

## Appendix H: Full Surface Water Management Plan



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# Local Water Management Plan (LWMP) City of Scandia, MN

December, 2018

**DRAFT**

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# Certification

Local Water Management Plan (LWMP)

for

City of Scandia

December 2018

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

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## I. EXECUTIVE SUMMARY

The City of Scandia Local Water Management Plan (LWMP) serves as a comprehensive planning document to guide the City in conserving, protecting and managing its surface and groundwater resources. This document represents the 2018 update which follows updates made by the local regulatory watershed districts to their plans and aligns with the 10-year Comprehensive Plan update cycle. The City's previous LWMP was approved in September, 2012.

The content of the LWMP is in large part determined by Minnesota Statute 103B and Rules 8410. Specifically, statute 103B.235 states:

*After the watershed plan is approved and adopted, or amended, pursuant to section 103B.231, the local government units having land use planning and regulatory responsibility for territory within the watershed shall prepare or cause to be prepared a local water management plan, capital improvement program, and official controls as necessary to bring local water management into conformance with the watershed plan.*

This LWMP includes the following sections:

- The **Purpose** briefly describes the purpose of the plan.
- The **Land and Water Resource Inventory** summarizes available data regarding the existing and proposed physical environment and land use in Scandia and the existing planning and regulatory framework for water management.
- The **Existing Water Resource Planning and Regulatory Framework** section summarizes the surface water and groundwater planning efforts to date in Scandia.
- **Water Resource Related Agreements** describes the City's existing and proposed water resource-related agreements with other units of government.
- The **Assessment of Issues** section describes current problems affecting water resources within the City.
- The **Goals, Policies, and Strategies** section lists the goals, policies, and strategies adopted to address local water management issues in the City.
- The **Implementation** section summarizes the projects planned to implement goals and policies. It includes a **Capital Improvement Plan**.
- The **Amendment Procedures** outlines the process by which plan amendments will be incorporated into the plan.
- The Plan also includes Figures and Attachments that support the analysis.

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

## II. LOCAL WATER MANAGEMENT PLAN PURPOSE

Scandia's Local Water Management Plan (LWMP) has been prepared to guide the City in conserving, protecting, managing, and improving its surface water resources. Scandia is located in northeastern Washington County, as seen in Figure SW-01. The plan meets the requirements described in Minnesota Statutes 103B and Minnesota Rules 8410. The plan is also consistent with the goals and policies of the Metropolitan Council's Water Resources Management Policy Plan and the three watershed management organizations with jurisdiction in the City: the Carnelian-Marine-St. Croix Watershed District (CMSCWD), the Comfort Lake-Forest Lake Watershed District (CLFLWD), and the Rice Creek Watershed District (RCWD). Watershed boundaries can be seen in Figure SW-02.

## III. LAND AND WATER RESOURCE INVENTORY

### A. Introduction

Scandia's landscape is a mosaic of agricultural lands, residential and commercial development, and areas with remnant natural vegetative cover. The purpose of this section is to summarize available information regarding land use and natural resources in the City of Scandia and discuss the relationship between water resources and land use planning. The section is organized into five major topic areas:

- Land Use
- Water Resources
- Geology and Topography
- Natural Areas
- Existing Water Resource Planning Framework

Additional information on land and water resources within the city of Scandia can be found in the watershed management plans and related natural resource management plans of the watershed management organizations with jurisdiction in the City and the City's Comprehensive Plan. The plans are available at Scandia City Hall and from the following sources:

- Carnelian-Marine-St. Croix Watershed District, Watershed Management Plan, amended 2015
- Comfort Lake-Forest Lake Watershed District, Watershed Management Plan, 2012-2021
- Rice Creek Watershed District, 2010 Watershed Management Plan, updates in 2020
- City of Scandia Comprehensive Plan Update, 2018
- City of Scandia Development Code, 2011
- City of Scandia, Shoreland Management Regulations, 2007
- Washington County Groundwater Plan, 2014
- Washington County Model Groundwater Rules, 2004
- North and East Metro Groundwater Management Area Plan, 2015

The comprehensive plan, development code, and ordinances are available online at the City's website. The watershed management plans are available on their respective websites.

### B. Land Use

Current land uses in Scandia are shown on Figure SW-03 and current zoning is displayed in Figure SW-04. Agriculture and single-family residential uses occupy the majority of the land area in the city. Open water, parks and open space also occupy a significant area in Scandia. The Land Use Section of the 2040 Comprehensive Plan and Figure SW-05 identifies the future land uses in the community and their proportion of the City's land area. Table 1 is a summary of the 2040 land uses and their areas in the City.

- Agriculture Core - this category includes traditional row crop and animal agriculture, as well as a variety of specialized operations such as nurseries, goat dairies, and produce farming.
- Residential uses - a variety of residential land use types exist in Scandia. Single-family uses predominate. Residential uses in Scandia include:
  - Single-family residential uses - lot sizes range from 8,000 square feet in the Village center to 40 acres or more.
  - Multi-family residential - the only significant multifamily development is Oakhill Cottages in the Village Center.
  - Seasonal residential - many shoreland residential properties around lakes or the St. Croix River were originally built as seasonal residences. Around 160 parcels are still classified as seasonal.
- Commercial, Industrial, Mixed Use and Extractive uses - Commercial and industrial land uses are concentrated in the Village center and in Scandia Plaza on Scandia Trail. A small number of commercial properties are located on major roadways in the rural area. Scandia has two active gravel mining operations, and a third abandoned gravel mine that is proposed for new mining activity in the future.
- Institutional uses, civic and parks and open space - this category includes religious and public facilities, as well as local, county and state parks. It also includes floodplain and riparian lands within the St. Croix National Scenic River, the Rustrum Wildlife Management Area, and Fall Creek Scientific and Natural Area.
- Open Water - includes lakes, streams and wetlands.
- Roads and utilities

**Table 1: Summary of Land Use.**

Land Use	Area (ac)	% of City
Agricultural Core Area	7769.0	30.0%
Agricultural Core Area	480.6	1.9%
General Rural Residential	10192.3	39.3%
Mining	480.6	1.9%
Open Water	3322.8	12.8%
Railway	72.7	0.3%
Recreation Area Protected	1801.9	7.0%
Rural Commercial	75.3	0.3%
St Croix River Corridor Area	802.0	3.1%
Village Mixed Use	287.0	1.1%
Village Neighborhood	616.7	2.4%
No Code	2.7	0.0%
<b>TOTAL</b>	<b>25903.6</b>	<b>100.0%</b>

During the several decades, the proportion of land area devoted to residential uses has

gradually increased, while the area devoted to agriculture has decreased. Figure SW-04 is the zoning map that indicates the current zoning districts in Scandia.

### C. Water Resources

This section of the local water management plan describes the water resources in the City of Scandia. It includes information regarding the following:

- Public Waters Inventory
- Shoreland Management Lake Classifications
- Floodplain Areas
- Water Quality Monitoring
- Impaired Waters
- Watershed Boundaries

#### 1. Public Waters Inventory

Figure SW-06 displays the lakes, wetlands and shoreland areas in Scandia. Public Waters are all water basins and watercourses that meet the criteria for designation as “public waters” set forth in Minnesota Statutes, Section 103G.005, Subd. 15. Public Waters are identified on the Minnesota DNR’s Public Water Inventory maps and lists authorized by Minnesota Statutes, Section 103G.201. Public Waters wetlands include all type 3, type 4, and type 5 wetlands (as defined in U.S. Fish and Wildlife Service Circular No. 39, 1971 edition) that are 10 acres or more in size in unincorporated areas or 2.5 acres or more in size in incorporated areas, as well as lakes and streams. Forty water bodies within Scandia are classified as Public Waters in accordance with the guidelines of the Minnesota DNR.

The Public Waters within Scandia range in size from 2 acres to nearly 2,000 acres of water surface and include several water bodies of regional significance. Table 2 below provides information on all of the Public Waters in Scandia and their acreage. Table 2 also includes the Public Waters inventory number, and the shoreland classification information for each of the water bodies.

Water bodies of regional significance include the St. Croix River, a federally-designated National Scenic Riverway, which forms the eastern border of the City. Big Marine Lake, in the southwestern portion of the city, is the second largest lake in Washington County. Existing and future development in areas surrounding public waters should be carefully managed and planned to prevent adverse impacts to water resources. More information on land use planning can be found in the Land Use section of the 2040 Comprehensive Plan.

**Table 2: Public Waters Inventory.**

Name	Public Waters Inventory ID	Shoreland Management Classification	Acres
Alice Lake	82-287 P	Natural Environment	26.3
Big Marine Lake	82-052 P	Recreational Development	1902.59
Bone Lake	82-054 P	Recreational Development	218.47
Clear Lake	82-078 W	Natural Environment	35.28
Falls Creek (1.6.7.12)	--	Tributary	--
Fish Lake	82-064 P	Natural Environment	64.99
German Lake	82-056 P	Natural Environment	151.2
Goose Lake	82-059 P	Natural Environment	84.04
Sylvan Lake	82-080 P	Recreational Development	108.25
Hay Lake	82-065 P	Natural Environment	59.32
Long Lake	82-068 P	Natural Environment	46.12
Nielson Lake	82-055 W	Natural Environment	49.65
Pitzl Pond	82-282 W	Natural Environment	36.19
Rasmussen Pond	82-070 W	Natural Environment	18.24
Sand Lake	82-067 P	Natural Environment	47.41
Sea Lake	82-053 W	Natural Environment	51.67
St. Croix River	--	Wild and Scenic River	--
Washington Lake	82-169 W	--	22.34
White Rock Lake	82-072 P	Natural Environment	80.88
Wojtowicz Pond	82-058 W	Natural Environment	16.8
Unnamed	82-057 W	Natural Environment	27.52
Unnamed	82-060 W	Natural Environment	26.26
Unnamed	82-061 W	Natural Environment	14.37
Unnamed	82-062 W	Natural Environment	17.44
Unnamed	82-066 W	Natural Environment	33.75
Unnamed	82-081 W	--	41.29
Unnamed	82-171 W	--	14.54
Unnamed	82-172 W	--	26.95
Unnamed	82-173 W	--	10.49
Unnamed	82-174 W	--	26.95
Unnamed	82-210 W	--	25.12
Unnamed	82-211 W	--	10.84
Unnamed	82-212 W	--	17.46
Unnamed	82-213 W	--	7.45
Unnamed	82-280 W	--	19.48
Unnamed	82-281 W	--	7.46
Unnamed	82-283 P	--	8.46
Unnamed	82-284 P	--	2.08
Unnamed	82-285 P	--	14.73
Unnamed	82-286 P	--	5.17

## 2. Shoreland Management

The Minnesota Department of Natural Resources' (DNR) Shoreland Management Program has classified water bodies and created requirements and development standards that are applied to classes of lakes, wetlands and streams found in Minnesota. Lakes and wetlands are divided into the following classes:

- **Natural Environment Lakes** usually have less than 150 total acres, less

than 60 acres per mile of shoreline, and less than three dwellings per mile of shoreline. They may have some winter kill of fish; may have shallow, swampy shoreline; and are less than 15 feet deep.

- **Recreational Development Lakes** usually have between 60 and 225 acres of water per mile of shoreline, between 3 and 25 dwellings per mile of shoreline, and are more than 15 feet deep.
- **General Development Lakes** usually have more than 225 acres of water per mile of shoreline and 25 dwellings per mile of shoreline, and are more than 15 feet deep. (Note: no lakes in Scandia have been given this classification.)

Lakes within the City of Scandia and the National Wetlands Inventory are shown in Figure SW-06. The Shoreland Management System also includes rivers, streams and their tributaries. The St. Croix River is classified as a Wild and Scenic River and Falls Creek is classified as a Tributary Stream.

While the lakes and streams in Scandia are one of the reasons that the city is an attractive place to live, residential development and agricultural activities on these lakes and in tributary watersheds can have detrimental effects on water quality and wildlife habitat. In order to protect lakes from potential negative impacts, the State of Minnesota requires cities and counties to adopt a shoreland management ordinance that provides for the orderly development and protection of shorelands. After New Scandia Township incorporated as the City of Scandia, the city developed and adopted its own Shoreland Management Ordinance in 2007. The Shoreland Management Ordinance can be found in Appendix B. The Shoreland Management Ordinance applies to land located within the following distances from lakes that have been given a lake shoreland management classification or rivers and streams that are considered public waters:

- 1,000 feet from the ordinary high water level of a lake, pond, or flowage
- 300 feet from a river or stream, or the landward extent of a floodplain designated by ordinance on a river or stream, whichever is greater.

Lakes, Wetlands and Shoreland Areas within Scandia are shown on Figure SW-06.

### 3. Floodplain Areas

The floodplains shown on Figure SW-07 represent the Digital Flood Insurance Rate Map (DFIRM) information for Washington County dated February 3, 2010. Floodplains were delineated for the St. Croix River and some of the larger lakes in the City of Scandia including Big Marine Lake, Long Lake, Fish Lake and Hay Lake. Figure SW-07 shows the extent of the 100-year and 500-year floodplains for water bodies in the City of Scandia.

Chapter 6 of the Development Code is the Floodplain Ordinance that regulates land use and development standards in floodplain areas. The City amended the ordinance in 2010. The ordinance can also be found in Appendix B.

### 4. Lower St. Croix River Bluffland and Shoreland Management Regulations

The City has adopted the Washington County Development Code regulations by reference that address bluffland and shoreland management within the Lower St. Croix Riverway.

### 5. Water Quality Monitoring

Eight lakes in the City of Scandia were monitored as part of the Metropolitan Council's Citizen-Assisted Monitoring Program (CAMP). Monitoring results are reported annually, with the current report released in 2018 and the previous reports released in



2015, 2010 and 2006. Lakes are sampled every two weeks from mid-April through mid-October. During each sampling event, temperature, dissolved oxygen, and Secchi depth transparency are measured and recorded. A surface water sample is also collected and analyzed for total phosphorus, total Kjeldahl nitrogen, and chlorophyll- a. Total phosphorus is a key measure of lake nutrients, chlorophyll-a is a measure of algae abundance, and Secchi depth transparency is a measure of water clarity. Figure SW-08 shows the 2018 water quality grades for lakes in the City. Summaries for each of the monitored lakes in Scandia can be found in Appendix C.

The CAMP report can be found at the Metropolitan Council webpage for Lake Monitoring and Assessment. The Metropolitan Council uses the monitoring data to assign each lake a water quality grade using an A through F grading system. The grading system uses percentile ranges for three water quality indicators-summertime average values for total phosphorus, chlorophyll-a, and Secchi depth transparency. An overall grade is calculated as the average grade for the three individual grades. The overall grade for each of the monitored lakes is displayed on Figure SW-08.

Over the last decade, reports generally show water quality remaining stable or improving in Scandia’s monitored lakes. In the 2018 report, Long Lake was given a “D” grade. The majority of monitored lakes in the City were given a “C” grade, including Bone Lake, Goose Lake, Hay Lake, Long Lake, White Rock Lake, Fish Lake, Sand Lake and Jellum’s Bay on Big Marine Lake. The main lake on Big Marine was given an “A” grade.

## 6. Impaired Waters

Under the federal Clean Water Act (33 U.S.C) the Environmental Protection Agency (EPA) requires the MPCA to set standards and assess Minnesota waters for impairments. The standards are set on a wide range of pollutants, including bacteria, nutrients, turbidity and mercury. A water body is listed as impaired by the MPCA if it fails to meet one or more water quality standards. If a water body is listed as impaired, a Total Maximum Daily Load (TMDL) must be established for the pollutant. A TMDL implementation plan will then be designed to reduce the pollutant loading to meet the TMDL. Scandia will be required to participate in TMDL plans for impaired water bodies within its borders. Figure SW-08 displays and Table 3 lists the impaired water bodies in Scandia.

**Table 3: Summary of Impaired Waters.**

Water Body	Type of Impairment	Watershed District
Big Marine Lake (Jellums)	Nutrients	CMSCWD
Big Marine Lake (Main Lake)	Mercury	CMSCWD
Bone Lake	Nutrients	CLFLWD
Fish Lake	Nutrients	CMSCWD
Goose Lake	Nutrients	CMSCWD
Hay Lake	Nutrients	CMSCWD
Long Lake	Nutrients	CMSCWD
White Rock Lake	Nutrients	RCWD
St. Croix River	Mercury and PCB's	CMSCWD
Unnamed Tributary to Birch Lake	E. Coli	CLFLWD
Unnamed Tributary to St. Croix River (North)	E. Coli	CMSCWD
Unnamed Tributary to St. Croix River (South)	E. Coli	CMSCWD



a) Carnelian-Marine-St. Croix Watershed District TMDL Report (2012)

CMSCWD completed its Multi-Lake Total Maximum Daily Load (TMDL) Report in 2012. Fish Lake, Goose Lake, Hay Lake, Jellum's Lake and Long Lake in Scandia are included in the report. The report presents the results of detailed impairment assessments and watershed modeling for each lake. The major source of nutrient pollution in Fish, Hay, Jellum's and Long Lake is identified as storm water runoff, while Individual Sewage Treatment Systems (ISTS) are the major source of nutrients in Goose Lake.

The District notes that the data collected on these lakes indicated an impairment in water quality due to excessive nutrient loading from each lake's watershed (from storm water runoff and individual septic systems) and due to phosphorus loading from in-lake sediments. The analysis indicates that phosphorus reductions ranging from 29 percent to 34 percent on each of the lakes is necessary to achieve the desired water quality standard for aquatic recreational use. Nutrient reduction (primarily phosphorus) will need to target runoff from watershed sources including agricultural areas, septic systems, residential storm water, and internal loading from sources such as rough fish disturbance of sediment. The draft report also outlines possible strategies for implementation. The primary strategies identified for improvement of these lakes include the following:

- Private projects to reduce runoff and septic system impacts
- Education
- Fishery management

b) Comfort Lake Forest Lake Six Lakes TMDL (2010) Study and Implementation Plan

This study and its implementation plan identify the eutrophication impairments for Bone Lake in Scandia and five other lakes in the Watershed. It identifies the phosphorus load that the lake can support in order to meet state standards, and goals for phosphorus reduction. The implementation plan includes actions and methods that will be used to achieve the goal. These items are included in the district's 2018 amended Watershed Management Plan. The efforts include monitoring, cost-share projects with landowners, education and outreach activities, and specific projects including the Bone Lake inlet and outlet fish barriers, infiltration basin design and implementation, a shoreline survey, Curley-Leaf Pondweed Management, a potential Alum Treatment, a survey of macrophytes and invasive species, and rough fish management.

c) *White Rock Lake EPA Approved Impairment.*

White Rock Lake is located in Rice Creek Watershed District and was added to the impaired waters list in 2010 due to excessive nutrients. White Rock Lake is land-locked with a very small watershed. Land use in the area is primarily agricultural. The lake fluctuates periodically from a turbid, algae-dominated state to a clear, plant-dominated state. There is currently no approved TMDL for White Rock Lake.

## 7. Watershed Boundaries

Figure SW-02 shows that the City of Scandia is included in three watershed management organizations: the Carnelian-Marine-St Croix Watershed District (CMSCWD), the Comfort Lake-Forest Lake Watershed District (CLFLWD), and the Rice Creek Watershed District (RCWD).

More than half of Scandia is within the CMSCWD which drains to the St. Croix River in two ways. Land in the central and southern portions of the City, Big Marine Lake, Mud Lake, and Turtle Lake drain eventually to Little Carnelian Lake; a man-made outlet on the Lake connects to the St. Croix River. Land in the eastern portion of the City drains directly to the St. Croix River. Each Watershed Management District has completed modeling to identify drainage areas and paths of runoff. This sub-watershed analysis is available in each District Plan and the City will work with the watersheds to utilize this data for local projects and development review.

The northwest corner of the City is part of the CLFLWD and drains to the Sunrise River which eventually drains to the St. Croix River. A small area in the southwest part of the City around

White Rock Lake drains to the RCWD and the Mississippi River watershed.

The boundaries of the watersheds are shown on Figure SW-02. Table 4 summarizes the size of each watershed within the City.

**Table 4: Area of Scandia within each Watershed District.**

<b>Watershed Name</b>	<b>Size (Acres)</b>	<b>Percent of City Area</b>
Carnelian-Marine-St. Croix Watershed District	17,488	68.8%
Comfort Lake-Forest Lake Watershed District	7,442	29.3%
Rice Creek Watershed District	495	1.9%
<b>TOTAL</b>	<b>25,425</b>	<b>100.0%</b>

Each watershed district is required by the State of Minnesota to update their Watershed Management Plan every 10 years. After a plan is approved by the Board of Water and Soil Resources, the watershed district requires each city or township within its boundaries to create and implement their own local water management plan consistent with the district's plan. Each city or township is then required to adopt, amend, or update its local controls to meet watershed district standards.

#### **D. Geology and Topography**

This part of the Land and Water Resources Inventory describes the following:

- Surficial geology
- Sensitivity to groundwater pollution
- Extent of known sand and gravel deposits
- Topography

##### **1. Surficial Geology**

Materials present at the surface of the lands in the City of Scandia were created by glacial and post glacial processes. Glacial materials present at the surface were deposited in two glacial episodes, the Wisconsin and the Des Moines. The Wisconsin Age ended about 25,000 years ago. Late in the Wisconsin Age, the Superior Lobe advanced south from the Lake Superior region, leaving moraine and outwash deposits in Washington County. The St. Croix end moraine has relatively high topography that extends northeast-southwest through the northern part of Washington County. The Des Moines Lobe glaciation, the final glacial episode in Minnesota, ended about 10,000 years ago. The Grantsburg Sublobe of the Des Moines Lobe moved from southwest to northeast through the northwest corner of the Washington County, leaving deposits along the western edge of the City of Scandia. This unusual south to north- moving

glacier deposited a lateral moraine and outwash deposits. The tills related to the Des Moines Lobe glaciation are more compact, have more clay, and have lower hydraulic conductivity in general than the Superior Lobe tills. Figure SW-09 shows the surficial geology of the City of Scandia.

Geologic landforms and processes influence topography, soil characteristics like infiltration rates and nutrient content, sensitivity to ground- water pollution, and the development of plant communities.

Soils information for the City of Scandia can be found in the USDA-NRCS Soil Survey of Washington Counties. Figure SW-10 displays the primary hydrologic soils groups in Scandia. In general, hydrologic soils group A tend to be sandier soils with high infiltration capacity. Conversely, hydrologic soils group D tends to be more clayey soils with low infiltration rates. Table 5 is a summary of the design infiltration rates and corresponding soil types as defined by the Minnesota Pollution Control Agency (MPCA) Minnesota Stormwater Manual (updated 2017). The infiltration rates listed in the table were updated with the most recent updates to the Manual which resulted lower design infiltration rates for B and D soils. The soils maps in that report are general and intended for broad planning purposes. Details on the soils included in each association can be found in the aforementioned report. The generalized soils located within the City have been mapped and are shown on Figure SW-11.

**Table 5: Summary of Hydrologic Soils Groups, Design Infiltration Rates and Unified Soil Classifications.**  
Source: Minnesota Stormwater Manual (MPCA, 2017).

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

## 2. Sensitivity to Groundwater Pollution

The 1990 Washington County Geology Atlas identifies areas of sensitivity to groundwater pollution. The Atlas is currently being updated by the Minnesota Department of Natural Resources (MnDNR). Figure SW-14 shows areas that are susceptible to groundwater pollution in Scandia. The areas of highest sensitivity are located along the St. Croix River and near some lakes in the western portion of the city. The classifications are derived both from the type of material overlying the aquifer as well as the amount of material. Areas that are more sensitive to pollution have less material overlying the aquifer, the materials are fractured or are structured in a way that allows surface water to reach the aquifer more quickly than in other areas. Figure SW-

14 shows the sensitivity of wells in the Prairie Du Chien and Jordan Aquifers to groundwater pollution.

Groundwater provides all of the drinking water for the City of Scandia. Land uses that have the potential to generate pollutants should be limited to areas where the sensitivity to groundwater pollution is low or managed to prevent pollution of groundwater resources.

### 3. Extent of Known Sand and Gravel Deposits

In 2000, the Metropolitan Council, the Department of Natural Resources and the Minnesota Geological Survey collaborated on an aggregate resource inventory of the seven-county metropolitan area. The inventory identified and categorized likely areas of dolostone deposits, and sand and gravel deposits. Areas identified as “dolostone” represent significant potential deposits of Prairie du Chien dolostone suitable for crushed aggregate with less than 10 feet of overburden. The sand and gravel deposits are classified into three categories according to type and quality (based on percent of gravel content), thickness of deposit, amount of overlying material, relationship to water table, and reliability of the mapping. Figure SW-13 shows the extent of known sand and gravel deposits and the location of dolostone deposits within the City of Scandia. Table 6 below summarizes the estimated area of the dolostone deposits and the categories of sand and gravel deposits found in the City of Scandia.

**Table 6: Estimated area of dolostone deposits in Scandia.**

Deposit Type	Size (acres)
Dolostone	62
Sand and gravel deposits, good to excellent quality	649
Sand and gravel deposits, moderate to good quality	254

Aggregate plays two important roles in development: as a base for pavements and other structures, and as a principal ingredient in concrete. The proximity of aggregate to a development site is an important component in the cost of aggregate and the overall cost of development. However, population growth, the subsequent demand for land and concerns about mining impacts can make securing sand and gravel deposit lands within a reasonable distance of development sites and existing residents challenging. The City of Scandia had two active mining operations in 2008 and one active mining operation as of January, 2018. The City revised its zoning map and ordinance in 2013 to limit the areas where mining is permitted to the existing mine locations.

### E. Natural Areas and Cover Types

This part of the Land and Water Resource Inventory includes the following information related to natural resources:

- Original Vegetation
- Natural areas
- High quality natural areas
- Regionally significant natural areas
- National Wetland Inventory
- Wetland assessment status

## 1. Original Vegetation

Scandia's original vegetation was the result of glacial processes that created the topographic landscape features and soil types. For example, along the St. Croix River, rich alluvial soils and periodic flooding led to the development of floodplain forests. Surveys completed at the time of settlement indicated that the vegetation in the city was dominated by Oak Woodland/Brushland and Maple Basswood Forest plant communities.

As the landscape was modified during European settlement, most natural communities on soils suitable for crop production were cleared for planting. Natural areas on steep slopes, hydric soils, and poor soils were left alone or used as pasture. As a result, Scandia's landscape today is a mosaic of agricultural lands, residential and commercial development, and remaining areas of natural cover.

## 2. Existing Natural Areas

Figure SW-09 displays land cover using the Minnesota Department of Natural Resources' (MN DNR) Minnesota Land Cover Classification System (MLCCS). MLCCS combines the Minnesota Natural Heritage native plant community types with a cultural classification system to distinguish among different types and amounts of land cover, vegetation and impervious surfaces. Information on the location, type, size, and quality of remaining natural areas is included in the MLCCS. Approximately 58% of the land cover in the City of Scandia is classified as some form of natural area. Figure SW-15 shows remaining natural areas within the City and the table below summarizes the acreage of each type of natural area within the City.

**Table 7: Summary of land cover.**

Natural Area Type	Size (acres)
5-10% Impervious	1771.1
11-25% Impervious	1612.5
26-50% Impervious	344.3
51-75% Impervious	61.5
76-100% Impervious	509.8
Short Grasses	329.3
Agricultural Land	5789.6
Maintained Tall Grass	1422.3
Tree Plantation	503.7
Forest	5449.2
Wetland Forest	813.1
Shrubland	0.4
Wetland Shrubs	318.4
Tall Grasses	910.0
Wetland Emergent Veg.	1640.4
Dry Tall Grasses	831.5
Rock Outcrop	3.2
Mud Flat	13.8
Open Water	2511.2
Wetland Open Water	589.6
<i>TOTAL</i>	<i>25,425</i>

Additional development within the City of Scandia has the potential to further impact the patchwork of remaining natural areas that are privately-owned by fragmenting habitat and introducing invasive species. The City has adopted Section 6 of its

Development Code that provides criteria and incentives for Open Space Conservation Subdivisions to encourage protection of natural habitat areas and open space.

### 3. Quality of Natural Areas

There are two different measures of high quality natural areas:

- Natural area quality grades included in the MLCCS
- Minnesota County Biological Survey (MCBS)

Natural area quality grades using an A through F grading system are collected as part of the MLCCS. Natural areas given a grade of A, AB, B, or BC are considered high quality and are displayed on Figure SW-15. There are approximately 1,510 acres of outstanding and high quality areas within the City of Scandia using this measure.

MCBS Sites of Biodiversity Significance are also displayed on Figure SW-16. This data layer, generated by the MN DNR, represents areas with varying levels of native biodiversity that may contain high quality native plant communities, rare plants, rare animals, and/or animal aggregations. A biodiversity significance rank is assigned on the basis of the number of rare species, the quality of the native plant communities, size of the site, and the site's context within the landscape. The classifications displayed on the map are described below:

- **Below** sites lack occurrences of rare species and/or natural features that meet MCBS standards for an Outstanding, High, or Moderate rank.
- **Moderate** sites contain significant occurrences of rare species, and/or moderately disturbed native plant communities and landscapes that have a strong potential for recovery.
- **High** sites contain very good quality occurrences of the rarest species, high quality examples of the rarest native plant communities, and/or important functional landscapes.
- **Outstanding** sites containing the best occurrences of the rarest species, the most outstanding examples of the rarest native plant communities, and/or the largest, most intact functional landscapes present in the state.

Research by ecologists in Minnesota suggests that plant and animal communities that are high in natural diversity are better able to adapt to change and stress and are healthier than natural communities of low diversity.

Table 8 below summarizes the acreage of the four categories of sites of biodiversity significance found within the City of Scandia.

**Table 8: Summary of biodiversity categories.**

Natural Area Type	Size (acres)
Outstanding	1,170
High	340
Moderate	959
Below	329
TOTAL	2,798

### 4. Regionally Significant Natural Areas

The MN DNR completed an analysis of regionally significant Terrestrial and Wetland Ecological Areas in the seven county metropolitan area in 2004. The analysis assessed



remaining forest, grassland, and wetland areas. The scores were determined by examining important ecological attributes of the natural areas, including size, shape, cover type diversity, and adjacent land use. Figure SW-15 displays the Regionally Significant Ecological Areas, as determined by the MN DNR. Table 9 below summarizes the acreage for each category of Regionally Significant Ecological Areas found within the City of Scandia.

**Table 9: Summary of Regionally Significant Ecological Areas.**

Natural Area Type	Size
Moderate	1,028
High	558
Outstanding	5,330
TOTAL	6,916

## 5. National Wetland Inventory

The National Wetlands Inventory (NWI) is a national program sponsored by the US Fish and Wildlife Service (USFWS). Based on the NWI data, the City of Scandia has approximately 5,492 acres of wetland. Figure SW-06 displays wetland area features mapped as part of the National Wetlands Inventory (NWI).

The NWI maps were created by identifying areas of wet soils using aerial photography and soils maps. The inventory data and maps are not based on field surveys, and do not include the detailed evaluation and analysis that is required for an official wetland delineation.

## 6. Wetland Assessments

The Carnelian-Marine-St. Croix Watershed District (CMSCWD) completed a wetland assessment and management plan for the district in 2010. The wetland assessment contains more complete and more accurate data than the NWI. A wetland assessment categorizes wetlands by importance, quality, and need for restoration. The Comfort Lake-Forest Lake Watershed District completed a wetland assessment in 2011. The watershed district plans have additional information regarding wetland assessments and are updated as needed.

## F. Existing Ground Water Planning and Regulatory Framework

The purpose of this section is to:

- Describe the purpose of surface water and groundwater planning at several geographic scales
- Identify the agencies and organizations that are responsible for surface water and groundwater planning within the City of Scandia, and
- Summarize the goals and policies of recent plans and studies regarding surface water and groundwater resources in the City of Scandia.

The purpose of water planning is to protect and maintain or improve the quality of surface water and groundwater resources. It should be noted that there is a great deal of overlap in planning for surface water resources and planning for groundwater resources. While the planning efforts for each are described here separately, in reality, surface water planning efforts usually touch on groundwater issues and groundwater planning efforts often include issues relating to the interaction between surface water and groundwater. The 2040 Comprehensive Plan contains more information to link ground water protection, water

distribution and land use.

At the national level, the Clean Water Act (1972) regulates the pollution of surface waters in the United States. The Environmental Protection Agency (EPA) is the primary agency that implements the Clean Water Act. Other federal agencies involved in water management include the U.S. Army Corps of Engineers, which regulates impacts to wetlands and navigable waters, and the Federal Emergency Management Agency (FEMA), which maps floodplains and flood-prone areas and floodplain insurance programs.

At the state level, the Minnesota Pollution Control Agency (MPCA) implements the Federal Clean Water Act through permits, by identifying Impaired Waters and related regulations, and by setting groundwater standards and monitoring. The Minnesota Health Department regulates and protects drinking water. The Minnesota Department of Natural Resources (DNR) maintains the list of Public Waters and grants permits for work in public waters, water appropriations, and regulates wetlands that are on the Public Waters Inventory. The DNR also manages the state's Shoreland Program and Floodplain Management Program. The Board of Water and Soil Resources (BWSR) oversees local Watershed Management Organizations (including Watershed Districts) and approves their plans. BWSR also administers the Wetland Conservation Act statewide. Each of the state agencies operates grant and/or cost-share programs.

The Metropolitan Council creates plans for regional systems, including surface and ground water. The Council approves local land use and infrastructure plans, and the Local Water Management Plans of Counties, Cities and Townships.

Within the City of Scandia, surface water planning is done by several entities. Minnesota Statute 103D enabled the creation of watershed districts. Watershed districts are local units of government that manage surface water resources through the adoption and implementation of Comprehensive Watershed Management plans. Because watershed boundaries are based on the drainage areas of rivers and lakes and do not follow political boundaries, there are three watershed districts within the City of Scandia: the Carnelian-Marine-St. Croix Watershed District (CMSCWD), the Comfort Lake-Forest Lake Watershed District (CLFLWD), and the Rice Creek Watershed District (RCWD). Figure SW-02 shows the boundaries of each watershed district within the City of Scandia. Every 10 years, each watershed district is required to update its water management plan to:

- Protect, preserve, and use natural surface and groundwater storage and retention systems
- Minimize public capital expenditures needed to correct flooding and water quality problems
- Identify and plan for means to effectively protect and improve surface and groundwater quality
- Establish more uniform local policies and official controls for surface and groundwater management
- Prevent erosion of soil into surface water systems
- Promote groundwater recharge
- Protect and enhance fish and wildlife habitat and water recreational facilities; and
- Secure the other benefits associated with the proper management of surface and groundwater.

After plan approval by the Board of Water and Soil Resources (BWSR), the watershed district formally adopts the plan and requires each city or township within its boundaries to create and implement their own local water management plan consistent with the watershed



district's plan. As a result, the City of Scandia is required to develop its own local water management plan that is consistent with approved watershed district plans. The CMSCWD adopted amendments to its most recent plan in 2015, the CLFLWD adopted amendments to its most recent plan in 2015, and the Rice Creek Watershed District adopted its most recent plan in 2010 with plans to revise the plan in 2018/2019. After developing a local water management plan, a city or township should also develop or update local ordinances in order to implement the local plan.

Groundwater planning is also completed by several entities within Minnesota. Minnesota Statute 103D allows watershed districts to include groundwater resources in their local water management plans, while Minnesota Statute 103B provides counties with the authority to complete groundwater plans. County Groundwater Plans are approved by the Board of Water and Soil Resources; Washington County's most recent Groundwater Plan was completed and approved in 2014, and will be effective through 2024. Washington County's 2014 Plan focuses on protecting groundwater resources through coordinated intergovernmental efforts. The County's groundwater plan addresses many groundwater issues that are a priority for the City of Scandia.

The plans, studies, and ordinances that were reviewed to develop Scandia's local water management plan, or will be used to implement the plan, include:

- Carnelian-Marine-St. Croix Watershed District, Watershed Management Plan, amended 2015
- Comfort Lake-Forest Lake Watershed District, Watershed Management Plan, 2012-2021
- Rice Creek Watershed District, 2010 Watershed Management Plan, updates in 2020
- City of Scandia Comprehensive Plan Update, 2018
- City of Scandia Development Code, 2011
- City of Scandia, Shoreland Management Regulations, 2007
- Washington County Groundwater Plan, 2014
- Washington County Model Groundwater Rules, 2004
- North and East Metro Groundwater Management Area Plan, 2015

#### G. Surface Water Planning

This section briefly describes the most recent local water management plan for each of the three watershed districts within the City of Scandia, followed by a comparison of the goals, objectives, and policies of each plan. It briefly discusses Washington County's 2040 Comprehensive Plan (final plan pending) and its relationship to surface and ground water planning. It also summarizes the City's current local water management plan and implementation tools.

##### 1. Carnelian-Marine-St. Croix Watershed District, Watershed Management Plan, 2018

The Carnelian-Marine-St. Croix Watershed District's (CMSCWD) most recent watershed management plan was adopted in 2018. The plan's goals and policies are based on the outcome of a strategic planning effort that identified a need to prioritize the District's activities and expenditures to protect and improve the water resources of the District, and to focus on protecting the District's high quality resources.

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

- *Routine Watershed Management* for the non-impaired water resources of the

District—these are the basic, day-to-day programs that are implemented throughout the District.

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

The District Plan notes that this management process recognizes the limited financial resources of the District, and provides a framework and criteria direct the funding of all district programs and projects to improve and preserve water quality based resource classification, and take advantage of outside funding sources that are available to assist District efforts.

## 2. Carnelian-Marine-St. Croix Watershed District (CMSCWD) Wetlands Management Plan

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

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

1. High Quality/Highest Priority
2. Stream Corridor and Shoreland Wetlands
3. Isolated Wetlands
4. Utilized Wetlands

Management goals and standards, including buffer width requirements and standards for wetland replacement, are based on the classification system. Figure SW-06 identifies the locations of wetlands within the CMSCWD in Scandia, and identifies the locations of Wetland Preservation Areas within the City. Additional information regarding specific wetland classification of wetlands is maintained by the CMSCWD and can be found in the Comprehensive Watershed Management plan available through CMSCWD.

## 3. Comfort Lake-Forest Lake Watershed District, Watershed Management Plan, 2015

The Comfort Lake-Forest Lake Watershed District's (CLFLWD) most recent revisions to the watershed management plan were adopted in 2015. The plan contains the goals, objectives, and actions of the CLFLWD and guides the watershed's activities from 2012-2021. An electronic version of the plan can be found on the District's website. The plan includes goals, policies and implementation actions that address 8 major issues:

- Floodplain goals include conserving flood storage and capacity and limiting flood damage.
- Lake goals include management to protect and improve water quality, limit the spread and entry of invasive species, and preservation of shoreline buffers.

- Stream goals focus on managing stream water quality and habitat, invasive species management education, and the preservation and establishment of stream buffers.
- Wetland goals address coordination with local governments to ensure no net loss, improving wetland habitat research on phosphorus cycling in wetlands and the preservation and establishment of wetland buffers.
- Upland resource goals include improving the beneficial use of upland areas for storm water management, maintaining and restoring uplands, and promoting uplands conservation.
- Groundwater goals address the protection of groundwater quality and quantity and maintaining the function of groundwater-dependent natural resources.
- Public Education goals address providing education and outreach services to the public to increase knowledge of and appreciation for the resources of the District and increasing stewardship and participation in District programs.
- Interagency Communication goals focus on partnerships that ensure efficient and cost-effective use of funds for water resource management and coordination of efforts toward managing resources.

CLFLWD developed a Total Maximum Daily Load (TMDL) plan for Bone Lake, which is discussed in the section on Impaired Waters. The District completed a Partially Drained Wetland Assessment in 2014. CLFLWD's plan notes that the District has established an Urban Stormwater Remediation Cost-Share program that could be used as a source of funding that the City of Scandia could use to provide water quality enhancements as part of municipal projects, such as future road projects that go above and beyond the minimum requirements and are not used for future credits.

#### 4. Rice Creek Watershed District, Watershed Management Plan, 2016

The Rice Creek Watershed District's (RCWD) most recent watershed management plan was adopted in June 2010 and amended in 2016. The plan contains the objectives, policies, and management strategies of the RCWD and guides the watershed's activities for the next ten years. A small area of the City of Scandia around White Rock Lake falls within the RCWD. An electronic version of the plan can be found at the District's website.

The goals included in RCWD's 2016 Watershed Management Plan include:

- Use education and outreach tools to increase knowledge, awareness and capacity of decision-making for the district's constituents.
- Manage lake systems for their ecological and community value.
- Manage wetlands to improve diversity and ecological integrity on a district-wide basis.
- Manage and operate drainage systems and manage and use waterways to recognize the origins of the system (natural or artificial) and connectedness of resources.
- Minimize potential damage from excess runoff and flooding to infrastructure and resources.
- Construct, maintain and operate the District's facilities in accord with resource management purpose and effectiveness.

- Capitalize on opportunities to enhance water quality, reduce runoff and flooding and enhance resources by using open space and greenways.

The plan identifies the following key issues related to water management, plan goals and implementation strategies:

- Lake Pepin Total Maximum Daily Load (TMDL) Study
- Lake TMDL's
- Management of runoff to the Mississippi River
- Alternate storm water volume control methods
- Climate change
- Declining regional groundwater and groundwater management issues
- Lake management issues related to nutrient enrichment and accelerated sedimentation
- Invasive species
- Wetland management
- Public drainage system management

#### 5. City of Scandia Comprehensive Plan Update and Development Code Update

The City of Scandia adopted its updated Comprehensive Plan in 2018, and completed revisions of its Development Code in 2017. The Comprehensive Plan update included an update of the City's Local Water Management Plan.

The City revised the sections of its Development Code related to water management to be consistent with the rules of the three local watershed districts, including the performance standards for storm water management, land alteration, and the erosion and sediment control that are included in Chapter 2 of the Code and in the subdivision ordinance.

The City updated its Shoreland Management Regulations in 2007 and its Floodplain Regulations in 2010.

The City's development code and local water management related ordinances are found in Appendix B and on the City's website.

#### H. Groundwater Planning

This section describes the most recent plans and studies relating to groundwater planning in the City of Scandia, followed by a comparison of the goals and objectives of each plan or study.

##### 1. Washington County Groundwater Plan, 2014-2024

The Washington County Groundwater Plan provides a county-wide framework for the protection and conservation of groundwater resources. The current plan was approved in 2014 and guides the protection of groundwater resources in the county until 2024. The City of Scandia will remain consistent with the Washington County Groundwater Plan to preserve its groundwater resources. Additional information can also be found in the 2040 Comprehensive Plan.

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

two major issues: groundwater quality and groundwater quantity. The plan identifies eleven major issue areas relating to groundwater quality and groundwater quantity:

- Groundwater Supply
- Groundwater and Surface Water Interaction
- Source Water and Wellhead Protection
- Existing Contaminants: VOCs and PFCs
- Nutrients, Pesticides and Road Salt
- Emerging Contaminants
- Septic Systems
- Land Spread for Beneficial Use
- Hazardous Waste
- Mining
- Landfills

## 2. Washington County Model Groundwater Rules, 2004

In 2004, the Washington County Water Consortium developed model groundwater rules for future adoption by the water management organizations (WMOs) located within the County. The model rules address groundwater appropriations, storm water runoff volume control, groundwater quality, the protection of groundwater dependent natural resources.

The purpose of the model rules is to encourage water management organizations to adopt groundwater standards. As local units of government develop local water management plans they will also have to consider the adoption of similar standards in order to be consistent with the watershed management plans. The overall goal is for groundwater protection to become an integral part of future land use decisions at both the watershed district level as well as the municipal level.

## 3. Integrating Groundwater and Surface Water Management, Northern Washington County, 2003

The purpose of this study by Washington County is to provide local decision makers with planning level information on groundwater resources. It provides data to support management strategies and policies protecting lakes, wetlands, streams, and water supplies dependent on groundwater resources. The study area for this report includes all areas of Washington County north of State Highway 36. The study included:

- An educational component aimed at educating and informing local water management groups
- A hydrologic monitoring plan
- An assessment of groundwater resources - lakes, recharge and discharge areas, and groundwater dependent resources were inventoried and classified
- A strategy for integrating groundwater and surface water management, including policies and recommendations for drinking water protection, maintaining recharge, and managing high water levels
- A feasibility study for managing excess surface water - Valley Branch Watershed District investigated alternatives for retention and infiltration of

water in the upper watershed of the Sunnybrook Lake area.

The strategy for integrating groundwater and surface water management addresses four issues relating to groundwater:

- Groundwater recharge and discharge areas
- Areas susceptible to high water levels
- Groundwater-surface water interaction and groundwater dependent resources
- Education

#### 4. Groundwater Plan Goals, Objectives, and Policies

The 2014 Washington County Groundwater Plan, 2003 Groundwater Study and the 2004 Washington County Model Groundwater Rules, and local water management plans include a variety of goals, policies and objectives. Those that are most related to the City of Scandia include the following:

- Goals related to managing land use in non-urban areas to protect groundwater
- Goals related to enforcing groundwater provisions in local mining ordinances
- Goals and policies related to subsurface sewage treatment system management and to the proper design, building, operation and maintenance of those systems
- Goals and policies related to the sealing of abandoned wells
- Goals to maintain infiltration when land alteration and development are implemented
- Goals related to storm water management performance standards
- Goals and policies related to management and transport of hazardous materials

The City of Scandia has adopted zoning requirements and performance standards that support protection of ground water resources. Section V. of this plan details the City's goals, policies and strategies related to ground water.

#### 5. North & East Metro Groundwater Management Area Plan, 2015

The Minnesota Department of Natural Resources (MnDNR) developed the North & East Metro Groundwater Management Area Plan in 2015 to identify approaches to management of the interconnected groundwater systems in Washington and Ramsey Counties and portions of Anoka and Hennepin Counties. The study allows for a more comprehensive and focused approach to groundwater management to ensure that reservoirs can serve the potable water demand and that lakes, wetlands and rivers remain healthy and protected. The plan identifies specific strategies for implementing five key objectives, which include:

- Identifying and embracing local conservation practices.
- Protecting surface waters.
- Preserving water quality.
- Improving appropriations permitting.
- Protecting water availability.

## I. Water Resource Related Agreements

The City's existing and proposed water resource-related agreements include the following:

### 1. WCA Administration Agreement

The City is the Local Government Authority (LGU) in the administration of WCA except for that area within the Rice Creek Watershed District boundary. The City has an existing agreement with the Washington Conservation District (WCD) to provide technical expertise to the City in the administration of the Wetlands Conservation Act (WCA). The City's most recent contract with the WCD was approved on November 8, 2017. A copy of the agreement is included in the Appendix E.

Rice Creek Watershed District is the WCA LGU for that portion of the City within the RCWD. The City of Scandia Resolution 04-20-10-04 and 04-20-10-05 documents the City's acceptance of the RCWD's role in administering WCA. A copy of the resolution is included in the Attachments.

### 2. Proposed MOU and Agreements with CMSCWD

The City has signed Memorandum of Understanding (MOU) Resolution 12-17-13-02 with the CMSCWD that will address the organizations' mutual roles and process for addressing development reviews and other joint activities. A copy of the proposed MOU is included in Appendix E.

### 3. Proposed MOU with CLFLWD

The City will develop a proposed Memorandum of Understanding with the Comfort Lake-Forest Lake Watershed District that will address the organizations' mutual roles and process for addressing development reviews and other joint activities, particularly in shoreland and floodplain areas. A copy of the proposed MOU will be included in the Attachments and will be considered with approval of this plan.

## IV. ASSESSMENT OF ISSUES

The City reviewed the watershed management plans of the three watershed management organizations having jurisdiction within the City to identify their inventories of the current significant water management issues across the City. The City's Planning Commission and residents identified water management issues in the City in the recent Comprehensive Plan update. There was a high level of agreement among the District and City plans on water management issues in Scandia.

The list below includes the issues that the Watershed Districts identified in their Water Management Plans that apply within Scandia, and summarizes approaches that the City will take to address the issues. The City's Planning Commission reviewed the list under the previous Local Water Management Plan and discussed at the public hearing. The following conclusion was provided at that time.

*The City's goals, policies and strategies to address the issues are listed in Section V. The specific implementation actions that the City will take to address the issues are listed in greater detail in Section VI, Items A and B. The actions that the Watershed Districts have included in their plans to address the issues related to resources in Scandia are included in Section VI, Item C.*

### A. Water and Natural Resource Issues in Scandia include the following:

- 1. The potential for water quality declines in local lakes, rivers and wetlands due to existing and future land uses. The potential impact of development in shoreland**



areas, such as areas around Bone Lake and Big Marine Lake, is a particular concern. The City of Scandia has adopted and enforces its Shoreland Ordinance and Washington County's Lower St. Croix River Bluffland and Shoreland Management Regulations to address these concerns. Water and natural resource issues were a strong consideration in the City's Comprehensive Plan and the Development Code update that implemented the plan.

2. **The potential for residential development and agricultural activities to impact water quality through soil erosion and runoff.** CMSCWD has identified particular erosion concerns near the St. Croix River bluffs, and CLFLWD has identified the watershed around Bone Lake as an area when erosion and sedimentation are a concern. The City updated its erosion and sediment control and stormwater management ordinance in 2011 to meet the standards of the watershed organizations and address this issue. It supports the Watershed rules and permit process related to erosion control. The City has adopted Washington County's Lower St. Croix River Bluffland and Shoreland Management Regulations to address specific issues on the St. Croix River. The City supports specific projects that the Watershed Districts have identified in their plans to address identified erosion control problems (Section VI, Item C).
3. **Existing water quality concerns related to impaired waters, including local lakes and the St. Croix River.** The MPCA has identified seven lakes and the St. Croix River in Scandia as impaired waters. Six of the lakes are impaired by nutrient loading, largely from storm water runoff, septic systems, and phosphorus loading from in-lake sediments. CMSCWD and CLFLWD have completed TMDL studies for these lakes, and have included specific projects to address the identified impairments in their plans. The projects are described in Section VI, Item C. The City supports these improvement efforts, and has updated its stormwater and erosion control ordinances and development code to address this issue.
4. **The need to protect the St. Croix River as a unique resource, while maintaining existing land uses and traditional development patterns.** The City's Comprehensive Plan identifies the significance of the St. Croix River to the community. The need to protect the quality of this resource is reflected in the updated zoning map and development code that the City adopted in 2011. Recent efforts include the City's code updates to protect scenic viewsheds, including the St. Croix area, and encourage protection of water and natural resources through the City's Open Space Conservation Subdivision subdivision option. The City has adopted Washington County's Lower St. Croix River Bluffland and Shoreland Management Regulations to manage land use along the St. Croix River.
5. **The need to protect the functions and values that wetlands provide to the community.** The City supports the CMSCWD Wetland Management Plan, and will assist with plan implementation during the review of subdivisions. The City's recent development code update includes a requirement that functions and values assessments be completed on all wetlands that have not been assessed by a watershed district, and will require developers to implement buffer requirements and other best management practices based on wetland classifications.
6. **The potential impacts of invasive species on water resources and habitat.** City ordinances prohibit the use of invasive species in landscape plans, and encourage the use of native species. The City's Parks and Recreation Committee is actively involved in the removal of invasive species from City parks. The City also supports the specific projects identified by the Watershed District to control invasive species in local lakes, streams and wetlands (Section VI, Item C).
7. **Need to identify and protect the quality and habitat functions of the significant upland natural resources in Scandia and maintain connections among these resources.** The



*City's Comprehensive Plan placed a strong emphasis on identifying the natural areas within the City (Figure 10) and the high-quality natural areas in the community (Figures 11 and 12). This information was used to update the City's zoning map and to strengthen sections of the Development Code related to erosion and sediment control, stormwater management, woodland and tree preservation, and landscaping. The City has adopted an Open Space Conservation Subdivision option, and encourages developers to utilize this option to protect high-quality water and natural resource areas. The City supports Watershed District efforts to identify high-quality natural resources areas and connecting areas in their plans, and projects to protect these resources, included in Section VI, Item C.*

8. **Need to protect floodplain areas and their functions.** *The City has adopted Chapter 6 of the City Code—Floodplain Management Regulations, and enforces this ordinance to protect floodplain areas and their functions.*
9. **The potential impacts of existing and future land uses on ground water quality, particularly since groundwater is the source of drinking water for Scandia residents.** *The City considered groundwater protection as it developed the zoning map and development code update to implement the 2040 Comprehensive Plan update. The City enforces strict conformance with regulations for design, installation and maintenance of on-site treatment systems, in cooperation with Washington County. The City is currently studying its existing 201 Community Sewer Systems on Big Marine Lake, and may amend its CIP to include system improvements to protect ground and surface water resources based on the results of the study. The City's code supports inspection of on-site individual sewage treatment systems by an MPCA-certified inspector at the time of property sale or transfer, and requirements that the systems meet state standards. The City adopts the 2014-2024 Washington County Groundwater Plan and the strategies for groundwater protection described therein.*
10. **The need to educate Scandia residents on the importance of the City's surface and ground waters, and how their actions can help to protect these resources.** *The City used its Comprehensive Plan process and the update of the Development Code to educate residents about the quality of water and natural resources in the community. The City will include information in its newsletter, on its website, and use other educational opportunities to educate residents on the quality of local resources and actions that they can take to help to protect these resources. The City also supports the efforts of local watershed districts, other public agencies and non-profit organizations to provide education to Scandia residents on these issues.*
11. **The need for partnerships among agencies, organizations, the City and its residents to address complex water management issues and find resources to address problems.** *The City is willing to work as a partner with the local watershed management organizations and other agencies to address water and natural resource concerns. Specific projects are identified in Section VI of this plan.*

These issues were the basis for development of the goals, policies and strategies for protection and management of surface and ground waters included in Section V.

## **V. GOALS, POLICIES AND STRATEGIES**

The City of Scandia has reviewed the goals and policies included in the three Watershed District management plans and its own Comprehensive Plan. It has developed the goals and policies listed below for surface water management based on these plans and the needs and issues identified in Section IV for water management. The City's goals for surface water management are the numbered items that follow. Each goal includes several policies specific policies that will help to achieve the goal.

**Goal 1. The City of Scandia is committed to preserving, protecting and enhancing the quality of surfaces and ground water resources, and to avoiding adverse impacts to resources in the City.**

Policies and Strategies:

- The City will work cooperatively with local water management organizations, state agencies, Washington Conservation District (WCD), Washington County and landowners to protect local wetlands, lakes, streams, and groundwater to preserve the values of these resources for future generations.
- The City concurs with and adopts the Carnelian-Marine-St. Croix, Comfort Lake-Forest Lake and Rice Creek Watershed Districts' Watershed Management Plans, rules and standards and adopted county development codes by reference through this LWMP. The Watershed Districts will continue to enforce surface water regulations and permitting within the City within the boundaries of each of their districts.
- The City will coordinate its review of development proposals and zoning applications with the three Watershed Districts by providing copies of applications to the Districts and incorporating their comments and recommendations in the review process.
- The City will manage land use and development to support protection of surface and ground waters through the following elements of its Development Code:
  - Chapter 2 – Zoning Regulations, Section 3 Development Standards
    - Subd. 3.3 – Environmental Regulations
    - Subd. 3.6 – Land Alteration and Grading
    - Subd. 3.7 – Stormwater Management
    - Subd. 3.8 – Land Clearing
    - Subd. 3.11 – Woodland and Tree Preservation
  - Chapter 2 – Zoning Regulations, Section 6 Open Space Conservation Subdivisions
  - Chapter 3 – Subdivision Regulations
  - Chapter 4 – Mining and Related Activities
  - Chapter 5 – Shoreland Management Regulations
  - Chapter 6 – Floodplain Management Regulations
  - Washington County Development Code sections adopted by reference:
    - Subsurface Sewage Treatment Regulations
    - Lower St. Croix River Bluffland and Shoreland Management Regulations

The City will review its regulations and update its ordinances as needed to be consistent with the LWMP, Watershed District and State regulations.

- The City supports and requires developers and landowners to use storm water practices that minimize impervious surfaces, incorporate natural topography, preserve natural vegetation, swales and storage areas, and promote the use of infiltration/filtration and other Low Impact Development (LID) techniques.
- The City will complete an inventory of its stormwater management facilities and develop policies related to managing these facilities that will support protecting and enhancing the quality of surface waters in Scandia.

- The City will work cooperatively with the Watershed Districts, Washington Conservation District and Washington County to encourage the use of best management practices for agricultural land uses to minimize erosion and to protect the quality of surface and groundwaters.
- The City will help promote existing storm water management related cost-share programs offered by local watershed districts and other partners.
- The City will demonstrate a commitment to improving surface water quality by incorporating best practices on City owned property.

**Goal 2. The City will work with the local Watershed Districts to address the specific water management issues that are identified in the District's Plans.**

Policies and Strategies:

- The City supports the Watershed Districts' implementation of their standards for management of water quantity and quality, including control of peak runoff, volume control, infiltration and filtration requirements, wetland standards, and best management practices to control Total Suspended Solids (TSS), Total Phosphorus (TP), and runoff from development or redevelopment within the City. The Districts will play the primary role in reviewing the storm water plans for development applications within the City, and implement their rules through the review and permit process. The City will include the comments and recommendations of the Watershed Districts in application reviews.
- The City will continue to participate in the Districts' Total Maximum Daily Load (TMDL) studies of impaired waters, and will cooperate with the Districts in the implementation of TMDL plans. The City will implement its Development Code to manage land use to protect the water resources in the City, including the Impaired Waters.
- The City will cooperate with the CMSCWD as the District implements the cost-share projects identified within Scandia in the District Management Plan. The District indicated that it will bear the costs for design and installation of water quality projects while additional infrastructure will be considered on a case by case basis.
- The City will support the implementation of the CLFLWD's TMDL plan for Bone Lake by implementing its Shoreland and Floodplain ordinances. The City requests that the Watershed District continue to implement its storm water management and erosion control ordinance in the Bone Lake watershed area. The City supports and will cooperate with the projects the CLFLWD has identified to implement the Bone Lake TMDL study.
- The City supports the Rice Creek Watershed District's efforts to study White Rock Lake and identify potential issues related to water quality and lake management.
- The City will cooperate with the education and outreach efforts made by the local Watershed Districts, WCD and other agencies by including information related to water management and best management practices in its newsletter and/or website.

**Goal 3. The City will protect the quality of local water resources by supporting the Watershed Districts' goals and plans for managing the lakes, rivers and streams in the City.**

Policies and Strategies:

- The City will implement its land use plan, development code, and ordinances to protect shoreland areas and lake water quality, and will work with the Watershed Districts to achieve the lake management goals identified in the Watershed Districts' Water Management Plans.

**Goal 4. The City will work with federal, state and local agencies to protect the natural and scenic resources of the St. Croix River Corridor, both within and adjacent to the St. Croix**

**National Scenic Riverway, while allowing traditional residential and recreational use patterns to continue.**

Policies and Strategies:

- The City will continue to apply Washington County development standards (the Lower St. Croix River Bluffland and Shoreland Management Regulations) that limit the density, location and appearance of new development, until adoption of City standards.
- The City will revise its Development Code and policies as needed to include protection of scenic views of the river and allow visual or physical access in appropriate locations, including:
  - Follow the recommendations of the Parks, Trails, Recreation and Open Space Plan to improve access, increase visibility, and improve stewardship.
  - Improve visual access to the river corridor where potential overlooks or viewpoints exist, while avoiding damage to sensitive resources.
  - Continue developing the City's inventory of scenic resources, such as scenic roads and view sheds. Use this information to regulate cell tower development, and to offer incentives to protect scenic resources and viewsheds.
- The City will work with river corridor residents, the National Park Service and scenic river interest groups to increase City-wide awareness and stewardship of the area's resources.

**Goal 5. The City will protect and enhance the quality of wetland resources.**

Policies and Strategies:

- The City will serve as the LGU for the Wetland Conservation Act (WCA), except for that area where Rice Creek Watershed District serves as the WCA LGU. The City will utilize the technical assistance provided by the Washington Conservation District in carrying out its role as WCA LGU.
- The City will support and help to implement Watershed District assessments and requirements for wetland management, including buffer requirements and pretreatment of storm water prior to discharge into wetlands through the development review process.
- Wetlands that have not been inventoried by the Watershed Districts will be inventoried by owners/developers as part of development applications. The City will require that owners/developers complete a functions and values assessment and implement appropriate buffer requirements and other best management practices. Watershed rules regarding wetland management will be applied based on the results of the assessment and the wetland classification.

**Goal 6. The City will protect and enhance the quality of natural resources.**

Policies and Strategies:

- The City will work with state agencies, Washington County, Washington Conservation District, local Watershed Districts, residents and landowners to protect and enhance the natural communities and natural resources within the City through implementing its Comprehensive Plan, Development Code and ordinances.
- To retain the rural character of Scandia and protect natural resources, the City will encourage developers to maintain large, connected areas of open space, rather than small, fragmented natural areas.
  - The City will encourage developers and landowners to use Open Space Conservation Subdivisions and park dedication to maintain large connected areas of open space, retain native vegetation, protect habitat and manage storm water.

- The City will encourage developers to use the natural resource corridor assessment map to identify and protect key connections between natural systems.
- The City will encourage subdivision design that preserves natural drainage systems and requires wetland and wetland buffer protection.
- The City will work with other organizations and support efforts to control the spread of invasive exotic species.
- The City will use the natural resource priorities map included in its Comprehensive Plan and the 2006 Open Space Plan map to identify large, connected natural systems and will work with property owners, other governmental units, agencies and developers to protect the high-quality natural areas identified on the natural resource priorities map.
- Scandia will continue to coordinate with both the Minnesota Department of Natural Resources and Washington County on plans for the long term acquisition and development of William O'Brien State Park and Big Marine Park Reserve.
- The City will coordinate with Washington County and other partners on a land acquisition programs for high quality areas identified on the natural resource priorities map.
- The City will encourage the restoration of indigenous plant communities and wildlife habitat in all private and public developments through its Open Space Conservation Subdivision option and the landscape plan requirements in its Development Code.
- The City will coordinate with the DNR on the review of developments with potential locations of rare plant and animal species.
- The City will implement performance standards and permit conditions for the management of mining operations in order to minimize or prevent negative impacts to resources and nearby land uses.

**Goal 7. The City will utilize its Development Code and ordinances and work with other organizations to preserve and protect the quality and quantity of groundwater resources.**

Policies and Strategies:

- The City will cooperate with Washington County, MPCA and the Watershed Districts in managing land use to protect ground water resources. The City will enforce its Development Code, Subdivision Regulations, and ordinances to protect groundwater quality and recharge areas.
- The City will work with Washington County to identify sensitive groundwater recharge areas and groundwater dependent natural resources and use this information to guide development. The City's development code limits contaminant-generating land use activities to areas where the potential to contaminate groundwater is low, and includes performance standards for management of hazardous materials.
- In keeping with its general rural character, Scandia plans to continue relying primarily on individual on-site water and sewer systems to serve both existing and future development in areas outside the village center. In cooperation with Washington County, the City will enforce strict conformance with regulations for the design, installation, and maintenance of on-site treatment systems including minimum design, licensing, and installation requirements of the Minnesota Rules Chapter 7080.
- Alternative and experimental wastewater treatment systems designed to serve a group of residential units may be considered for developments in the village center or as part of Open Space Conservation Subdivision projects, provided they are privately owned and conform to adopted local and state standards.

- The City supports inspection of on-site individual sewage treatment systems by an MPCA certified inspector at the time of property sale or transfer and requirements that the systems meet state standards.
- The City will respond to pollutant spills that may impact ground or surface waters. The City's Fire Department coordinates response efforts based on established Hazmat protocols. The City will request assistance from the MPCA or other agencies as needed to respond to spill events.
- The City will continue to work with Washington County and the State of Minnesota as permitting agencies, as the City operates and maintains the existing community sewage treatment systems on Big Marine Lake and in the Village.
- The City will promote the use of native species to minimize the need for irrigation in order to reduce groundwater use.

**Goal 8. The City will work with others on water and natural resource education efforts that help to protect the quality of those resources.**

Policies and Strategies:

- The City will support and promote the existing water-related education efforts of local watershed districts, Washington County, and other agencies.
- The City will cooperate with Watershed Districts to provide educational materials to residents and businesses regarding the relationship between storm water runoff and impaired waters and landowner practices that can reduce the volume of runoff or improve the quality of runoff. (e.g., management of sediment on impervious surfaces, lawn care, winter sidewalk and road maintenance, etc).
- The City will work with local watershed districts to create and distribute an Information Packet with information on application requirements, deadlines, the review process, permitting requirements of the City and local watershed districts, etc., to developers at the beginning of the development process.
- The City will encourage landowners in already developed areas to improve storm water drainage to reduce the volume of runoff and polluted runoff and participate in Watershed District cost-share programs and projects.
- The City will provide educational materials to residents about how to avoid damage to groundwater resources when using household chemicals in Individual Sewage Treatment Systems (ISTS).
- The City will provide information that encourages water users to practice water conservation techniques.
- The City will provide educational materials to residents and businesses on utilizing native plants in their landscaping.
- The City will encourage local nurseries to identify native plants and provide educational programs on native landscaping that protects surface water and groundwater.
- The City will work with the Washington Conservation District, the DNR, and other agencies to promote existing invasive species education efforts (such as the DNR's Invasive Species Program) within City boundaries.
- The City will encourage projects and efforts to remove invasive and exotic plants and animal species.



## VI. IMPLEMENTATION PLAN

### A. Actions to Implement This Plan and Address Identified Issues

The City will complete and/or support the specific implementation actions listed below to implement the LWMP and Watershed District Plans to address the issues identified in Section IV. The City has prioritized the implementation actions as “high” and “medium” priority efforts. High priority efforts are those that are required by state or district rules and will begin soon after the adoption of the LWMP; medium priority efforts are those that will be implemented over a longer time frame.

#### 1. High Priority Implementation Actions:

- a) The City concurs with and adopts the Watershed Districts’ Water Management Plans, standards and rules. The Watershed Districts will continue to enforce surface water regulations and permitting within the City, within each of their geographic areas. **(Addresses Goals/Policies/Strategies 1, 2, 3, 4)**
- b) The City will incorporate the CMSCWD Wetland Management Plan into its implementation of the Wetland Conservation Act (WCA). The CMSCWD will assist the City to coordinate the implementation of WCA with the District’s Plan. **(Addresses Goals/Policies/Strategies 1 and 5)**
- c) The City will continue to act as the local government unit (LGU) responsible for administering the requirements of the WCA in the CMSCWD and CLFLWD, and will use the services of the Washington Conservation District (WCD) staff for technical expertise in administering the WCA. The City will continue to recognize RCWD as the LGU responsible for administering WCA within that Watershed’s boundary. **(Addresses Goals/Policies/Strategies 1 and 5)**
- d) The City will coordinate its review of development proposals with the Watershed Districts, and will manage land use to support protection of surface and ground waters through implementation of its Development Code. **(Addresses Goals/Policies/Strategies 1, 4, 6, and 7)**
- e) The City supports the Watershed Districts’ implementation of their standards for management of water quantity and quality, including control of peak runoff, volume control, infiltration and filtration requirements, wetland standards, and best management practices to control Total Suspended Solids (TSS), Total Phosphorus (TP), and runoff from development or redevelopment within the City. The Districts will play the primary role in reviewing the storm water plans for development applications within the City, and implement their rules through the review and permit process. The City will include the comments and recommendations of the Watershed Districts in application reviews. **(Addresses Goals/Policies/Strategies 1, 2 and 3)**

#### 2. Medium Priority Actions:

- a) The City will continue to update the Memorandum of Understanding (MOU) with the CMSCWD as needed detailing the cooperative process that will be used for coordination between the District plan activities (including regulation and enforcement when needed) and the City’s land use and permitting responsibilities, to help to minimize the permit approval timeline and

minimize duplication of efforts. **(Addresses Goals/Policies/Strategies 1 and 4)**

- b) The City will continue to update a Memorandum of Understanding (MOU) with the CLFLWD as needed detailing the cooperative process that will be used for coordination between the District plan activities (including regulation and enforcement in shoreland and floodplain areas) and the City's land use and permitting responsibilities, to help to minimize the permit approval timeline and minimize duplication of efforts. **(Addresses Goals/Policies/Strategies 1 and 4)**
- c) The City will continue to participate in the Districts' Total Maximum Daily Load (TMDL) studies of impaired waters, and will cooperate with the Districts in the implementation of TMDL plans. The City will implement its Development Code to manage land use to protect the water resources in the City, including the Impaired Waters. **(Addresses Goals/Policies/Strategies 1, 2 and 3)**
- d) The City will cooperate with the CMSCWD as the District implements the cost-share projects identified within Scandia in the District Management Plan. The District indicated that it will bear the costs for design and installation of the projects on a case by case basis. **(Addresses Goals/Policies/Strategies 1 and 3)**
- e) The City will complete an inventory and map of its existing stormwater management system. **(Addresses Goals/Policies/Strategies 1, 5 and 6)**
- f) The City will support the implementation of the CLFLWD's TMDL plan for Bone Lake by implementing its Shoreland and Floodplain ordinances. The City requests that the Watershed District continue to implement its storm water management and erosion control ordinance in the Bone Lake watershed area. The City supports and will cooperate with the projects the CLFLWD has identified to implement the Bone Lake TMDL study. **(Addresses Goals/Policies/Strategies 1 and 3)**
- g) The City supports the Rice Creek Watershed District's efforts to study White Rock Lake and identify potential issues related to water quality and lake management. **(Addresses Goals/Policies/Strategies 1 and 3)**
- h) The City will cooperate with the education and outreach efforts made by the local Watershed Districts, WCD and other agencies by including information related to water management and best management practices in its newsletter and/or website. **(Addresses Goals/Policies/Strategies 1 and 8)**

#### B. City of Scandia Funding Mechanisms and Capital Improvement Plan (CIP)

Scandia cooperates with Watershed Districts and may use general fund revenues to fund improvements when needed to address water quality and quantity concerns related to local roadways or public infrastructure.

The City also uses its general fund revenues to update its plans and ordinances. The City requires that applicants for zoning permits, building permits and other approvals submit fees and escrows to pay the costs related to application review. Applicant fees and escrows, and general fund revenues as needed, will be used to pay the cost of implementing shoreland and floodplain regulations and City ordinances.

The following surface and ground water-related projects are currently included in the City's Capital Improvement Plan (Appendix F):

- Water quality improvements at Lilleskogen Park—the City is working with



CMSCWD on water quality improvements, including a weir and wetland restoration.

- The City has included funding in its CIP for improvements to the Uptown Sewer System, including a dosing chamber and pretreatment system.
- The City is currently studying its 201 Community Sewer Systems on Big Marine Lake, particularly the Anderson/Erickson System. The City may amend its CIP to include system improvements based on the results of the study.

Private developers are responsible to build and maintain the storm water facilities within private developments.

#### C. Watershed District Implementation Projects and Capital Improvement Plans

Implementation of the Scandia Local Water Management Plan will require cooperation with local Watershed Districts to implement projects within the City that are identified in the District Plans.

The City supports the projects identified in the District Plans and Capital Improvement Plans that are within Scandia, including the following:

##### 1. Carnelian-Marine-St. Croix Watershed District Implementation Plan

The CMSCWD plan describes three categories of activities that are included in the District's Implementation Program: routine watershed management, focused watershed management, and impaired watershed management. Most of the activities included in these efforts are implemented by the District. Some are implemented in cooperation with local landowners and volunteers. Cost-share Program, and identifies several existing or potential water quality and environmental issues that will be addressed by the program. The District has ranked the proposed projects on a watershed basis. Many of the projects will be carried out in cooperation with private landowners.

Intergovernmental coordination is included in the implementation efforts. The District Plan requests that local communities develop a Memorandum of Understanding (MOU) with the CMSCWD detailing the cooperative process that will be used for coordination between the District plan activities (including regulation and enforcement when needed) and the City's land use and permitting responsibilities, to help to minimize the permit approval timeline and minimize duplication of efforts.

The District Plan identifies some potential cost-share projects to be implemented in Scandia. District staff indicated that the District will bear the cost of design and installation of the projects, and is seeking support and cooperation from the City for its implementation efforts for the following.

- 205th Street, St. Croix River bluff erosion control and storm water quality project. Estimated cost: \$15,000.
- Neighborhood Small Lot Stormwater Management Incentive Program in Downtown Scandia and lake neighborhoods. These projects are not defined in the plan, but may include implementation of storm water best management practices throughout the neighborhood. No cost estimate in the plan. The District estimates the cost of the Small Lot Stormwater Management Incentive Program at \$20,000 over the next 10 years.
- TMDL Study Implementation Projects. The District is currently completing TMDL studies on the impaired lakes in the District. The District is also participating in the Lake St. Croix River TMDL Study. These studies will recommend implementation projects to address the identified impairments. The District expects that the projects will be funded primarily by grants.

- The District has completed ravine reconstruction in Scandia to address existing problem areas, and has scheduled this activity in its Implementation Program. This includes work on the 197th Street ravine, estimated to cost \$65,000. Other ravine projects are estimated to cost \$60,000, but the District has not specified the locations of these projects.
- The District has scheduled some non-specific project in its Focused Watersheds, including Sand Lake in Scandia. The District estimates that the cost of these project will be \$40,000 per year for the next 10 years.
- Obtain direct tax forfeit properties near Big Marine Lake to protect high value tamarack bog. Cost will varie based on lot.
- Maintenance of the Bliss Bay and Lomond Trail N. Channels to ensure free flow. Activities include debris removal.
- Bliss Addition Stormwater Fesibility Study and Retrofit Water Quality Study.
- Gilbertsons Creek Restoration Project.
- Goose Lake Iron Ehanced Sand Filter Project.
- Goose Lake Landing BMPs.

## 2. Comfort Lake-Forest Lake Watershed District Implementation Plan

The District's Management Plan includes three categories of implementation activities: Administration, Programs and Projects. Administration activities are carried out by the District. Programs include development of District rules and permitting activities, education and outreach, and aquatic invasive species prevention and management. As noted above, the City concurs with and adopts the District's Water Management Plan, standards and rules. The CLFLWD Districts will continue to enforce surface water regulations and permitting within the City, within its geographic area.

The District advocates for intergovernmental coordination to accomplish the implementation efforts. The District Plan requests that Scandia complete a Memorandum of Understanding (MOU) with the CLFLWD detailing the cooperative process that will be used for coordination between the District plan activities (including regulation and enforcement when needed) and the City's land use and permitting responsibilities, to help to minimize the permit approval timeline and minimize duplication of efforts. The District believes that a commitment to cooperation will be particularly valuable to coordinate reviews and permitting in shoreland and floodplain areas.

- Scandia will complete the requested MOU with the District to implement intergovernmental coordination as required.

Bone Lake is a resource of significant concern to the Watershed District. The District has completed a TMDL study for Bone Lake, and identified an implementation plan and projects to address the lake impairment. The City will support the implementation plan by implementing its Shoreland and Floodplain ordinances. The Watershed District will continue to implement its storm water management and erosion control ordinance in the Bone Lake watershed area.

The City supports the District's monitoring and assessment efforts on local lakes, streams and wetlands, the District's Non-Point Source Pollution Abatement Grant Programs, education and outreach efforts, and aquatic invasive species prevention and management efforts.

The District identified some specific projects that it will implement to address water quality issues in Scandia lakes in its plan. The projects will be funded through the District's annual levy and supported through grants. The projects include the following:

### 3. Bone Lake

- Bone Lake Inlet and Outlet Fish Barriers. Bone Lake has an overabundance of rough fish, which disturb the lake bottom and can cause an increase in the internal load of phosphorus in the lake. The District will install a barrier to manage the movement of rough fish into Bone Lake at the inlet to the lake from Moody Lake. The project will be funded through grants and District funds.
- Bone Lake Infiltration Basin Planning and Design. The project will include design of an infiltration basin to provide volume reduction and water quality improvements through a subwatershed located east of the creek and near Oakhill Road North. Project planning and design will be funded by the District.
- Bone Lake Infiltration Basin Implementation. The project would implement the Infiltration Basin Design identified above. The facility will require private landowner participation to identify its location.
- Bone Lake Shoreland Survey. The District will complete a shoreline survey to identify areas for improvements such as shoreline buffers and lakescaping.
- Alum Treatment. The District may conduct an alum treatment or other in-lake treatment to reduce the internal phosphorus load in Bone Lake.
- Bone Lake Diagnostic Implementation. The CLFLWD will implement the phosphorus reduction activities identified in the Bone Lake Diagnostic Study. The Study included targeting tributary monitoring and watershed modeling to identify additional sources of watershed phosphorus loads to Bone Lake and target phosphorus reduction activities in the watershed.
- The District is proposing to complete a variety of feasibility studies and designs for wetland restorations in the Bone Lake watershed to reduce phosphorus and improve wetland function.
- The District completed a rural subwatershed assessment to identify agricultural sources of phosphorus loading to Bone Lake and prioritize agricultural best management practices to reduce phosphorus and other pollutant loading.

### 4. Other Lakes and Streams

- The CLFLWD will conduct lake water quality studies and develop management plans for Sea Lake, Nielsen Lake and Clear Lake, and will complete a stream assessment of the Bone-Birch-School-Little Comfort lake Tributary, located in Scandia. IN 2016, the District completed the following surveys on Sea Lake: fish community, aquatic plant point-incept and sediment characteristics.

### 5. Rice Creek Watershed District

A small portion of Scandia is included within the Rice Creek Watershed District—the area around White Rock Lake. The District's Plan includes no implementation projects for the White Rock Lake area. The City supports the District's efforts to study this lake and identify potential issues related to water quality and lake management.

#### D. Official Controls

The City of Scandia updated its Development Code in 2017. The new code includes updates to several sections that address surface and ground water management. These sections were updated to be consistent with the requirements of the three local Water Management Organizations. Updated sections include the following:

Chapter 2:           Zoning Regulations, Section 3 Development Standards

                  Subdivision    3.3     Environmental Regulations

                  Subdivision    3.6     Land Alteration and Grading

                  Subdivision    3.7     Stormwater Management

                  Subdivision    3.8     Land Clearing

                  Subdivision    3.11    Woodland and Tree Preservation

Chapter 3:           Subdivision Regulations

                          Section 14.0    Stormwater Management and Erosion Control

Other recent ordinances that include regulations that address surface and groundwater protection and management that were not changed in 2011 include the following:

Ordinance 103           Mining and Related Activities

Ordinance 107           Shoreland Management

Ordinance 110           Floodplain Management

The City also updated and adopted new Engineering Standards and Detail Specifications in 2011 that address surface water standards and design, erosion and sediment control.

**Table 10: Summary of Proposed Watershed Projects.**

Watershed District	Project	Improvement Cost Estimate <sup>1</sup>		Approximate Project Timeline	Funding Source
		Low	High		
CMSCWD	205th Street – St. Croix River Bluff Erosion Control and Stormwater Quality Project	\$15,000	\$25,000	2018 - 2019	CMSCWD/City/BWSR
	Neighborhood Small Lot Stormwater Management Incentive Program in Downtown Scandia and Lake Neighborhoods	\$30,000	\$50,000	2018 - 2025	CMSCWD/City/BWSR
	TMDL Study Implementation Projects	TBD		2018 - 2028	CMSCWD/City/BWSR
	Ravine Reconstruction	\$60,000	\$85,000	2018 - 2025	CMSCWD/City/BWSR
	Non-Specific Project in its Focused Watersheds, including Sand Lake	\$40,000/Year for 10 Years		TBD	CMSCWD/City/BWSR

CLFLWD	Bone Lake Diagnostics Implementation – Numerous Projects	\$425,000	2018-2021	CLFLWD/City/BWSR
	Bone Lake Alum Treatment	\$300,000	2020	CLFLWD/City/BWSR
	Sea Lake, Nielsen Lake and Clear Lake Water Quality Studies and Management Plan Implementation	TBD	2018 - 2028	CLFLWD/City/BWSR
	Stream Assessment of the Bone-Birch-School-Little Comfort Lake Tributary	TBD	TBD	CLFLWD/City/BWSR
RCWD	White Rock Lake (RCWD)	No Projects Planned		

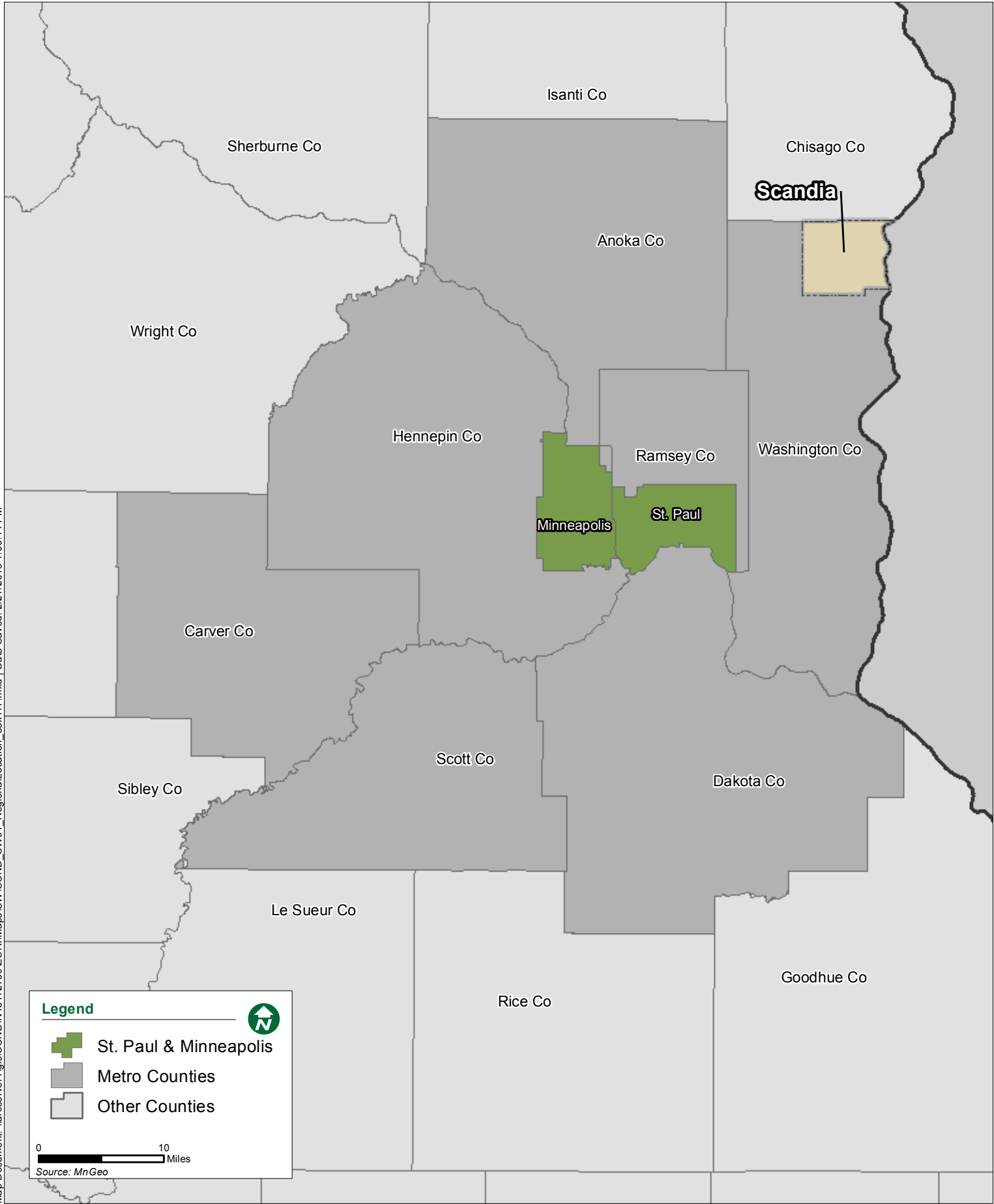
## VII. AMENDMENT PROCEDURES

This Local Water Management Plan will be applicable until the City's next Comprehensive Plan update, or until another update is required based on updates of local watershed district plans. Plan amendments will be incorporated by following the review and adoption steps outlined below:

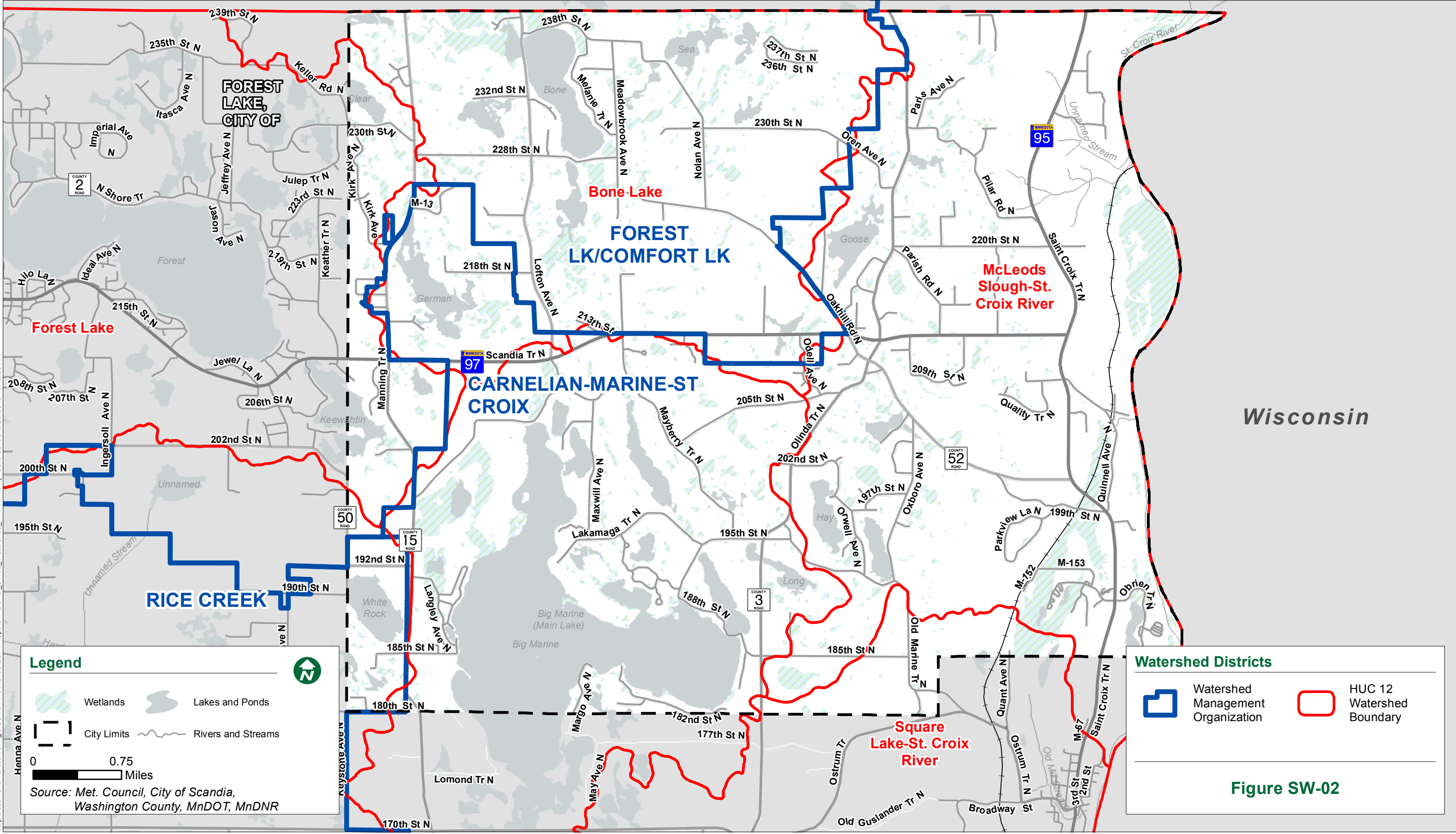
1. The City shall prepare proposed amendments to the plan and give notice of the proposed plan amendments. Notice of public hearing on proposed plan amendments and a description of the amendments shall be published by the City in at least one legal newspaper within the City. Publication shall occur at least ten days before the hearing. Notice shall also be mailed at least 30 days before the hearing to the Metropolitan Council and watershed management organizations having jurisdiction within the city. At the hearing, the City shall solicit comments on the proposed plan amendments. Public hearings on plan amendments are likely to be held at regular Planning Commission meetings.
2. After consideration but before adoption by the City, the City shall submit amendments to its water management plan to the watershed management organizations having jurisdiction within the city for review for consistency with the watershed plan. The City shall also submit amendments to the plan to Washington County for review for consistency with the Washington County Groundwater Plan. The organizations shall have 60 days to complete their review and approve or disapprove the local plan or parts of the plan. If the organizations fail to complete their review within the prescribed period, the local plan shall be deemed approved unless an extension is granted by the City.
3. Concurrently with the City's submission of local water management plan amendments to the watershed management organization, the City shall submit amendments to its water management plan to the Metropolitan Council for review and comment. The council shall have 45 days to review and comment upon the local plan. The council's 45-day review period shall run concurrently with the 60-day review period by the watershed management organizations. The Metropolitan Council shall submit its comments to the watershed management organizations and shall send a copy of its comments to the City.
4. After approval of amendments to the local plan by the watershed management organizations, the City shall adopt and implement its plan within 120 days, and shall amend its official controls accordingly within 180 days.
5. The LWMP will be amended as necessary in response to Watershed District rule changes.

# Appendix A: Figures

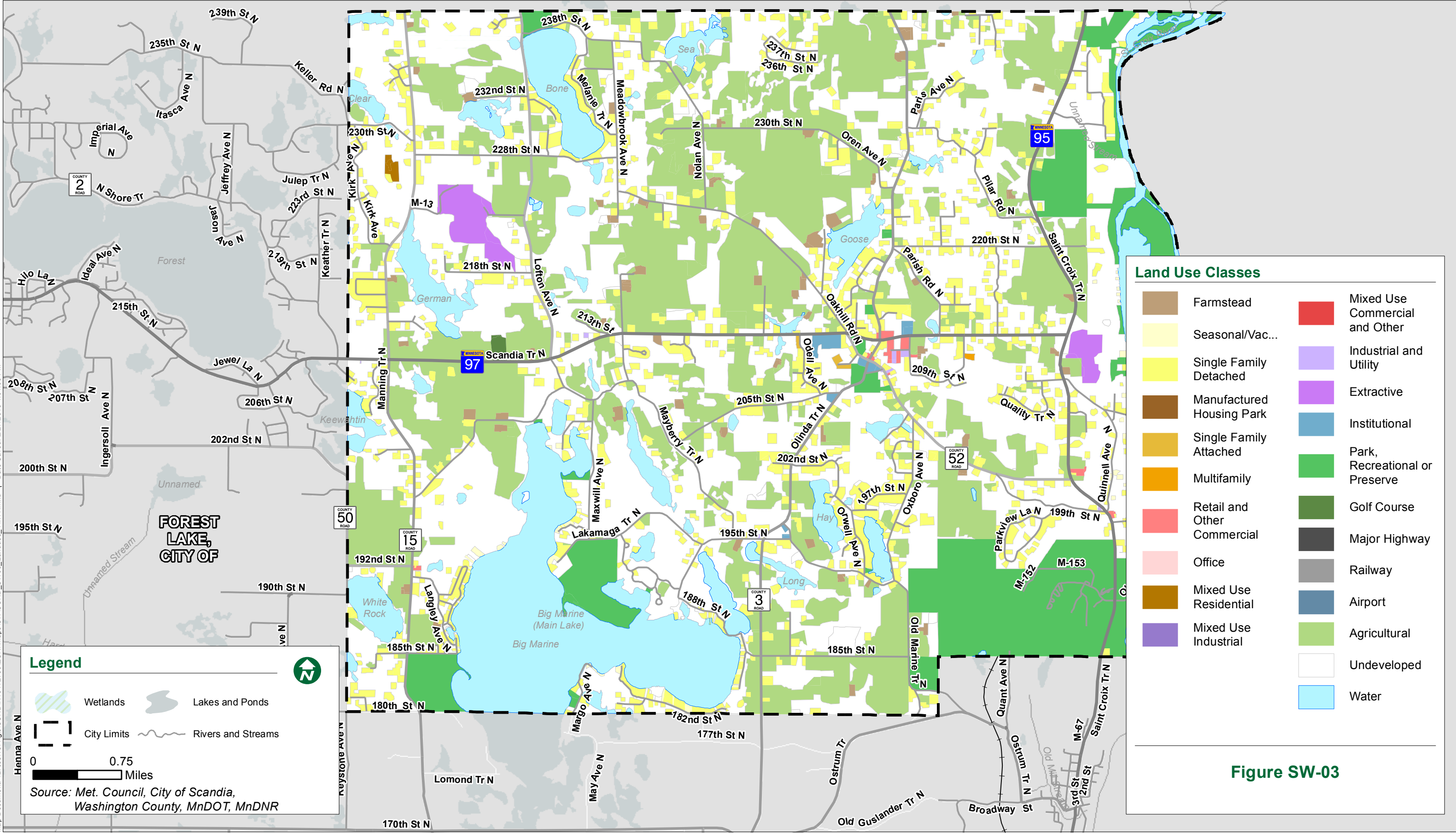
- Figure SW-01: Regional Location Map**
- Figure SW-02: Watershed Districts**
- Figure SW-03: Existing Land Use**
- Figure SW-04: Zoning**
- Figure SW-05: Future Land Use**
- Figure SW-06: Lakes, Wetlands and Shoreland Areas**
- Figure SW-07: FEMA Floodplain**
- Figure SW-08: Impaired Waters and Water Quality Grades**
- Figure SW-09: Minnesota Land Cover Classification**
- Figure SW-10: Hydrologic Soils**
- Figure SW-11: Soil Types**
- Figure SW-12: Surficial Geology**
- Figure SW-13: Sand and Gravel Resources**
- Figure SW-14: Sensativity to Groundwater Pollution**
- Figure SW-15: Natural Areas, Open Space, & RSEA**
- Figure SW-16: MCBS Sites of Biodiversity Significance**
- Figure SW-17: Storm Sewer System**
- Figure SW-18: Subwatersheds**







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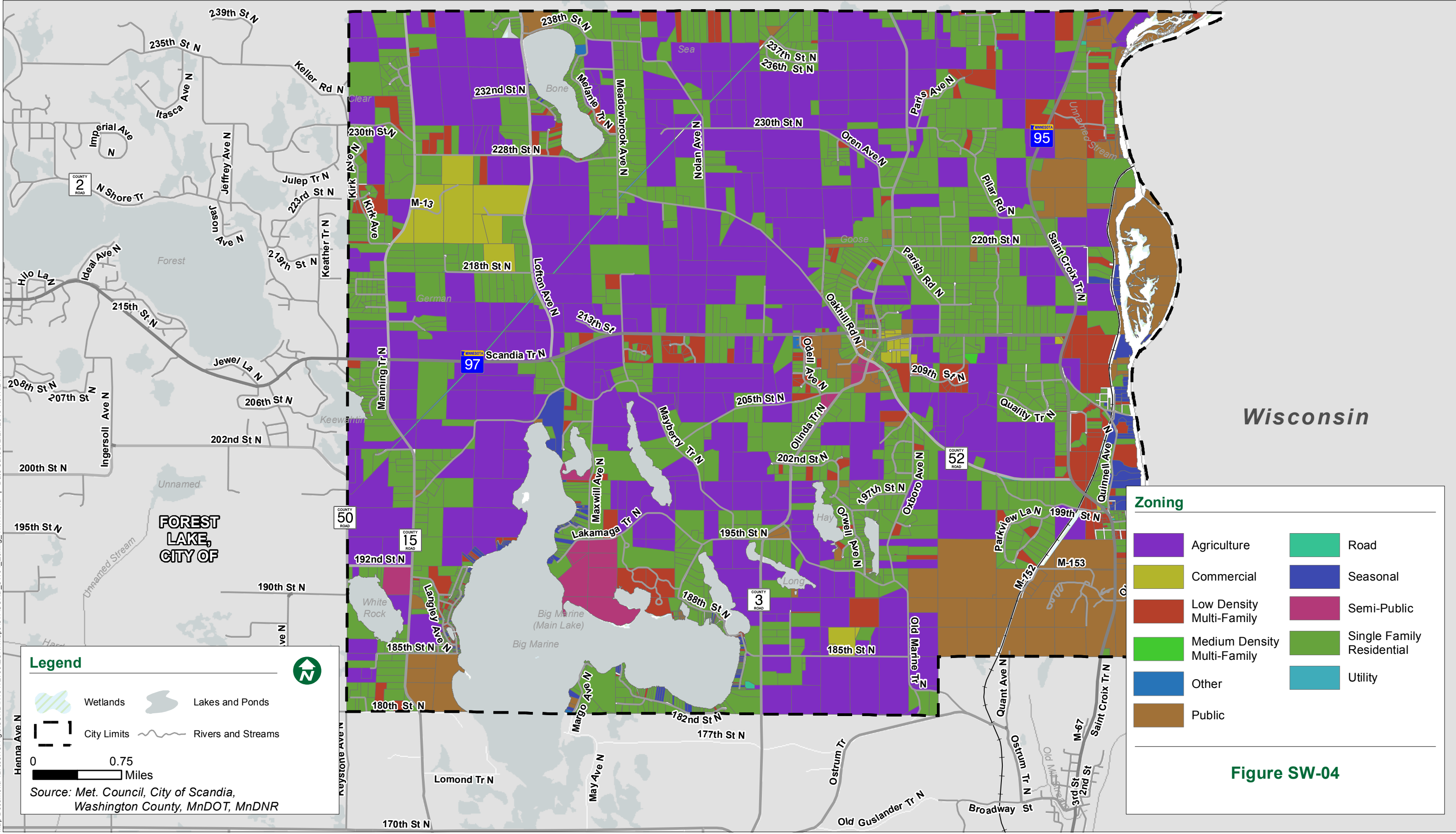


2040 Comprehensive Plan

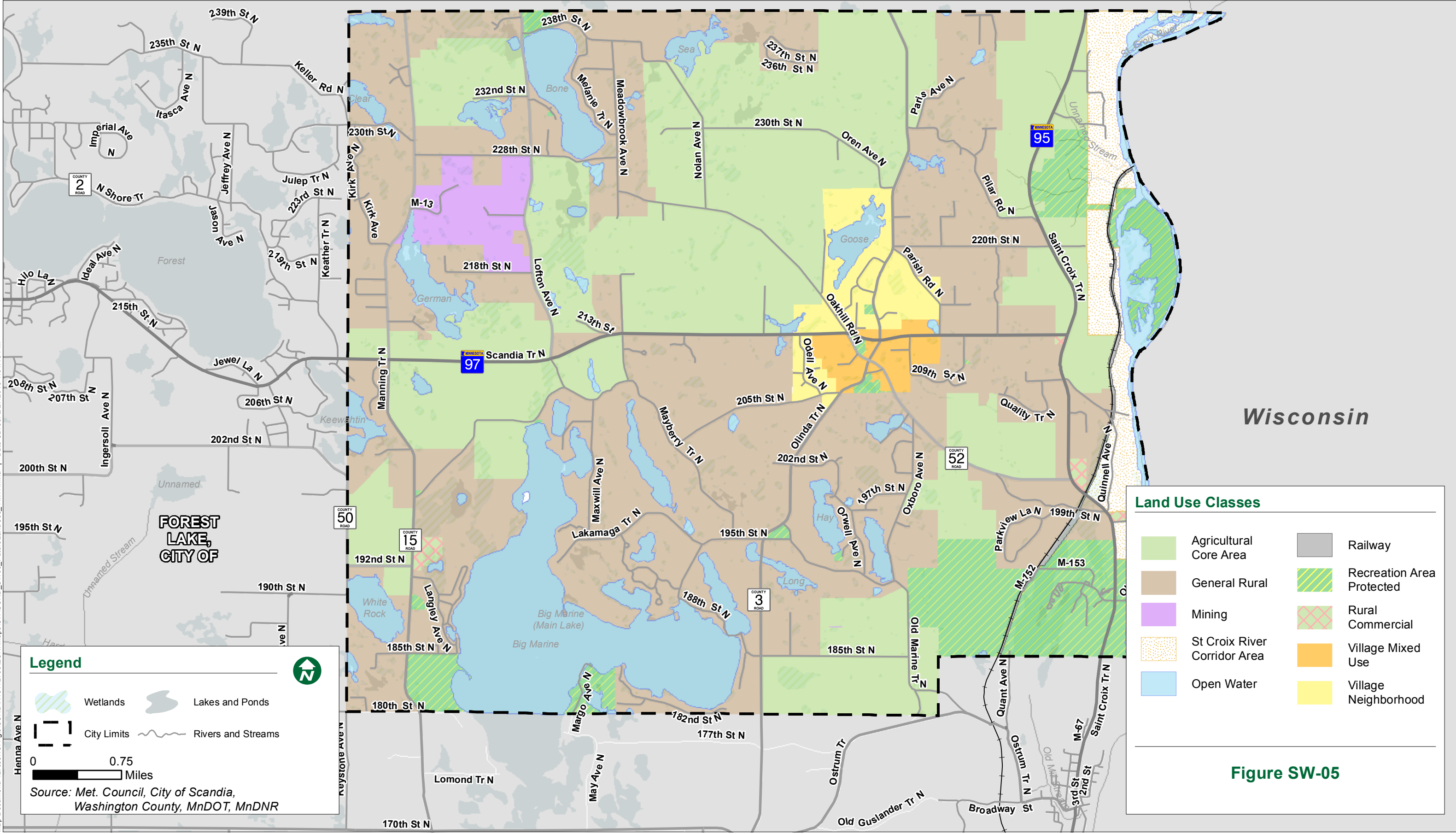
Scandia, MN

Zoning

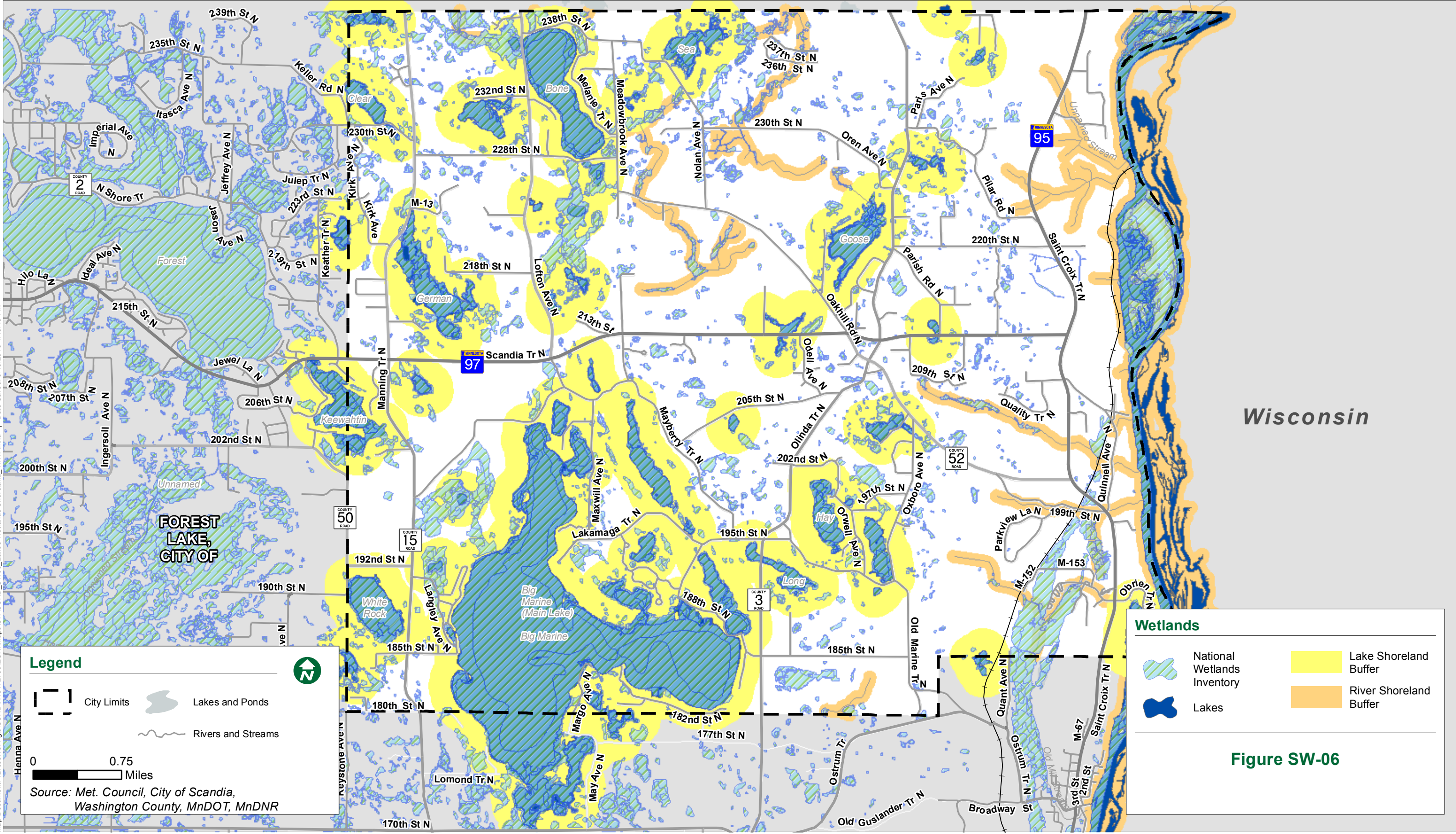
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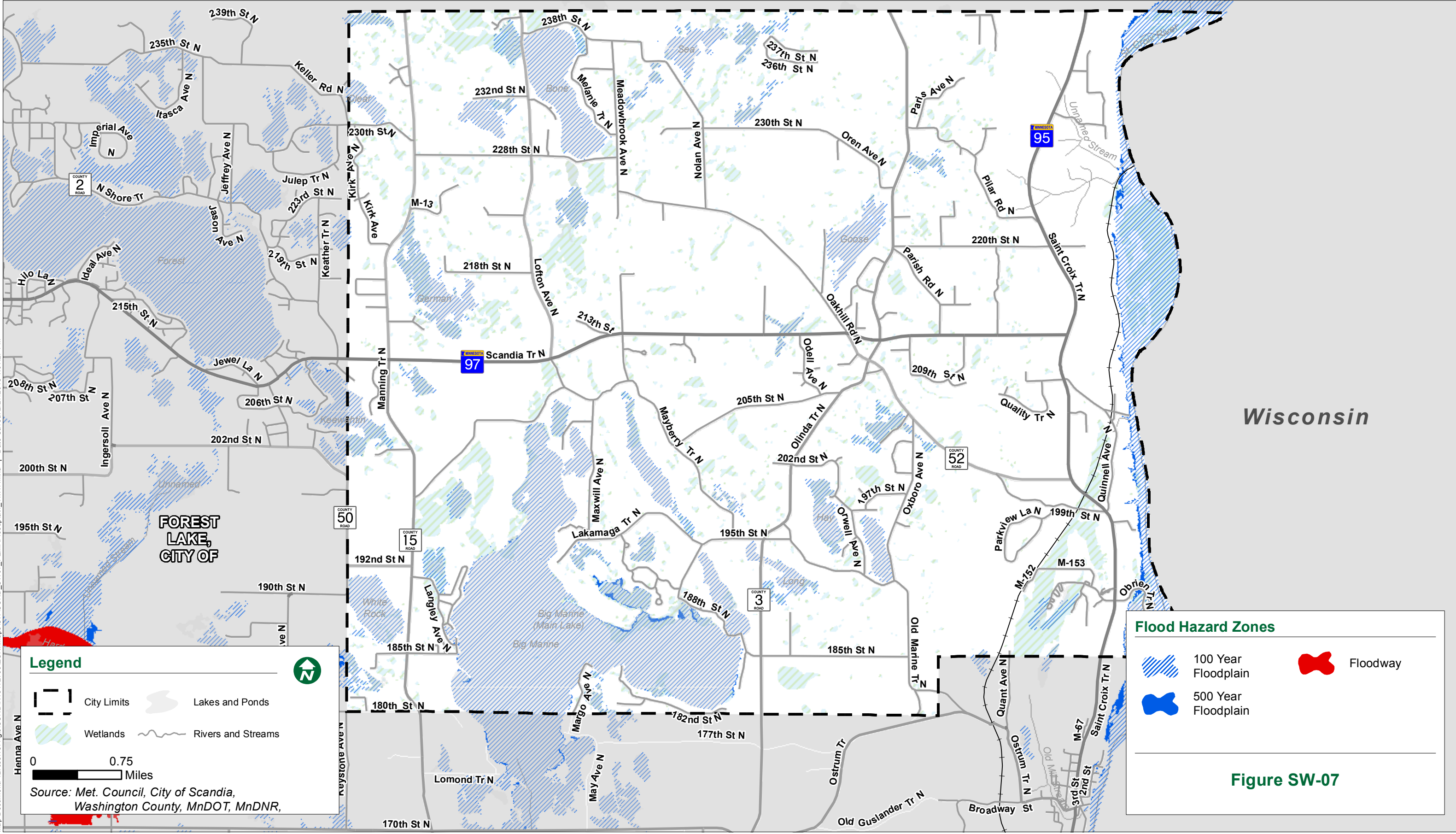
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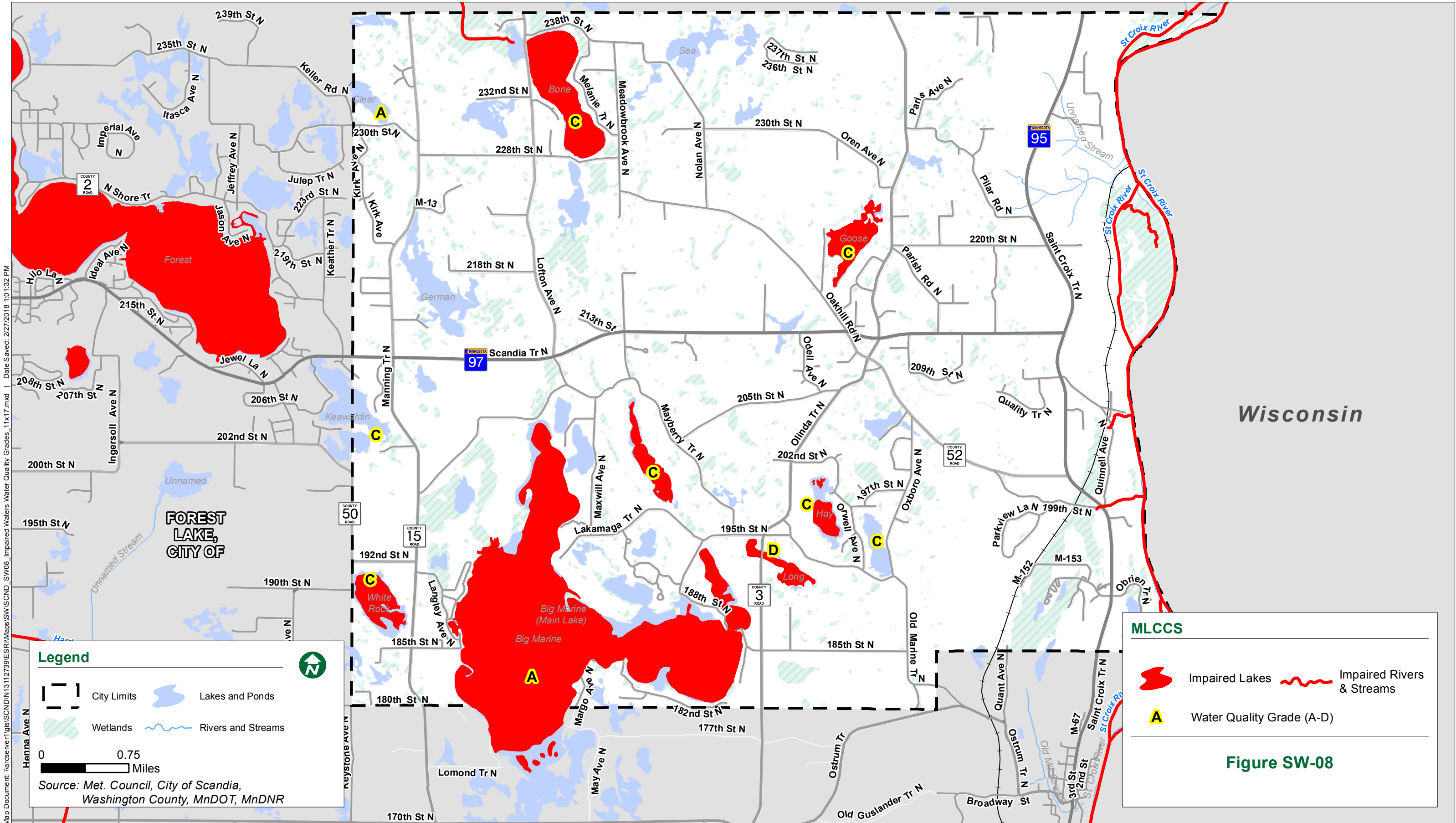




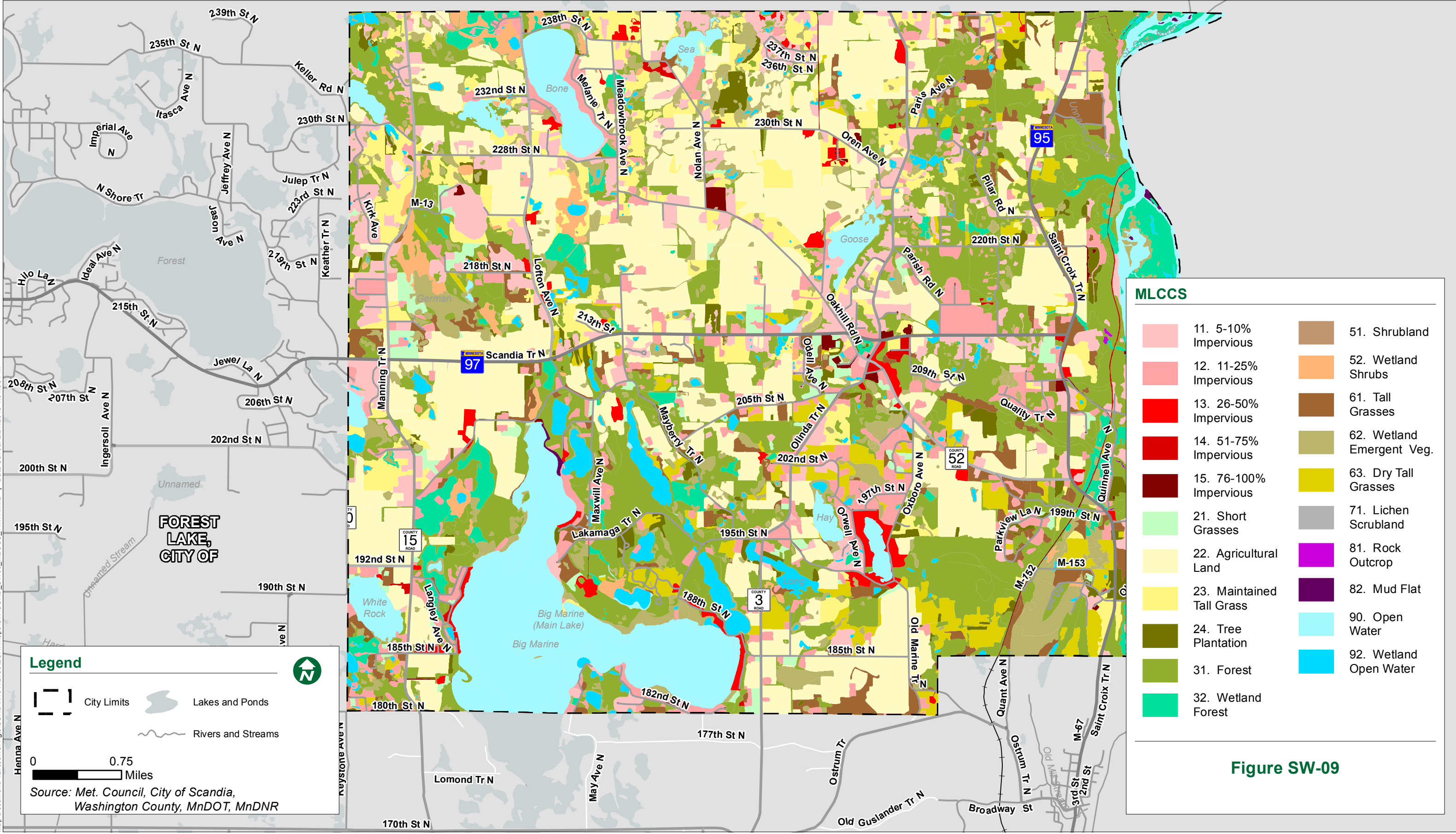




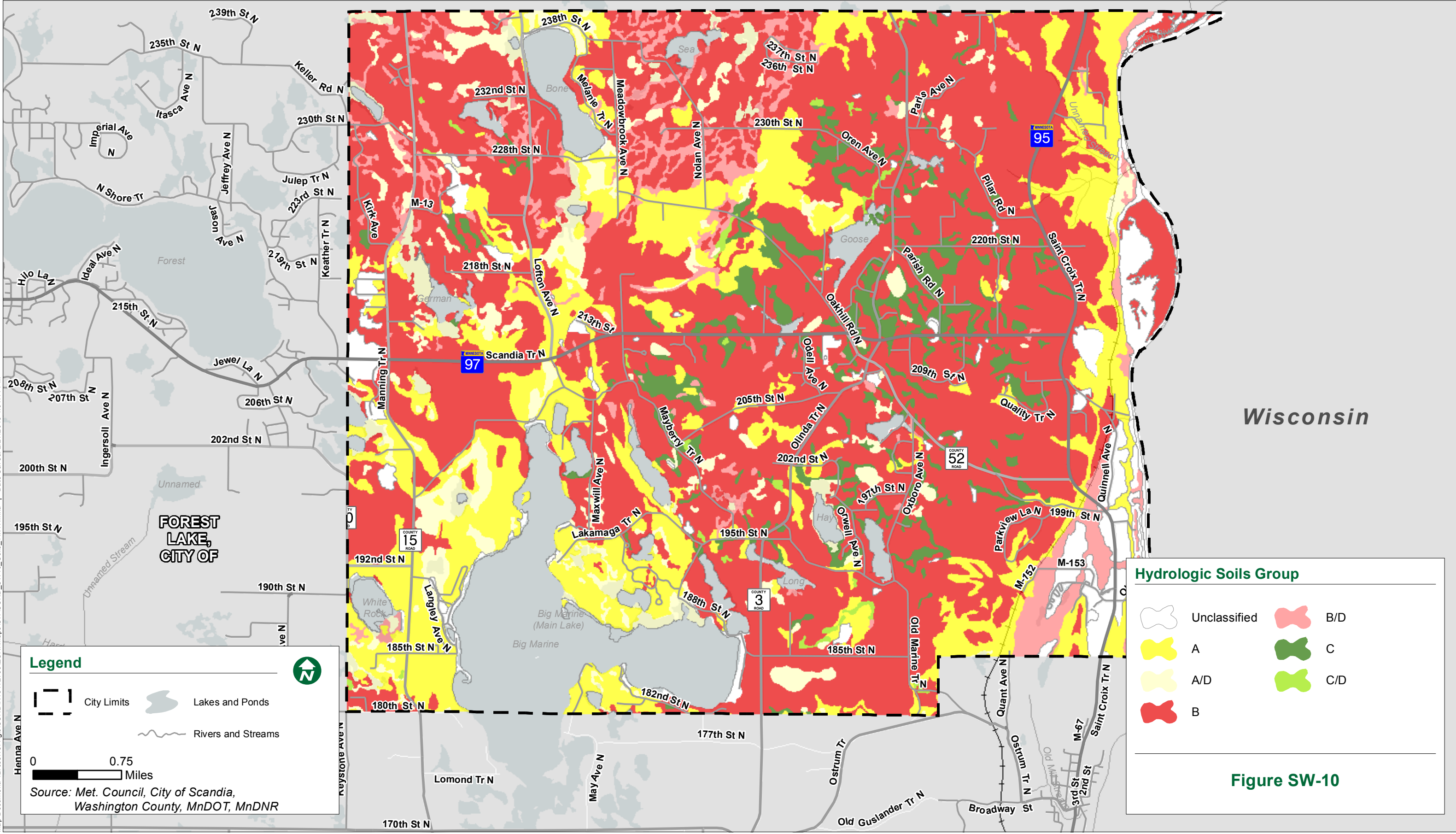




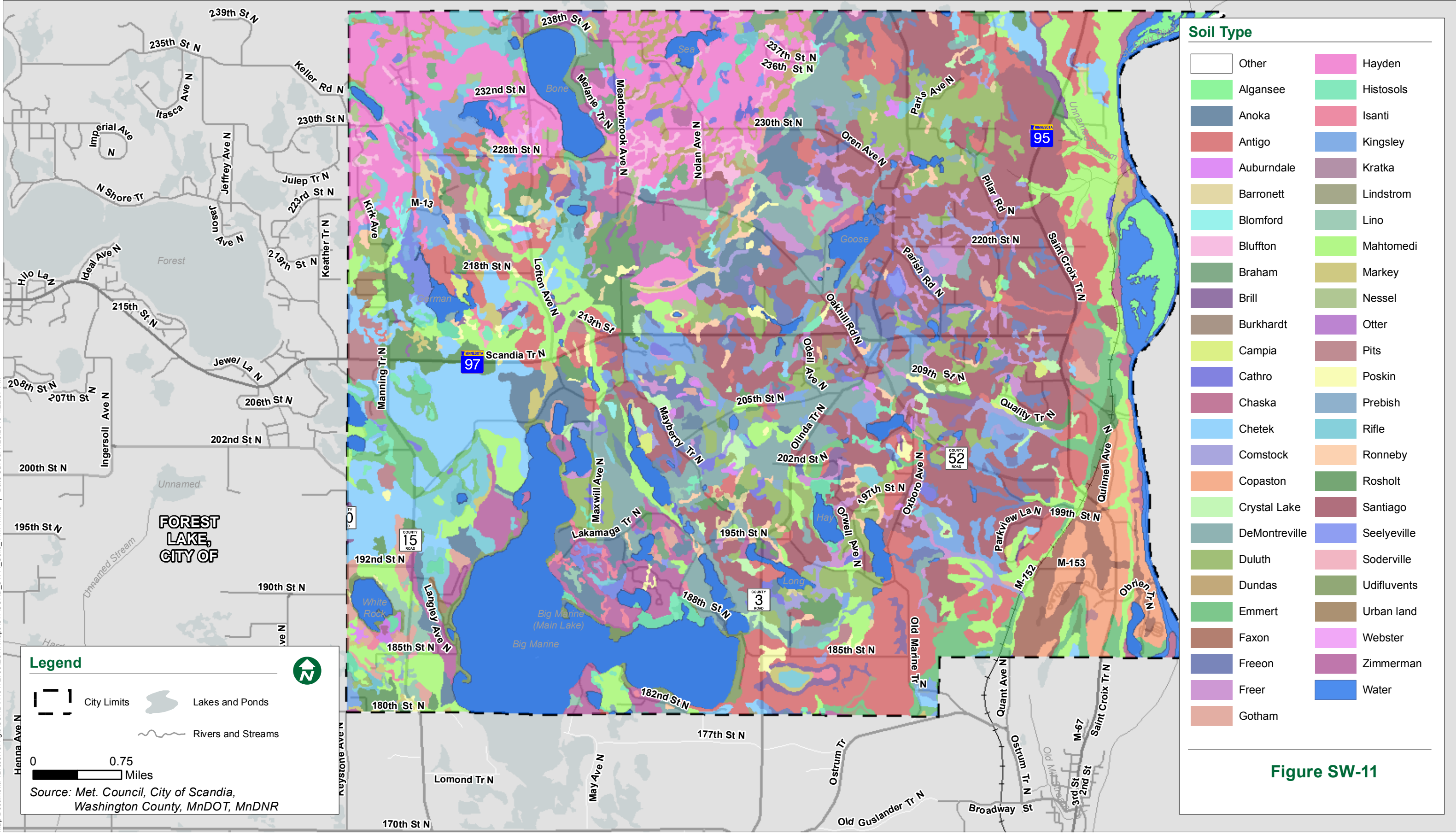




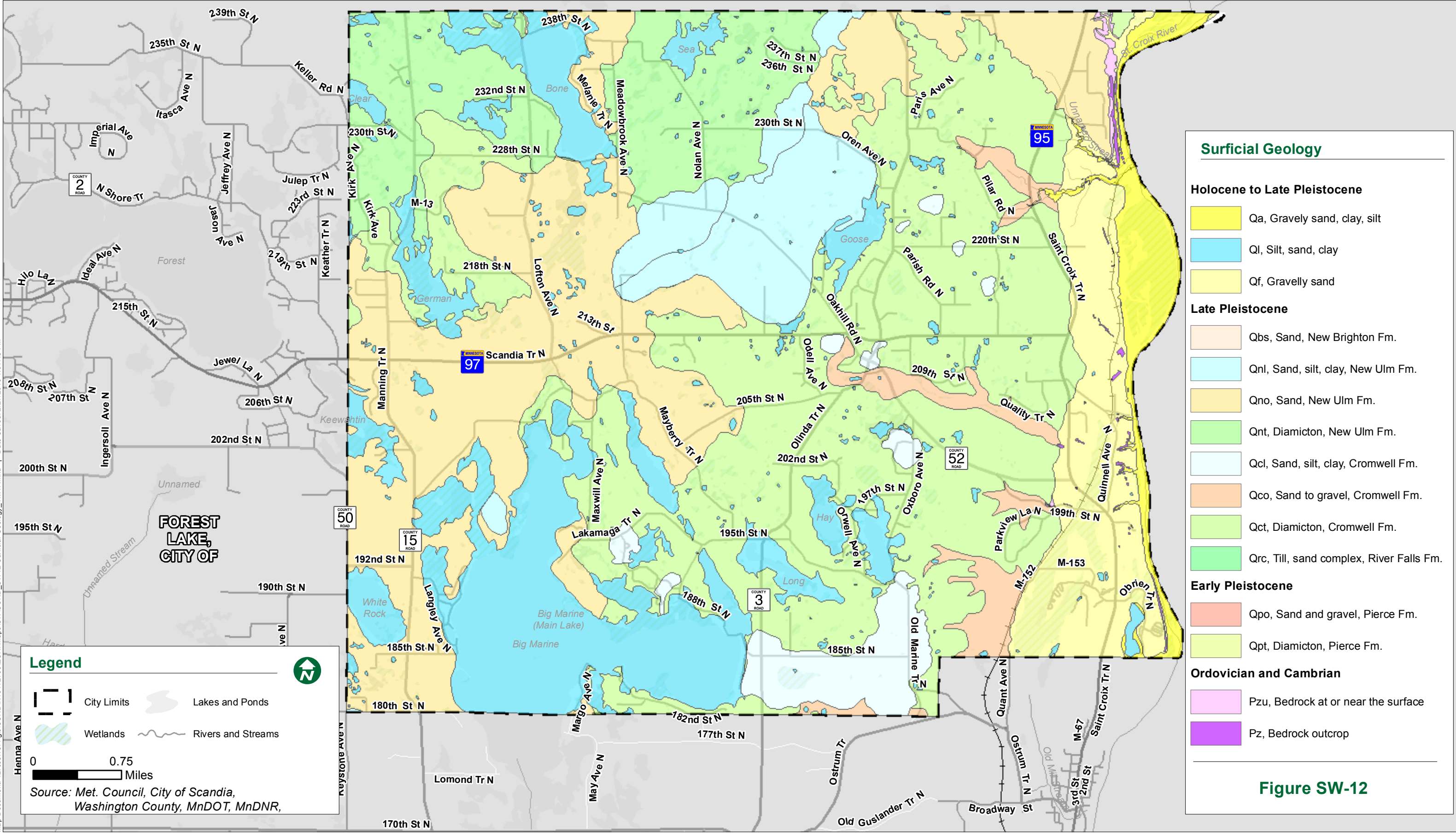


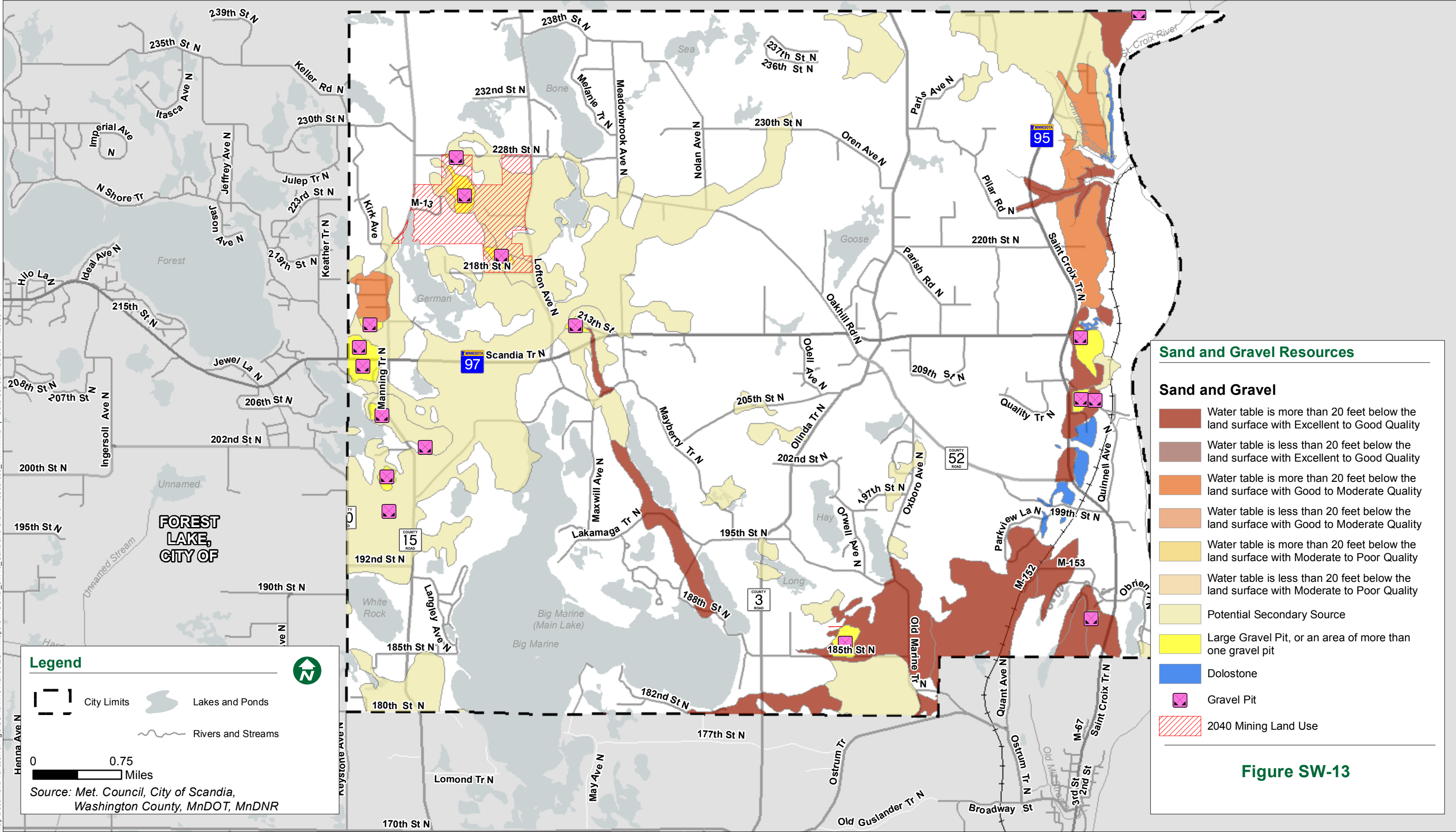




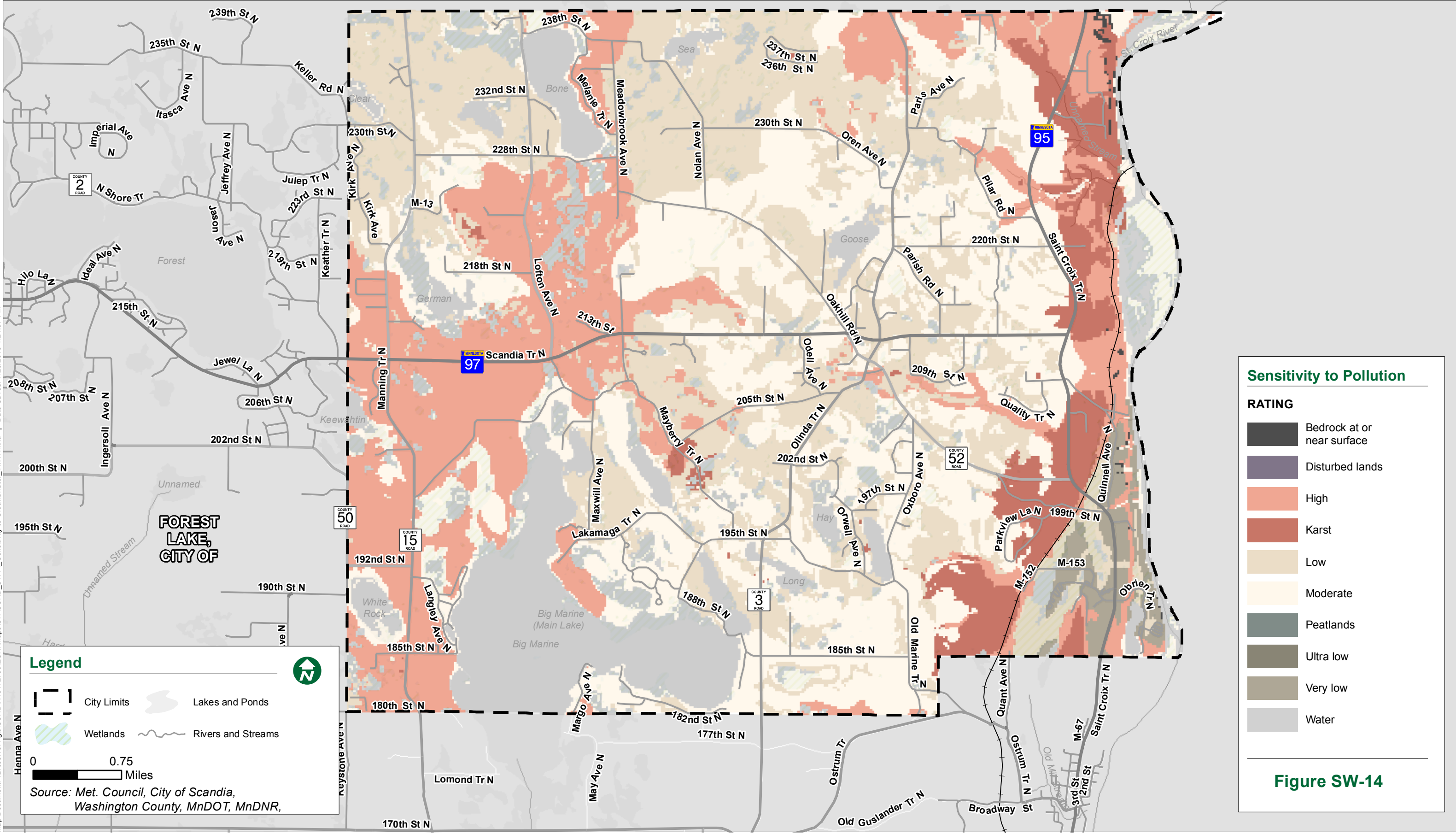












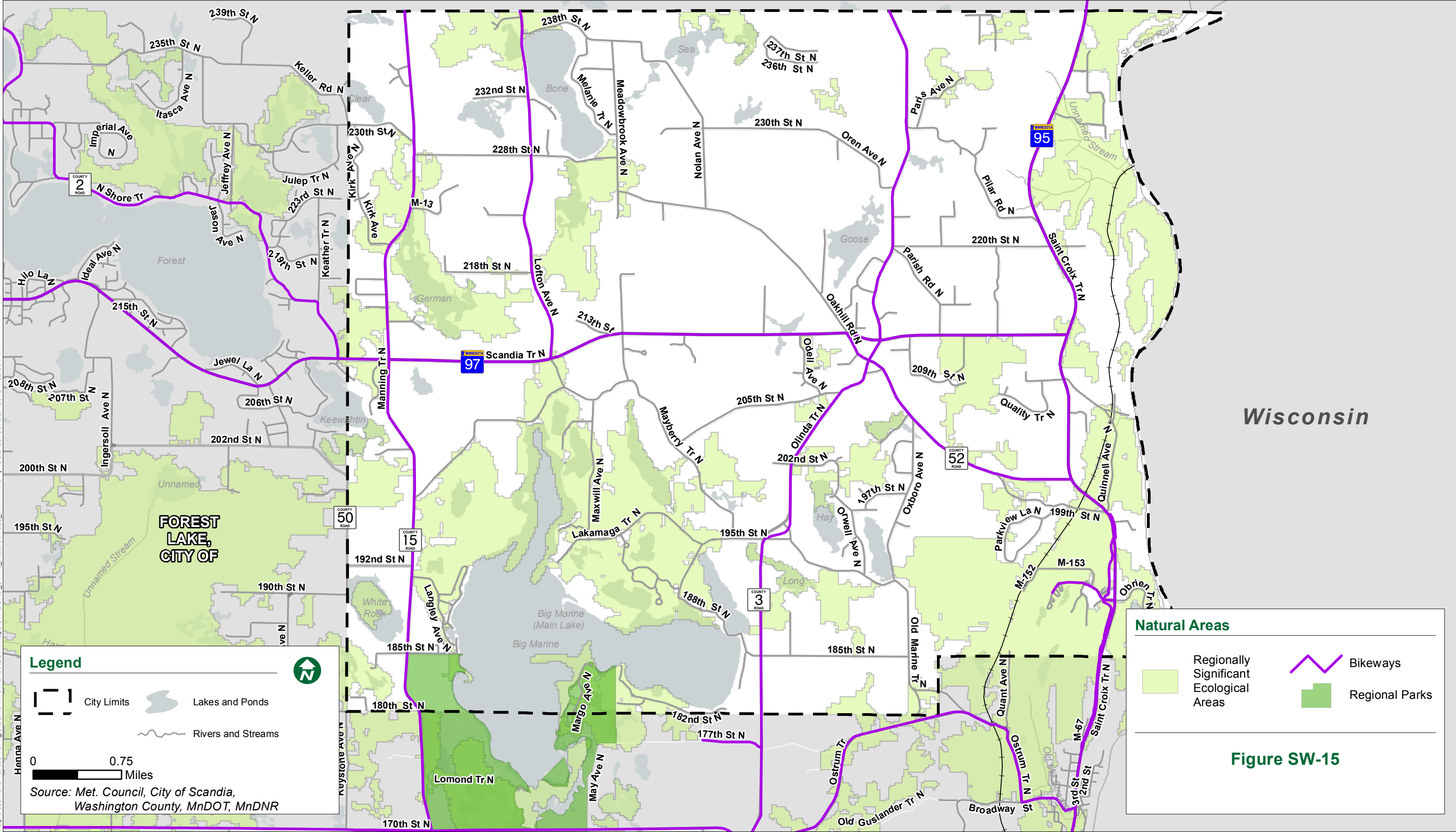


2040 Comprehensive Plan

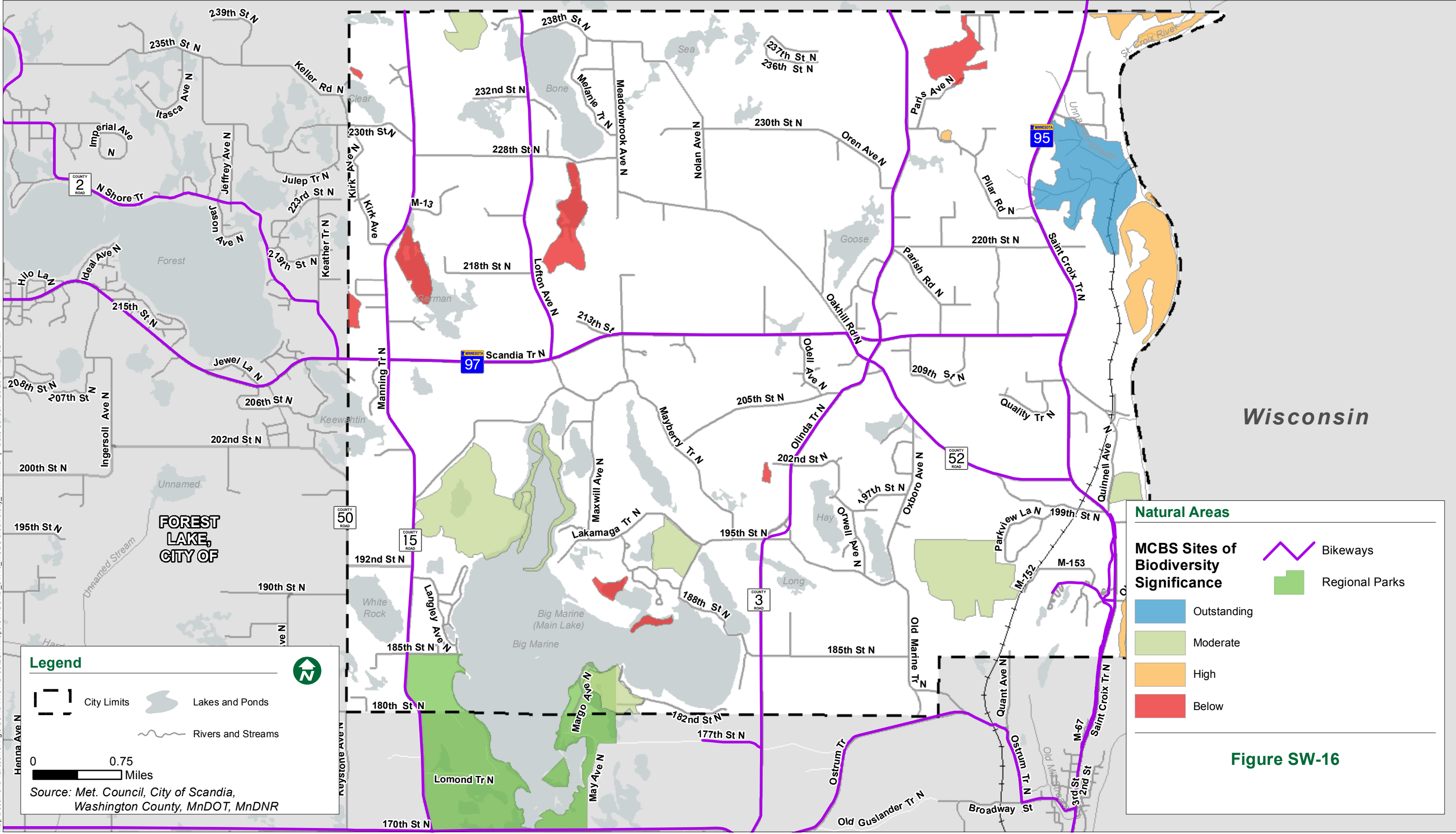
Scandia, MN

Natural Areas, Open Space, & RSEA

July 2018

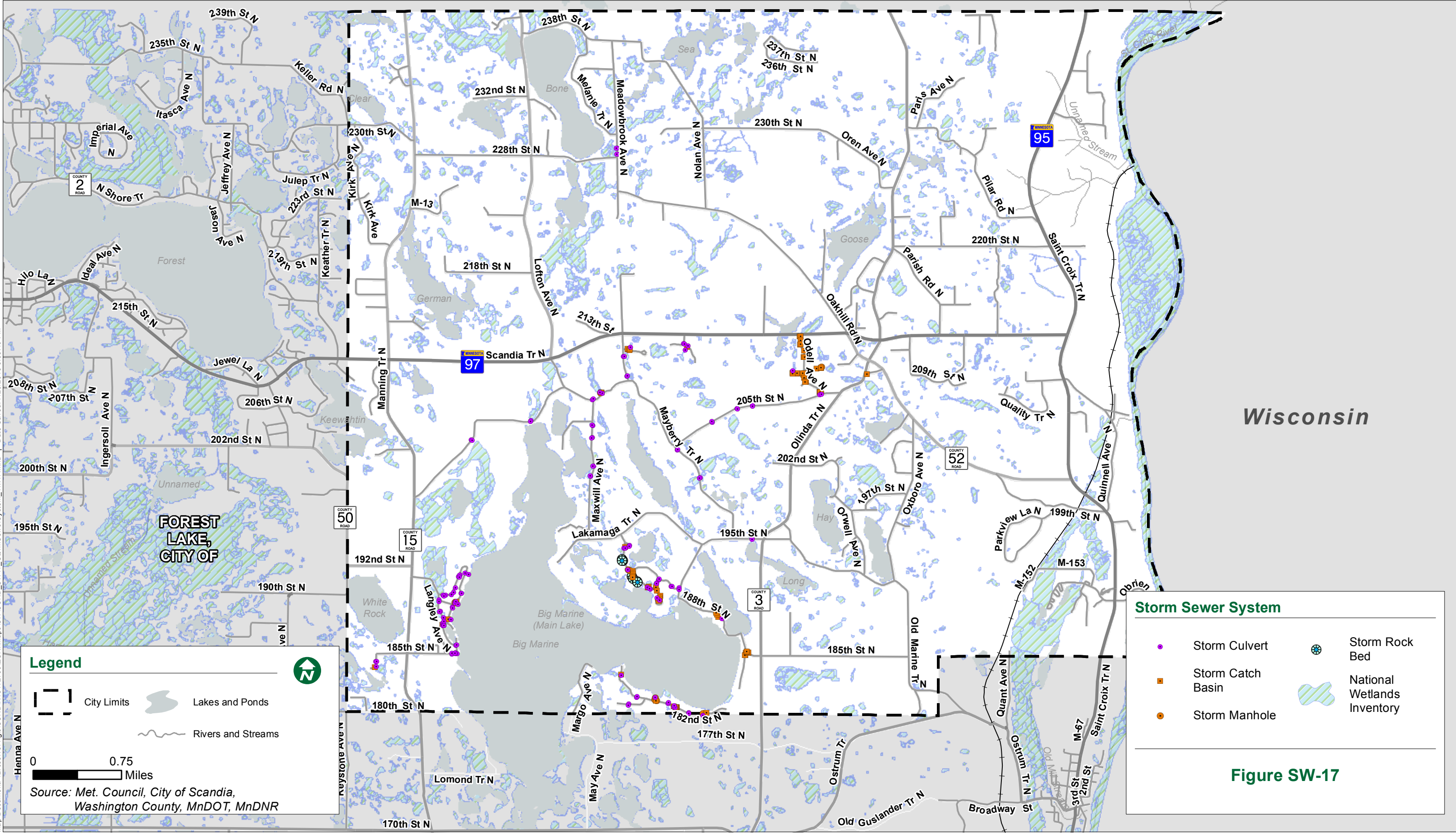






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## Appendix B: Ordinances

**Zoning Regulations – City Code Chapter 2**

**Subdivision Regulations – City Code Chapter 3**

**Mining and Related Activities – City Code Chapter 4**

**Shoreland Management Regulations – City Code Chapter 5**

**Floodplain Regulations – City Code Chapter 6**

historic building or structure with the City. The Zoning Administrator shall review the application, and shall approve the request if it is in conformance with the criteria listed in Section 3.2(5). The Zoning Administrator shall provide the approval to the applicant in writing. If the application does not meet the requirements, the Zoning Administrator shall deny the request in writing, stating the reasons for the denial. The Zoning Administrator shall inform the City Council of each approved or denied exception. An applicant may appeal the decision of the Zoning Administrator to the City Council within thirty (30) days following the date of the decision. If no appeal is made, the decision of the Zoning Administrator becomes final thirty-five (35) days after the decision.

### 3.3 Environmental Regulations

#### (1) Hazardous Materials

- (A) All uses associated with the bulk storage of over two thousand (2,000) gallons of oil, gasoline, diesel fuel, liquid fertilizer, chemicals and similar liquids shall require a conditional use permit.
- (B) Secondary containment shall be provided for hazardous materials that are stored above ground and for all areas where hazardous materials are loaded or unloaded. Above ground liquid storage tanks shall have secondary containment, suitably sealed to hold a leakage capacity equal to 110% of the tank's capacity.
- (C) Any area used for the storage of hazardous materials shall not contain interior floor drains. If floor drains are essential to business operation, then the facility shall:
  - 1. Connect the floor drain to a closed holding tank, or;
  - 2. Obtain a groundwater discharge permit from the Minnesota Department of Natural Resources.
  - 3. The storage and/or preparation area for hazardous materials with more than 25 gallons or 100 pounds dry weight shall be set back a minimum of 150 feet from a water supply well.
- (D) Hazardous materials stored in an above ground storage tank with containment shall be set back a minimum of 100 feet from a water supply well.
- (E) Dry commercial fertilizers shall not be located in areas where stormwater runoff from stockpiles could enter storm sewers, sanitary sewer or other surface or ground water.
- (F) Dry bulk pesticides with a dry weight of 100 pounds or more shall be stored under a roof or tarpaulin that prevents precipitation from reaching the pesticide.
- (G) Closed holding tanks shall be used for the collection of washwater from vehicle maintenance and other related operations.
- (H) Primary containment of hazardous materials shall be product-tight and all hazardous materials shall be stored in compliance with the rules and regulations of Federal, State, County and local agencies.

- (I) The Minnesota Pollution Control Agency and Federal agency requirements for storage leak detection, record keeping, spill prevention, emergency response, transport, and disposal shall be met.
- (J) Underground storage tanks shall comply with the requirements of the Minnesota Pollution Control Agency and Federal agencies.

(2) Explosives.

Uses involving the commercial storage, use or manufacture of materials or products that could detonate by decomposition are not permitted.

(3) Radiation and Electrical Interference.

No activities shall be permitted that emit dangerous radioactivity beyond enclosed areas. There shall be no electrical disturbance (except from domestic household appliances) adversely affecting the operation of ordinary business or household equipment and appliances. Any such emissions are hereby declared to be a nuisance.

(4) Nuisances.

No noise, odors, vibration, smoke, air pollution, liquid or solid wastes, heat, glare dust or other such adverse influences shall be permitted in any district that will have an objectionable effect upon adjacent or nearby property owners and residents. Minimum standards shall be as follows:

- (A) Noise, Air and Water Pollution. Notwithstanding anything contained herein to the contrary, the standards of the Minnesota Pollution Control Agency for noise, air, and water pollution shall be the standards applied in those areas.
- (B) Vibration. The following vibrations are prohibited:
  - 1. Any vibration discernible (beyond the property line) to the human sense of feeling for 3 minutes or more duration in any 1 hour.
  - 2. Any vibration resulting in any combination of amplitudes and frequencies beyond the "safe" range of the most current standards of the United States Bureau of Mines on any structure. These standards shall not apply to vibrations created during the process of construction.
- (C) Public Health. The following are declared to be nuisances endangering public health and are prohibited:
  - 1. Causing or allowing the effluent from any cesspool, septic tank, drainfield or human sewage disposal system to discharge upon the surface of the ground, or dumping the contents thereof at any place except as authorized by the Minnesota Pollution Control Agency.
  - 2. Causing or allowing the pollution of any public well or cistern, stream or lake, canal or body of water by sewage, industrial waste or other substances.
  - 3. Failing to dispose of carcasses of animals within 24 hours after death.

4. Any use shall be so operated as not to discharge across the boundaries of the lot or through evaporation into the atmosphere or the subsoil beyond the boundaries of the lot wherein such use is located toxic or noxious matter in such concentration as to be detrimental to or endanger the public health, safety or welfare, or cause injury or damage to property or business.
5. The ownership, possession or control of any unused refrigerator or other container, with doors which fasten automatically when closed, of sufficient size to retain any person, and which is exposed and accessible to the public, without removing the doors, lids, hinges or latches, or providing locks to prevent access by the public.

(D) Refuse

In all districts all waste material, debris, refuse, or garbage (with the exception of agricultural uses and crop residue and properly maintained compost piles) shall be kept in an enclosed building or properly contained in a closed container designed for such purposes, except on days of collection when such materials may be placed at the curb or roadside. The owner of vacant land shall be responsible for keeping such land free of refuse. The keeping of shrub and tree waste, other waste material, debris, refuse or garbage generated off site is not permitted except as provided in Section 4.32.

(E) Abandoned, Inoperable, Unlicensed, Discarded or Junked Motor Vehicles

1. Passenger vehicles and trucks in an abandoned, inoperable, unlicensed, discarded or junked state shall not be parked in any districts, except in a location authorized as a vehicle reduction yard or enclosed building, for a period exceeding seven consecutive days.
2. Any other unlicensed motor vehicle, capable of being operated, shall not remain on any property for more than 30 days if such motor vehicle has been unlicensed in both the current and previous year. This requirement does not include a motor vehicle used on the property that does not require a license.
3. With respect to any motor vehicle not required to be licensed or not usually used on the public highways, the fact that such motor vehicle has remained unused for more than six (6) months and is not in condition to be removed under its own power shall be presumptive evidence that such motor vehicle is an abandoned, junked, or inoperative vehicle.

- (5) Hazardous Waste. Any use that generates, processes or disposes of hazardous waste shall comply with the standards and regulations of the County's Hazardous Waste Management Ordinance, Minnesota Pollution Control Agency and any other federal, state and local agencies.

3.4 Exterior Storage and Off-Street Parking for Residential and Agricultural Uses. Exterior storage shall be regulated by the following standards.

- (1) Residential and Agricultural Uses. All materials, machinery, vehicles, and equipment shall be stored within a building or fully screened so as not to be visible from adjoining properties and public streets, except for the following:



- (B) Within the non-buildable setback, fences shall be allowed along the side lot lines, but shall not exceed 6 feet in height from the finished ground grade.
  - (C) Within the buildable area of the property, fences shall have a maximum height of 6 feet from the finished ground grade.
- (3) Fences are permitted along a property line abutting a road right-of-way in accordance with the following:
- (A) On properties that are being used for agriculture, a fence may be constructed up to 6 feet in height provided the fence is a wire strand, woven wire or wood rail fence.
  - (B) On properties where the primary use is residential, commercial or industrial, fences shall not exceed 4 feet in height. Fences within the non-buildable setback area and less than 20 feet from the front property line shall not exceed 4 feet in height.

### 3.6 Land Alteration and Grading

- (1) **Applicability and Required Permits.** Any person, firm, sole proprietorship, partnership, corporation, state agency, or political subdivision proposing a land disturbance activity within the City shall apply to the City for an Administrative Permit for Grading and Erosion and Sediment Control. No land shall be disturbed until the permit is granted by the city and conforms to the standards set forth in this code. A grading and erosion and sediment control plan shall be submitted and an Administrative Permit obtained for the following activities:
- (A) Land alteration and grading of 50 cubic yards or more and/or the disturbance of land area of 1,000 square feet or more.
  - (B) Any excavating, grading or filling or change in the earth's topography in any designated wetland, floodplain or shoreland district.
  - (C) Any changing of a natural drainageway or drainage pattern that increases or intensifies the flow of surface water upon an adjacent property.
- (2) **Exemptions.** A permit is not required for the following: installation and maintenance of home gardens; minor landscaping where the total volume of earth disturbed does not exceed 50 cubic yards; agricultural activities; cemetery graves; grading activities associated with a construction project provided a building permit is issued and there is a minimal amount of land disturbance; subdivisions that have received final plat approval and driveways permitted in conjunction with a building permit; and emergency work necessary to protect life, limb or property.
- (3) **Other Permits.** The issuance of a City permit does not exempt the applicant from the requirements and permitting authority of other agencies having jurisdiction over the work performed.
- (4) **Permit Application.** The application for a permit shall include an existing and a finished grade plan and an erosion and sediment control plan. The plans shall be drawn to scale at a scale of no less than 1 foot to 200 feet. The plans shall indicate site topography, including contour intervals of not more than 2 feet. The first sheet of the plans shall give the location of the work and the name and address of the owner and the person who prepared the plans.

- (A) The finished grade plan shall show no adverse effects on adjacent land. The grading plan shall clearly indicate the proposed land disturbing activities. Both existing and proposed topography shall be shown. Drainage patterns shall be clearly shown using arrows depicting the direction of flow. Other information shall be shown as required by the City based on specific project characteristics.
  - (B) The erosion and sediment control plan shall be prepared by a qualified professional certified by the Minnesota Department of Transportation or other certification acceptable to the City. The plan shall include at a minimum the lot boundaries, name, address and telephone number of the party responsible for maintenance of the sediment control measures, easement areas, building locations, drainage directions indicated by arrows, location of construction site access, stockpiles, trash containers, concrete washout area, and all proposed temporary and permanent erosion and sediment control measures. The application shall document that the applicant has applied for an NPDES Permit from the Minnesota Pollution Control Agency, if applicable.
  - (C) At a minimum, the grading, erosion and sediment control measures shall conform to those for Erosion Prevention and Sediment Control included in the current version of the Minnesota Pollution Control Agency's Manual "Protecting Water Quality in Urban Areas."
  - (D) The City may require additional erosion and sediment control measures for sites draining to Outstanding Resource Value Waters (ORVW) identified by the State of Minnesota, or for slopes leading to a sensitive, impaired or special water body to assure retention of sediment on site.
  - (E) A permit fee shall be paid by the applicant prior to issuing any permit. The fee shall cover review of the application and typical inspections for enforcement. Any inspections and administration of the permit triggered by a notice of violation are not included in this fee.
  - (F) The applicant will be required to file with the City an escrow to cover the City's costs for failure by the applicant to make repairs or improvements installed on the site, and any costs associated with a Notice of Violation. The project will be considered complete and the escrow released when the site has reached final stabilization. The applicant is required to inform the City when the site has reached stabilization and the city may complete a final compliance inspection.
  - (G) Grading and Erosion and Sediment Control permit applications will be reviewed by the Zoning Administrator, and as deemed necessary, by the City Engineer. Applications may also be referred to a watershed district, watershed management organization or to other agencies for review and comment.
- (5) General Standards. The following general standards shall apply for grading, drainage and erosion control:
- (A) All development shall conform to the natural limitations presented by the topography and soil as to minimize the potential for soil erosion.
  - (B) Slopes over 25% (4:1) shall not be altered.

- (C) Development on slopes with a grade between 12% (8:1) and 25% (4:1) shall be carefully reviewed to insure adequate measures have been taken to prevent soil erosion, sedimentation, vegetative, and structural damage.
  - (D) Erosion and siltation measures shall be coordinated with the different stages of development. Appropriate control measures shall be installed prior to development when necessary to control erosion.
  - (E) Land shall be developed in increments of workable size such that erosion and siltation controls can be provided as construction progresses. The smallest practical area of land shall be exposed at any one period of time.
  - (F) The drainage system shall be constructed and made operational as quickly as possible during construction.
  - (G) Whenever possible, natural vegetation shall be retained and protected.
  - (H) Where the topsoil is removed, sufficient arable soil shall be set aside for re-spreading over the disturbed area. The soil shall be restored to a depth of 4 inches and shall be of quality at least equal to the soil quality prior to development.
  - (I) Erosion and sediment control measures shall be maintained until final vegetation cover is established to a density of 70%.
  - (J) All temporary erosion and sediment control BMP's will be removed after the permanent erosion and sediment control BMP's have been implemented and the site has been permanently stabilized.
- (6) Inspection Procedures. The applicant shall promptly allow the City and its authorized representatives, upon presentation of credentials, to:
- (A) Enter upon the permitted site for the purpose of obtaining information, examination of records, conducting investigations, inspections or surveys.
  - (B) Bring such equipment upon the permitted site as is necessary to conduct such surveys and investigations.
  - (C) Inspect the erosion and sediment control measures.
  - (D) The applicant shall notify the City when the measures required by the permit have been accomplished on site, whereupon the City may conduct an initial inspection to determine compliance with this Section, and may within a reasonable time thereafter report to the applicant either that compliance appears to have been achieved, or that compliance has not been achieved. In that case, the City shall provide a correction notice identifying the conditions of noncompliance. The applicant shall immediately begin corrective action and shall complete such corrective action within 48 hours of receiving the City's notice. For good cause shown, the City may extend the deadline for taking corrective action. Failure to take corrective action in a timely manner shall constitute a violation of this Chapter. The City shall not be responsible for direct or indirect consequences to the applicant or to third-parties for non-compliant conditions undetected by inspection.

- (7) Enforcement. Whenever the Zoning Administrator finds any violation of this Chapter, the Zoning Administrator shall issue a stop work order. Such stop work order is subject to the following conditions:
- (A) The stop work order shall be in writing and shall be given to the applicant or the applicant's agent. The stop work order shall state the reason for the order.
  - (B) Upon issuance of the stop work order, the cited work shall immediately cease.
  - (C) The stop work order may be issued for a reasonable period to be determined by the City during which time the applicant will be allowed to correct the identified violations.
  - (D) If the violations cannot be corrected within the time frame determined by the City, the applicant may seek an extension of the stop work order for such additional period of time as allowed by the Zoning Administrator.
  - (E) If the applicant does not contest the stop work order and corrects the identified violations within the designated period, the applicant may immediately commence further activity at the site. The City will inspect the site to verify correction of the violations.
  - (F) If the violations are not corrected within the designated period (with extensions), the City may correct the cited violations and draw down the escrow to cover the cost.
  - (G) Any person who shall continue any cited work after having been served with a stop work order, except such work as is necessary to correct the cited violations, shall be subject to penalties as stated in Chapter 1, Section 2.

### 3.7 Stormwater Management

- (1) This section sets forth the minimum requirements for stormwater management that will diminish threats to public health, safety, public and private property and natural resources of the City and meet the requirements of appropriate regulatory agencies.
- (2) The Zoning Administrator shall administer this Section. Regulation by the City does not exempt the applicant from the requirements and permitting authority of other agencies.
- (3) The requirements of this section shall apply to all applicants or projects requiring site plan review, a Conditional Use Permit, platting, or subdivision review.
- (4) General Stormwater Management Standards and Design Criteria
  - (A) No person shall develop land for residential, commercial, industrial or institutional uses without providing stormwater management measures that control or manage runoff from such developments. Emergency actions, such as the need to address a failing septic system, are exempt from these controls.
  - (B) Development shall minimize impact to significant natural features. All sites shall be reviewed for the presence of wetlands, wooded areas of significance, rare and

endangered species habitat, and areas designated by the County Biological Survey. These areas should not be developed.

- (C) New development and redevelopment activities shall meet the adopted water management rules, standards, and plan requirements of local watershed management organizations for volume control, rate control, and water quality.
- (D) Where directed by the City and based on site suitability, the developer or applicant shall consider reducing the need for stormwater controls and Best Management Practices (BMP's) by minimizing impervious surface and incorporating the use of natural topography. The following design options should be considered, consistent with the zoning and subdivision requirements:
  - 1. Preserving natural vegetation;
  - 2. Preserving and utilizing natural upland swales, depressions and storage areas in the post development conditions to the degree that they can convey, store, filter and retain stormwater runoff before discharge without becoming a public nuisance or hazard. Preservation requires that no grading or other construction activity occur in these areas;
  - 3. Installing semi-permeable/permeable or porous paving;
  - 4. Using landscaping and soils to treat and infiltrate stormwater runoff;
  - 5. Identifying vegetated areas that can filter sheet flow, remove sediment and other pollutants, and increase the time of concentration;
  - 6. Disconnecting impervious areas by allowing runoff from small impervious areas to be directed to pervious areas where it can be infiltrated or filtered;
  - 7. Increasing buffers around streams, steep slopes, and wetlands to protect from flood damage and provide additional water quality treatment;
  - 8. Installing green roofs;
  - 9. Using irrigation systems, cisterns, rain barrels and related BMP's to reuse stormwater runoff.
- (E) The design of ponds and other stormwater BMP's shall conform to the requirements of the Chapter 3 of this Development Code--Engineering Standards, and to the standards and design recommendations in the Minnesota Pollution Control Agency's Minnesota Stormwater Manual (2006 and subsequent revisions) and Minnesota Stormwater Best Management Practices Manual.
- (F) The lowest ground elevation adjacent to a structure in a development shall be at least 3 feet above the 100-year, 24-hour elevation of the water body. The lowest ground elevation adjacent to structures that are adjacent to ponds shall be certified by the applicant during basement construction to ensure adequate freeboard.



- (G) If the basin is landlocked, the lowest ground elevation adjacent to a structure shall be a minimum of 3 feet above the calculated high water level.
- (5) Illegal disposal
- (A) No person shall leave, throw, deposit, discharge, dump, place, leave, maintain or keep any substance upon any street or sidewalk, or any element of the storm sewer system, or upon any public or private lot of land, so that the same may be or might become a pollutant, except in containers, recycling bags, or other lawfully established waste disposal facility.
  - (B) No person shall intentionally dispose of grass, leaves, dirt or landscape material into any surface water, buffer area, street, sidewalk or element of the storm sewer system.
- (6) Illicit discharges and connections
- (A) No person shall cause any illicit discharge to enter the storm sewer system or any surface water unless such discharge:
    - 1. Consists of non-stormwater discharge that is authorized by an MPCA permit; or
    - 2. Is associated with fire fighting activities or other activities necessary to protect public health and safety.
    - 3. Is associated with normal household activities such as car washing, lawn watering or draining a swimming pool.
  - (B) Dye testing is an allowable discharge, but requires a verbal notification to the city prior to the time of the test.
  - (C) The following discharges are exempt: water line flushing or other potable water sources, landscape irrigation or lawn watering, diverted stream flows, rising ground water, ground water infiltration to storm drains, uncontaminated pumped ground water, foundation or footing drains, crawl space pumps, air conditioning, condensation, springs, non-commercial washing of vehicles, natural riparian habitat or wetland flows, dechlorinated swimming pool water and any other water source not containing a pollutant.
  - (D) No person shall use any illicit connection to intentionally convey a non-stormwater discharge to the city's storm sewer system.
  - (E) The construction, use, maintenance or continued existence of illicit connections to the storm sewer system is prohibited. This prohibition includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.
  - (F) Any owner or occupant of property within the city shall comply with the following requirements:
    - 1. Subsurface sewage treatment systems shall be maintained to prevent failure.

2. Recreational vehicle sewage shall be disposed of to a proper sanitary waste facility.
3. Water in swimming pools shall sit for 7 days without the addition of chlorine to allow for chlorine to evaporate before discharge.
4. Runoff of water from the washing of paved areas on commercial or industrial property is prohibited unless necessary for health or safety purposes and not in violation of any other provisions of this code.
5. Mobile washing companies (carpet cleaning, mobile vehicle washing, etc.) shall dispose of wastewater to a proper sanitary waste facility.
6. Any machinery or equipment that is to be repaired or maintained in areas susceptible to runoff shall be placed in a confined area to contain leaks, spills or discharges.

### 3.8 Land Clearing

- (1) Required Permits: Land clearing on an area of 20,000 square feet or more is permitted in all districts, provided an Administrative Permit is issued. A permit is not required for clearing trees and other woody plants in an area less than 20,000 square feet, clearing activities associated with a construction project provided a building permit is issued and there is minimal amount of clearing, and subdivisions that have received final plat approval.
- (2) Other Requirements. Land Clearing shall comply with all rules and regulations of Federal, State, County and local agencies.
- (3) Performance Standards. Land clearing shall comply with the following:
  - (A) There shall be no removal of trees located on slopes greater than 25%, or in wooded floodplains, wooded wetlands, and stream corridors. Trees and woodlands within the Shoreland Overlay District and the St. Croix River District are subject to the requirements as stated in the overlay district regulations in addition to the regulations of this Chapter.
  - (B) Construction fences or barricades may be required to be placed at the perimeter of the area to be cleared.
  - (C) Erosion and siltation measures shall be coordinated with the different stages of clearing. Appropriate control measures shall be installed prior to land clearing when necessary to control erosion.
  - (D) Land shall be cleared in increments of a workable size such that erosion and siltation controls can be provided as the clearing progresses. The smallest practical area of land shall be exposed at any one period of time.
  - (E) Restoration. All permits shall contain a restoration plan providing for the use of the land after project completion. The following are minimum standards for restoration:
    1. All disturbed areas shall be restored at the completion of the project.



2. All restoration shall include the application of a minimum of 4 inches of mineral soil or similar material that will support plant growth.
3. All restored areas shall be seeded with a mixture recommended by the soil and Water Conservation District unless it is put into forest or row crop production.
4. Final grades shall be in conformity with the permit and topography of the surrounding land.
5. The standards above may be raised or modified to accommodate a specific restoration plan.
6. The Zoning Administrator may require the applicant to post a financial guarantee to ensure compliance with the Administrative Permit.

### 3.9 Lighting

- (1) **Applicability.** The standards in this section apply to Outdoor Lighting as defined in Chapter 1 of this Code: “Any light source or collection of light sources, located outside a building, including but not limited to, light sources attached to any part of a structure, located on the surface of the ground or located on free standing poles.” Chapter 2, Section 3.13 of this Code shall regulate lighting for Signs.
- (2) **Exemptions.** The standards of this section shall not apply to the following:
  - (A) The use of temporary outdoor lighting during customary holiday seasons provided that individual lamps are 10 watts or less.
  - (B) The use of temporary outdoor lighting used for civic celebrations and promotions.
  - (C) Lighting required and regulated by the Federal Aviation Administration or other federal or state agency.
  - (D) Emergency lighting by police, fire and rescue authorities.
  - (E) Street lighting on City streets and State and County Highways.
- (3) **Nonconforming Uses.**
  - (A) All outdoor lighting fixtures lawfully existing and legally installed prior to the effective date of this Chapter are exempt from the regulations contained in this Chapter.
  - (B) Whenever an outdoor light fixture that existed on the effective date of this Chapter is replaced by a new outdoor light fixture, the new fixture shall meet the standards of this Chapter.
- (4) **Method of Measuring Light Intensity.** The foot-candle level of a light source shall be taken after dark with the light meter held 6 inches above the ground with the meter facing the light source. A reading shall be taken with the light source on, then with the light source off. The difference between the two readings will be identified as the illumination intensity.

### 3.11 Woodland and Tree Preservation

#### (1) Purpose.

The preservation and protection of trees and woodlands can significantly add to the quality of the physical environment of the community. The City recognizes the value of trees and woodlands for improving air quality, scenic beauty, protection against wind and water erosion, shade, natural insulation for energy conservation, wildlife habitat, and protecting the integrity of the natural environment.

#### (2) Applicability.

##### (A) A Woodland Preservation Plan shall be required for:

1. Any Preliminary Plat when significant trees or significant woodlands exist in the proposed construction zone.
2. Any Minor Subdivision when significant trees or significant woodlands exist in the proposed construction zone.
3. Any Landscape Plan as required by Section 3.12 of this Chapter when significant trees or significant woodlands exist in the proposed construction zone.

##### (B) A Woodland Preservation Plan shall not be required for:

1. Removal of Diseased Trees. All diseased, hazardous, dead and dying trees may be removed.
2. Removal of invasive tree species. Invasive tree species are encouraged to be removed and chemically treated with appropriate herbicides and application methods to discourage re-sprouting and minimize ecological impacts.

#### (3) Woodland Preservation Plan Requirements.

##### (A) All Woodland Preservation Plans shall be certified by a forester, ecologist, landscape architect or other qualified professional retained by the applicant.

##### (B) The Woodland Preservation Plan shall include the following information:

1. Boundary lines of the property with accurate dimensions as established by survey.
2. Location of existing and proposed buildings, structures, parking lots, roads, impervious surfaces and other improvements.
3. Proposed grading plan with two-foot contour intervals and limits of the construction zone.
4. Location of all significant woodlands, area in square feet and acres, and description of natural community type or predominant canopy tree species, identified in both graphic and tabular form.

5. Location of all existing significant trees, size by caliper inch, scientific name, and common name for all areas of the site identified in both graphic and tabular form.
6. Location of significant trees and significant woodlands proposed to be removed within the construction zone, identified in both graphic and tabular form.
7. Measures to protect significant trees and significant woodlands, as required by Section 3.11(7).
8. Size, scientific name, common name, and location of all replacement trees proposed to be planted on the property to replace significant trees and/or significant woodlands proposed to be removed.
9. The name(s), telephone number(s), and address(es) of Applicants, property owners, developers, and/or builders.
10. Signature and qualifications of the person preparing the plan.

#### (4) Significant Tree Replacement

All significant trees removed shall be replaced by the applicant as determined by the tree replacement schedule. Option A, B or C, or some combination may be proposed by the applicant. The list of coniferous, primary and secondary deciduous tree species is included in Section 3.12 (4)(G).

Tree Replacement Schedule. Size of Tree Damaged or Destroyed	Number of Replacement Trees		
	A	B	C
	Deciduous trees at least 4 caliper inches; Coniferous trees at least 12 feet in height	Deciduous trees at least 2.5 caliper inches; Coniferous trees at least 6 feet in height	Deciduous trees at least 1.5 caliper inches; Coniferous trees at least 4 feet in height
Coniferous, 12 to 24 feet high	1	2	4
Coniferous, greater than 24 feet in height	2	4	8
Primary Deciduous, 6 to 20 inches diameter	1	2	4
Primary Deciduous, greater than 20 inches in diameter	2	4	8
Secondary Deciduous, 20 to 30 inches diameter	1	2	4
Secondary Deciduous, greater than 30 inches diameter	2	4	8

- (5) **Tree Replacement Fund.** In the event that sufficient land area on the subdivision or commercial lot is not available to plant the replacement trees, as determined by the City, the Applicant shall provide to the City payment for the planting of the required trees elsewhere at a rate of \$100 per caliper inch.

- (6) **Significant Woodland Replacement.**

All significant woodlands removed shall be replaced by the applicant. The number of replacement trees shall be determined by either of the following methods, whichever yields the greater number of replacement trees.

- (A) Replacement of significant trees within the significant woodland that are damaged or destroyed, per the Tree Replacement Schedule.
- (B) Replacement for every 125 square feet of significant woodland damaged or destroyed, or increment thereof, with:
  - 1. 1 deciduous tree of at least 4 caliper inches or 1 coniferous tree at least 12 feet tall; or
  - 2. 2 deciduous trees of at least 2.5 caliper inches or 2 coniferous trees at least 6 feet tall; or
  - 3. 4 deciduous trees of at least 1.5 caliper inches or 4 coniferous trees at least 4 feet tall.
- (C) **Species Requirement.**
  - 1. The City may require that the replacement species is identical to the removed species.
  - 2. Where 10 or more replacement trees are required, not more than 50% of the replacement trees shall be of the same species of tree without the approval of the City.
  - 3. Trees planted to replace significant woodland shall be arranged in stands to provide a habitat similar to the damaged or destroyed habitat. An appropriate native groundcover seed mix and/or understory planting approved by the City's ecologist shall be planted along with the replacement trees.
- (D) **Warranty Requirement.**

Any replacement tree which is not alive or healthy, as determined by the City, or which subsequently dies due to construction activity within 2 years of the tree's planting, shall be removed by the applicant and replaced with a new healthy tree meeting the same minimum size requirements within 8 months of removal.

- (E) **Landscaping Requirements.**

The planting of trees for mitigation shall be in addition to any other landscape requirements of the City.

(F) Shoreland Overlay District.

Trees and woodlands within the Shoreland Overlay District are subject to the requirements stated in Chapter Five of this Development Code, in addition to the regulations of this Section.

(7) Required Protective Measures.

The following measures shall be utilized to protect significant trees and significant woodlands during any type of grading or construction:

- (A) Installation of snow fencing or polyethylene laminate safety netting placed at the drip line or at the perimeter of the critical root zone (CRZ), whichever is greater, of significant trees and significant woodlands to be preserved. No grade change, construction activity, or storage of materials shall occur within this fenced area.
- (B) Identification of any oak trees requiring pruning between April 15 and July 1 to avoid the spread of Oak Wilt. Any oak trees so pruned shall be required to have any cut areas sealed immediately with an appropriate non-toxic tree wound sealant. The sealant shall be kept on-site for the duration of pruning, grading, and construction activities.
- (C) Prevention of change in soil chemistry due to concrete washout and leakage or spillage of toxic materials, such as fuels or paints.

(8) Recommended Protective Measures

The following tree protection measures are suggested to protect significant trees and/or significant woodland that are intended to be preserved:

- (A) Installation of retaining walls or tree wells to preserve trees.
- (B) Placement of utilities in common trenches outside of the drip line of significant trees, or use of tunneled installation.
- (C) Use of tree root aeration, fertilization, and/or irrigation systems.
- (D) Transplanting of significant trees into a protected area for later moving into permanent sites within the construction area.
- (E) Therapeutic pruning.



(9) Review Process.

The Woodland Preservation Plan shall be reviewed by the City to assess the best possible layout to preserve significant trees and significant woodland, and to enhance the efforts to minimize damage to significant trees and woodland. The applicant shall meet with the Zoning Administrator prior to submission of the development application to determine the most feasible and practical placement of buildings, parking, driveways, streets, storage, and other physical features in order that the fewest significant trees and significant woodlands are destroyed or damaged.

(10) Compliance with the Plan.

(A) Implementation of the Plan.

The applicant shall implement the Woodland Preservation Plan prior to and during any construction. The tree protection measures shall remain in place until all grading and construction activity is terminated, or until a request is made to and approved by the City. No significant trees or significant woodland shall be removed until a Woodland Preservation Plan is approved.

(B) Performance Guarantee.

The applicant shall provide the required performance guarantee following preliminary approval of the Woodland Preservation Plan and prior to any construction and/or grading.

The amount of the performance guarantee to be submitted, specific to the Woodland preservation requirements, shall be calculated as follows:

1. An amount to guarantee preservation of all trees identified by the approved Woodland Preservation Plan to be preserved within the Construction Zone shall be deposited with the City.

The amount shall be calculated by multiplying the total caliper inches of significant trees to be preserved by the rate of payment of \$100.00 per caliper inch and the total square feet of significant woodland to be preserved at the rate of \$1.50 per square foot.

2. Following written request by the applicant for acceptance, the performance guarantee will be released upon verification by the City that the Woodland Preservation Plan was followed and that the tree replacement schedule was complied with where necessary; in no event shall the performance guarantee be released earlier than completion of the warranty requirements.

- (C) Noncompliance. If a significant tree or significant woodland that was intended to be preserved is removed without permission of the City, or damaged so that it is in a state of decline within 1 year from date of project closure, the cash performance guarantee, \$100.00 per caliper inch of significant tree or \$1.50 per square foot of significant woodland, shall be remitted to the City. The City shall have the right to inspect the development and building site in order to determine compliance with the approved Woodland Preservation Plan. The City shall determine whether compliance with the Woodland Preservation Plan has been met.

### 3.12 Screening and Landscaping

- (1) Purpose and Objectives. The preservation of existing trees and vegetation as well as the planting of new trees and vegetation, can significantly add to the quality of the physical environment of the community. This Section provides for the health, safety, and welfare of the residents of the City of Scandia and is intended to:

- Promote the reestablishment of vegetation in developed areas for aesthetic, health, and wildlife reasons;
- Establish and enhance a pleasant visual character which recognizes aesthetics and safety issues;
- Promote compatibility between land uses by reducing the visual, noise, and lighting impacts of specific development on users of the site and abutting uses;
- Unify development and enhance and define public and private spaces;
- Promote the retention and use of existing vegetation;
- Aid in energy conservation by providing shade from the sun and shelter from the wind;
- Reduce flooding and erosion by stabilizing soils with trees and vegetation.

- (2) Landscaping Plan.

A landscaping plan shall be submitted at the time of site plan/preliminary plat review for any:

- (A) Major residential subdivision, or new development or new building construction in any commercial, industrial, public/institutional or planned unit development.
- (B) Modification or expansion of a commercial or industrial building or improvements to a site, and/or when there is a change in land use plan or zoning. Landscaping requirements shall be applied to those portions of the site that are directly affected by the proposed improvements, or change in land use, as determined by the Zoning Administrator. In all cases appropriate screening and buffering shall be provided for the entire site.

- (3) General Plan Requirements.

Landscape plans shall be prepared by a landscape architect or other qualified person acceptable to the Zoning Administrator and shall include information as required by Chapter 1, Section 11 of this Development Code, and a Woodland Preservation Plan as per Section 3.11 of this Chapter as applicable.

## **SECTION 14.0 STORM WATER MANAGEMENT AND EROSION CONTROL**

### **14.1 Storm Water Drainage.**

- (1) The City will not approve any subdivision that does not make adequate provision for managing the quantity and quality of storm water runoff. Subdivisions shall meet the adopted water management rules, standards and plan requirements of local watershed districts for volume control, rate control and water quality.
- (2) The design of ponds and other stormwater Best Management Practices (BMPs) shall conform to the requirements of the City's Engineering Standards and to the standards and design recommendations in the Minnesota Pollution Control Agency's Minnesota Stormwater Manual (2006 and subsequent revisions) and Minnesota Stormwater Best Management Practices Manual.
- (3) Where a watercourse, drainage way, channel or stream traverses a subdivision, the subdivider shall provide a storm water easement or drainage right-of-way, whichever the City may deem more appropriate. This easement, right-of-way or dedication shall conform substantially with the lines of such water courses, together with such further width or construction, or both, as will be adequate for the storm water drainage of the area. The City Engineer shall determine the width of such easements or rights-of-way.
  - (A) Where topography or other conditions make the inclusion of drainage facilities within road rights-of-way impractical, the subdivider shall provide perpetual, unobstructed easements at least 20 feet in width for drainage facilities across property outside the road lines and with satisfactory access to the road. Easements shall be indicated on the plat. Drainage easements shall extend from the road to a natural watercourse or to other drainage facilities.
  - (B) When a proposed drainage system will carry water across private land outside the subdivision, appropriate drainage rights shall be secured and indicated on the plat.
  - (C) The subdivider shall dedicate by drainage easement, land on each side of the centerline of any wetland, body of water, watercourse or drainage channel, whether or not shown on the City's Comprehensive Plan, to a sufficient width to 1) provide proper protection for water quality, 2) provide retention of storm water runoff, and 3) provide for the installation and maintenance of storm sewers, swales or other such conveyance method.
- (4) Where directed by the City and based on site suitability, the subdivider shall consider reducing the need for stormwater controls and BMPs by minimizing impervious surfaces and incorporating the use of natural topography. The following design options should be considered, consistent with City and local watershed management organization requirements:
  - (A) Preserving natural vegetation.
  - (B) Preserving and utilizing existing natural upland swales, depressions and storage areas in the post- development condition to the degree that they can convey, store, filter and retain stormwater runoff before discharge without becoming a public nuisance or

hazard. Preservation requires that no manual alteration, grading or other construction activity occurs in those areas.

- (C) Installing semi-permeable, permeable or porous paving.
- (D) Using landscaping and soils to treat and infiltrate stormwater runoff.
- (E) Identifying vegetated areas that can filter sheet flow, remove sediment and other pollutants and increase the time of concentration.
- (F) Installing green roofs.
- (G) Using irrigation systems, cisterns, rain barrels and related BMP's to reuse stormwater runoff.

#### 14.2 Erosion Control During Construction.

- (1) Prior to commencing any earth disturbing activity in the subdivision, the subdivider shall submit an erosion control plan for approval by the City Engineer. The plans shall be suited to the topography and soils so as to create the least erosion potential. Acceptable temporary and permanent erosion control plans shall include, but not be limited to, the following elements:
  - (A) A site map with existing and final grades. These grades shall include dividing lines and direction of flow for all pre- and post-construction storm water runoff drainage areas located within the project limits. The site map must also include impervious surfaces and soil types.
  - (B) Locations of all critical areas, and areas delineated for non-disturbance.
  - (C) Locations of areas where construction will be phased for non-disturbance.
  - (D) Locations and types of all temporary and permanent erosion and sediment control Best Management Practices (BMPs). Standard plates and/or specifications for the BMPs used on the project must be included in the final plans and specifications for the project.
  - (E) Locations and types of sediment control measures for all stockpiles located on the project.
  - (F) Plans and specifications for temporary seeding and mulching any exposed soils during construction.
  - (G) Plans and specifications for final vegetation establishment, including long-term vegetation management plan for controlling noxious weeds where appropriate.
  - (H) All plans shall include maintenance requirements and who will be responsible for the maintenance requirements.
  - (I) Land clearing and erosion control shall comply with all rules and regulations of Federal, State, County and local agencies.



- (2) Erosion control measures shall comply with the Minnesota Pollution Control Agency's Best Management Practices, all applicable NPDES Phase II construction site permit requirements, and the Minnesota Stormwater Manual (2006 and subsequent revisions), or other practices as approved by the City Engineer.
- (3) The subdivider must provide the City Engineer with separate temporary and permanent erosion control plans which shall be suited to the topography and soils so as to create the least erosion potential. Acceptable temporary and permanent erosion control plans shall include, but not be limited to, the following elements:
  - (A) The land shall be developed in increments of workable size on which adequate controls of erosion and siltation can be provided and maintained during the construction period. Grading operations and other land disturbing operations shall be staged so that the area being developed is not exposed for long periods of time without stabilization.
  - (B) Natural vegetation shall be protected whenever practical. All areas of natural vegetation that are to be protected shall be identified prior to any construction activity commencing. Trees shall be protected to meet the requirements of Chapter 2 Section 3.11 Woodland and Tree Preservation.
  - (C) Temporary vegetation and/or mulching shall be used to protect the areas exposed during the development. No area shall be left denuded for a period longer than 7 days after initial site grading and other land disturbing operations on slopes of 3:1 or steeper; 14 days after initial site grading and other land disturbing operations on slopes between 3:1 and 10:1; and 21 days after initial site grading and other land disturbing operations on all other slopes. These areas shall be seeded, mulched and stabilized with erosion control netting or blanket acceptable to the City Engineer.
  - (D) Permanent vegetation and structures shall be installed within 30 days after completion of initial grading. If grading is not completed until after the planting season has expired, temporary erosion control measures, including dormant seeding and mulching, shall be implemented.
  - (E) Sediment basins (debris basins, de-silting basins or silt traps) shall be installed and maintained to remove sediment from runoff waters from the land undergoing development. Storm sewer inlets shall be provided with debris guards and microsilts basins to trap sediment and avoid possible damage from blockage. The silt shall be removed when necessary. If sediment/siltation measures taken are not adequate and result in downstream sediment, the subdivider shall be responsible for cleaning out or dredging downstream storm sewers and ponds and restoration of disturbed areas as necessary.
  - (F) Temporary rock construction access drives shall be constructed and maintained in working condition throughout construction.
  - (G) Before grading is commenced, all control measures as shown on the approved plan shall be installed.

- (H) The subdivider shall be responsible for cleaning and maintenance of the storm sewer system (including ponds, pipes, catch basins, culverts, and swales) within the subdivision and adjacent off-site storm sewer system that receives storm water from the subdivision. The subdivider shall follow all instructions it receives from the City concerning the cleaning and maintenance of the storm sewer system. The subdivider's obligations under this paragraph shall end after the erosion control is complete and financial guarantees have been released.
  - (I) The subdivider shall be responsible for cleaning all streets in the subdivision and adjacent to the subdivision from silt and dirt from the subdivision. At a minimum, scraping and sweeping shall take place on a weekly basis. If the City finds that the street cleaning is not adequate, the City may order cleaning of the streets and the subdivider shall pay the cost. If the subdivider fails to do so, the City may draw on the subdivider's financial guarantee with the City and use it to provide payment for the cleaning.
- (4) No certificate of occupancy shall be issued until final grading has been completed in accordance with the approved final subdivision plat and the lot covered with top soil with an average depth of at least four inches over the entire area of the lot, except that portion covered by buildings or streets, or where the grade has not been changed or natural vegetation seriously damaged. The soil shall be stabilized by planting or seeding. The soil shall contain no particles more than one inch in diameter. Top soil shall not be removed from the subdivision or used as spoil.
- (5) Debris and Waste. No cut trees, diseased trees, timber, debris, earth, rocks, stones, soil, junk, rubbish or other waste materials of any kind shall be buried in any land, or left or deposited on any lot or street at the time of the issuance of a certificate of occupancy, and removal of those items and materials shall be required prior to issuance of any certificate of occupancy in a subdivision. No items and materials as described in the preceding sentence shall be left or deposited in any area of the subdivision at the time of expiration of the Development Agreement or dedication of public improvements, whichever occurs sooner.
- (6) Enforcement
- (A) The City may issue a stop work order halting all development work and building construction for noncompliance with the erosion control plan.
  - (B) The City will conduct site inspections for compliance with appropriate erosion control measures, and any related issues regarding non-compliance will be addressed as appropriate.

**CITY OF SCANDIA**

**ORDINANCE NO. 103**

**AN ORDINANCE ADOPTING A NEW CHAPTER 4 OF THE DEVELOPMENT CODE  
OF THE CITY OF SCANDIA AND PERTAINING TO THE REGULATION OF MINING  
AND RELATED ACTIVITIES**

The City Council of the City of Scandia hereby ordains as follows:

Section 1. A new Chapter 4 entitled Mining and Related Activities Regulations is hereby adopted and added to the Development Code of the City of Scandia as hereinafter stated.

**CITY OF SCANDIA DEVELOPMENT CODE**

**CHAPTER 4**

**MINING AND RELATED ACTIVITIES REGULATIONS**

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## **MINING AND RELATED ACTIVITIES**

Gravel and other mineral deposits are a valuable resource, available in generous quantities in the City of Scandia. This Chapter was developed to establish conditions whereby these mineral deposits, primarily gravel, will be made available for general use. This Chapter also provides guidelines protecting natural resources and adjacent areas from adverse impacts and for restoring the land to a usable, attractive condition after the mining operation is finished.

This mining regulation is adopted pursuant to the authorization and policies contained in Minnesota Statutes, Chapter 394.

### ***SECTION 1. INTENT AND PURPOSE***

***1.1*** Purpose. This Chapter is adopted for the purposes of:

- (1.) Providing for the health, welfare, and safety of the community by regulating the removal of sand, rock, soil, and other natural deposits in the City of Scandia.
- (2) Providing for the economic availability, removal and processing of sand, gravel, rock, soil, and other materials vital to the economic well-being of the region.
- (3) Establishing regulations, safeguards and controls regarding noise, dust, odors, traffic, drainage, groundwater quality and other factors which will minimize the environmental and aesthetic impacts on mined or other property.
- (4) Establishing regulations, policies and processes to protect the quality and quantity of groundwater in Scandia and its environs.
- (5) Reducing the potential for pollution caused by wind, soil erosion and sedimentation.
- (6) Establishing locations, orderly approval processes and operating conditions under which mining operations will be allowed and establishing conditions which ensure the restoration of mined areas consistent with the existing and planned land use patterns.
- (7) Ensuring compliance with the regulations established in this ordinance on those mining operations presently operating in Scandia.
- (8) Meeting the goals and policies of the Scandia Comprehensive Plan.



## ***SECTION 2. APPLICATION OF CHAPTER***

### ***2.1*** Application.

- (1) This Chapter applies to land uses within the City of Scandia. Where this Chapter imposes a greater restriction upon the land than is imposed or required by other existing provisions of law, ordinance, contract or deed, the provisions of this Chapter shall control.

## ***SECTION 3. GENERAL PROVISIONS***

### ***3.1*** A Conditional Use Permit (CUP) and an Annual Operators Permit (AOP) are required for all mining operations and are subject to the following:

- (1) The operation of a mining operation without a valid Conditional Use Permit (CUP) or an Annual Operators Permit (AOP) is declared to be a nuisance, and it shall be unlawful for any person, partnership, company or corporation to engage in mining in violation of this section, or for any property owner to permit mining of the property owner's property in violation of this section.
- (2) Existing operators holding a Conditional Use Permit from Washington County may operate under the terms and conditions of the Washington County CUP until its expiration date or until 90 days after this Chapter is adopted, whichever occurs later. If a complete permit application is not submitted within 90 days after this Chapter is adopted, all mining operations shall cease and the property restored in accordance with the provisions of the approved reclamation plan.
- (3) For new mining operations, the Applicant must apply for a Conditional Use Permit pursuant to Section 5 of this Chapter. In cases where a mandatory or discretionary EAW is required, or an EIS is required, those documents shall be prepared and accepted by the City before application for a CUP.
- (4) In order for the City to grant a Conditional Use Permit for a new mining operation or the expansion or change in use of an existing operation, all of the following criteria must be met:
  - (A) The property, which may consist of more than one parcel with more than one owner, is at least 40 contiguous acres in size.
  - (B) The standards for approval of a conditional use permit as contained in Chapter One, Section 7, of the Scandia Development Code are met;
  - (C) The operation is consistent with the Scandia Comprehensive Plan; and
  - (D) All provisions of this Chapter are met.

- (5) Asphalt operations or concrete ready-mix plants, either portable or permanent, and any new operations or existing operations that are substantially expanding or changing must have a Conditional Use Permit from the City of Scandia.
- (6) The standards which apply to these permits may be varied by the City according to the structure and size of the operation, and to factors presented by the mine operator and other interested parties.
- (7) Prior to the issuance of the Annual Operators Permit, an annual report and application shall be submitted to the City for determination if the operation complies with the requirements of this Chapter. The City will then make an inspection and deliver an inspection report to the operator. If the operator's application conforms to the requirements of this Chapter, and the inspection report indicates compliance with the terms of the CUP and AOP, the Annual Operators Permit may be issued.

#### ***SECTION 4. DEFINITIONS***

**4.1** For the purpose of these regulations, certain terms and words are hereby defined as follows: (other terms are defined in the Zoning and Subdivision Chapters)

- (1) Add: Rock. Rock or rock material imported to a gravel site to blend with quarried rock to obtain a desired rock product.
- (2) Asphalt Plant. Machinery, either temporary or permanent, used for blending and making aggregate materials with oil based materials to create hot or cold asphalt products.
- (3) Berm. An earthen structure not less than 6 feet in height designed to provide screening of mining operations from public roads and neighboring properties.
- (4) Bond. Any form of security including a cash deposit, surety bond, collateral, or instrument of credit in an amount and form satisfactory to the City of Scandia. All bonds shall be approved by the City of Scandia wherever a bond is required by these regulations.
- (5) Concrete Ready-Mix Plant. Machinery used to mix materials (usually cement, sand, or aggregate) and water to create concrete for commercial sales.
- (6) Confined Aquifer. An aquifer that is overlain and underlain by relatively impermeable layers or beds of rock or unconsolidated material (clay/silt) and contains water under pressure.
- (7) Dewatering. The pumping, extraction or removal of subsurface water.

- (8) Grading. The removal, depositing, or moving of more than 50 cubic yards of sand, gravel, rock, soil, clay or other deposits in less than a one (1) year period on any parcel.
- (9) Groundwater. Water contained below the ground surface in the saturated zone.
- (10) Holiday. New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.
- (11) Mining. The excavation, removal, storage or processing of sand, gravel, rock, soil, clay, or other deposits. Mining shall not include the excavation, removal, or storage of rock, sand, dirt, gravel, clay, or other material for the following purposes:
  - (A) Excavation for the foundation, cellar, or basement of some pending structure for which a permit has been issued and which is to be erected immediately following the excavation, removal or storage.
  - (B) On-site construction of approved roads, sewer lines, storm sewers, water mains, surface water drainage approved by the local unit of government, agriculture or conservation purposes, sod removal, or other public utilities.
  - (C) Landscaping purposes on a lot used or to be used as a building site.
  - (D) Grading/excavation of less than one (1) acre of land in conjunction with improvement of a site for lot development, providing activities will be completed in one year.
- (12) Mining Season. The period, not to exceed one year, contained within any calendar year.
- (13) Operator. A person, partnership, company, corporation or other business entity engaged in or proposing to conduct a mining operation. In the event the operator is not the fee owner of the land to be mined, then the fee owner's consent shall be required for the Conditional Use Permit (CUP).
- (14) Organic Soil. Soil that sustains and facilitates healthy plant growth.
- (15) Overburden. Those materials which lie above the mineral deposit to be mined.
- (16) Processing. Any activity which may include the crushing, washing, stockpiling, compounding, mixing, or treatment of sand, gravels, rocks, or similar mineral products into consumable products such as construction grade sand, gravel, concrete, asphalt, and other similar products.
- (17) Reclamation, Restoration, Rehabilitation. To renew land to a self-sustaining, long term use which is compatible with contiguous land uses and which process shall include the reestablishment of vegetation, soil stability and establishment of safe

conditions appropriate to the intended use of the land in accordance with the City's Comprehensive Plan and the Conditional Use Permit conditions allowing for excavation and/or processing on the site.

- (18) Stockpiling. Storage of processed or raw materials on the site of the sand, gravel or rock operation.
- (19) Topsoil. That portion of the overburden which lies within the "A" and "B" horizon of soil closest to the surface and which supports the growth of vegetation.
- (20) Unconfined Aquifer. An aquifer that is not naturally protected by an overlying confining bed or layer and the water level is at atmospheric pressure.

### ***SECTION 5. APPLICATION FOR A CONDITIONAL USE PERMIT (CUP)***

**5.1** The application for a Conditional Use Permit for a mining operation must be filed with the City. The City shall follow procedures prescribed in Chapter One, Section 7, Conditional Uses, of the City Development Code. The application must be made in the name(s) of the operator of the mine and owner of the land to be mined.

**5.2** The application shall contain the following:

- (1) The name and address of the operator and owner of the land.
- (2) An accurate legal description of the property where the mining shall occur.
- (3) Names and addresses of the adjacent landowners including all those within a one-half (1/2) mile of the perimeter of the property being or to be mined.
- (4) A narrative outlining the type of material to be excavated, mode of operation, estimate of amount of material to be removed, plans for blasting, estimated time to complete the removal, and other pertinent information to explain the request in detail.
- (5) All fees and escrow amounts as established by the City Council.
- (6) Survey indicating property boundaries.
- (7) A map of the property where the mining is to occur that clearly indicates the property lines and the limits of the proposed excavation with operating setbacks described in Section 7, topographic data, including contours at 2 foot vertical intervals. Water courses, wetlands, wooded areas, rock outcrops, power transmission poles and lines, and other significant features shall also be shown. U.S.G.S. datum shall be used for all topographic mapping. Interpolated contour data from U.S.G.S. Quadrangle maps is not permitted.



- (8) A general location map and aerial photo showing the proposed mining site in relation to the community.
- (9) Maps and Plans showing the following for the site and within 300 feet of the perimeter of the mine:
  - (A) Roads or streets showing all access routes between the property and the nearest arterial road, identifying name, right-of-way width and traveled portion width.
  - (B) Easements Plan with widths and purpose.
  - (C) Natural land features showing locations of watercourses and drainageways, flood elevation, wetlands, sinks, basins, and wooded areas.
  - (D) Natural Resources including other surface water, groundwater depth, flora, fauna, and any other natural features in the rural environment.
  - (E) Man-made features such as buildings and other structures, dams, dikes, and impoundments of water.
  - (F) Adjacent land features with all of the requirements included above within 300 feet of the perimeter of the mine, and all platted subdivision lots, metes and bounds parcels, and homes within 1/4 mile of the property boundaries. Wells should include private/agriculture, industrial, municipal wells within a 1/2 mile radius of the mine.
  - (G) A minimum of 1 cross-section for every 1000 feet running north/south and east/west, showing the extent of overburden, extent of sand and gravel deposits, the groundwater level (even if they are below the base of the proposed mine floor), and any evidence of the groundwater level in the past. Additional cross sections may be required at the discretion of the City.
  - (H) All processing areas and boundaries shown to scale.
  - (I) All access roads within the site to processing and mining areas shown to scale.
  - (J) Sequences or phases of operation showing approximate areas involved shown to scale and serially numbered with a description of each.
  - (K) Location of screening berms shown to scale, and notes provided indicating when they will be used as reclamation material. In the same manner overburden storage areas must be identified and noted.
  - (L) Fences and gates~~-~~, and their type or construction described and illustrated.

- (M) Proposed location of principal service or processing buildings or enclosures, as well as location of settling basins and process water ponds.
- (N) Existing site drainage features and flow directions indicated. A plan for handling surface drainage during operation and after final reclamation, consistent with local surface water management plans.
- (O) A plan for groundwater quality protection to include a minimum of 3 borings showing depth to groundwater. The City may require additional borings if necessary.
- (P) All mining operations must install one monitoring well. If the proposed mining operation will appropriate ground water for use in mining operations, the operator shall install not less than one monitoring well down-gradient of the mining operation. If the proposed mining operation will include mining into the water table, not less than two monitoring wells shall be installed one up-gradient and one down-gradient of the mine.
- (Q) If lighting is proposed, a plan for lighting of the area must be provided. The plan must comply with all City ordinances pertaining to lighting.
- (R) Reclamation plan in conformance with Section 8.
- (S) If blasting is proposed as part of the mining operation, the operator must indicate frequency, timing, size, duration and develop a blasting plan.
- (T) A description of any processing operations including, washing, crushing, recycling and bituminous plants and concrete ready mix plants.
- (U) Any other information, reports, or studies the City deems necessary for purposes of evaluating environmental or aesthetic impacts.

**5.3** The applicant (application) must comply with all rules of the Minnesota Environmental Quality Board Environmental Review Program.

**5.4** A mandatory Environmental Assessment Worksheet shall be required for development of a facility for the extraction or mining of sand, gravel, stone or other nonmetallic minerals which will excavate 40 or more acres of land to a mean depth of 10 feet or more during its existence. An Environmental Assessment Worksheet shall be required for any operation in which mining is proposed below the groundwater level. The City shall be the responsible governmental unit for the preparation of an Environmental Assessment Worksheet. (Chapter M.S. 4410.4300 Subpart 12.)

The City may require an Environmental Assessment Worksheet if available evidence indicates that the proposed operation may have the potential for significant environmental effects.

**5.5** A mandatory Environmental Impact Statement shall be required for the development of a facility for the extraction or mining of sand, gravel, stone or other nonmetallic minerals, which will excavate 160 acres of land or more to a mean depth of 10 feet or more during its existence. The City shall be the responsible governmental unit for the preparation of an Environmental Impact Statement. (Chapter M.S. 4410.4400 Subpart 9.)

**5.6** Protection of Groundwater. The maximum depth of excavation shall be established so that groundwater quality and quantity are protected. This depth of excavation shall be established by the City and will be based, in part, upon soil characteristics, depth to groundwater, nature of mining proposed, and local use of the aquifer. Mining shall not be allowed in confined aquifers. Excavation into unconfined aquifers must be closely monitored and conducted according to the conditions of the permit. Dewatering for the purposes of mining shall not be allowed. If it is determined in the course of mining that the mining operation has negatively impacted a well by lowering yields or water quality, the operator of the mine shall be responsible for providing a new well for the property.

No extraction operations shall be conducted in such a manner as to permanently lower the water table of surrounding properties or any other water body, wetland, or groundwater dependent natural resources.

**5.7** Permits from the Minnesota Pollution Control Agency will be required for a mining operation in relation to air, noise, and water quality where applicable. An air quality permit may be necessary for smoke stack discharges from processing plants or fugitive dust from operating areas. If the mining operation discharges water from gravel washing, a State Disposal System permit or a National Pollution Discharge Elimination (NPDES) permit may be necessary from the Minnesota Pollution Control Agency. As a condition of any permit issued pursuant to this Chapter, no mining will be allowed until evidence is shown the operator has obtained these permits or none are necessary.

**5.8** Permits from the Minnesota Department of Natural Resources may be required in the event any type of work is proposed that affects public waters. A permit may also be needed for a well in connection with a washing facility. As a condition of any permit issued pursuant to this Chapter, no mining will be allowed until evidence is shown the operator has obtained these permits or none are necessary.

**5.9** A surface water protection plan to address on-going monitoring; accident response and remediation shall be required. Surface water protection plans must include subwatershed maps delineating all drainage areas that drain to or through the property as well as for the property itself.

**5.10** Any mining operation having access from a State, County, or local highway or street must obtain an access permit from the respective agency or the City. Turn lanes and/or bypass lanes may be required by the respective agency or the City to reduce the risk of traffic safety hazards. The cost of construction of turn or bypass lanes shall be the sole expense of the operator.

**5.11** Abandoned wells must be sealed in accordance with State and County requirements.

***SECTION 6. APPLICATION FOR AN ANNUAL OPERATORS PERMIT (AOP)***

- 6.1** The application for an Annual Operators Permit (AOP) for a mining operation must be filed with the City. The application must be made in the name(s) of the operator of the mine and must be filed by January 31st of each year.➤
- 6.2** The application shall contain the following:
- (1) The operator shall submit an Annual Report that summarizes the operating conditions regulated by Section 7. The Annual Report shall summarize the annual activity for the amount of material removed from the site, amount of add-rock brought onto the site, area reclaimed and type of reclamation, average number of trips hauling material to and from the site per day for the season, any changes made to the site, and other conditions specific to the Conditional Use Permit.
  - (2) The AOP Application shall identify how the operating conditions for the coming year will vary from the previous year, if any variation is expected. The AOP Application shall include a site plan and aerial photos that show the active mining area and the location of existing and planned stockpiles for the coming year. The AOP Application shall describe reclamation to occur and describe the operating conditions planned for the coming year.
  - (3) The City shall inspect the site annually during normal operating times. The inspection shall determine if the operation complies with the Conditional Use Permit. If the operator's application conforms to the requirements of this Chapter, and the inspection report indicates compliance with the terms of the CUP and AOP, the Annual Operators Permit may be issued.



## ***SECTION 7. OPERATING CONDITIONS***

**7.1** Operating Conditions. The following operating conditions and standards must be met for all mining operations.

- (1) Setbacks. No mining, stockpiling or land disturbance with the exception of screening, shall take place within:
  - (A) 50 feet of adjoining property lines;
  - (B) 200 feet of any existing occupied structures not owned by the operator or owner;
  - (C) 100 feet of any contiguous property subdivided into residential lots of five (5) acres or less,
  - (D) 100 feet of any road right-of-way of any existing or platted street, except the amount of material stockpiled on the effective date of this Chapter may continue but not be expanded. Mining may be allowed up to 50 feet of the road right-of-way so long as the property is restored to 100 feet within one mining season as set forth in the approved reclamation plans, and;
  - (E) If two or more mining operations are contiguous to one another, the common boundary may be mined if the City approves the respective restoration plans.
- (2) Fencing. Where deemed necessary by the City for the protection of the general public, a fence shall be constructed prior to the commencement of the operation enclosing the area authorized by the permit to be mined. Where fencing is required by the City, said fence shall be, at a minimum, a three strand wire fence and the fence shall be posted with warning signs. The City may require alternative fencing standards if conditions warrant. The fence shall be maintained and shall remain until reclamation is determined to be complete.
- (3) Hours of Operation. Those portions of the mining operation consisting of excavating, stockpiling, processing, or hauling shall be conducted only between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, unless other hours or days of operation are specifically authorized by the City. Mining operations shall not take place on holidays. Blasting shall only take place between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday. Blasting is only permitted with a Certificate of Compliance and with three days notice to the City.

In cases of public emergencies, such as road washouts or blockages caused by flooding, adverse weather or other conditions, hours of operation may be extended with the consent of the Mayor, Acting Mayor, or in their absence, the City Administrator.

In cases of time constraints on completion of road construction before the end of

the construction season caused by adverse weather conditions and in the cases of major road or highway construction projects which cause substantial inconvenience to the traveling public, hours of operation may be extended with the consent of the Mayor or Acting Mayor, or in the absence of the Mayor or Acting Mayor, the City Administrator. Application for extended hours shall be made at least two (2) days prior to the day or days on which extended hours are requested. The applicant shall furnish such information or documentation as may reasonably be requested to support the application. If extended hours are permitted, operations shall be strictly limited to those hours for which permission is granted.

- (4) Screening. Where deemed necessary by the City, extracting and processing operations shall be screened or located in such a manner as to minimize the impacts on surrounding properties. To minimize noise, dust, odors, erosion and visual impacts on surrounding properties, a continuous screen shall be installed and maintained, either along the street or along the perimeter of the visible portion of the area being operated.

The following shall serve as the minimum performance standards for screening and may be varied as determined by the City:

- (A) The screen shall have a total height of not less than six feet and shall consist of one or more of the following types:
- (1) Walls. A wall shall consist of concrete, stone, brick, tile, or similar type of solid masonry material a minimum of four inches thick.
  - (2) Berms. A berm shall be constructed of earthen materials, and it shall be seeded and mulched as shown on the landscape plan. Plans for berms must be provided that avoid impacts, especially surface water, onto neighboring properties. If berms are constructed of topsoil, they must remain until final reclamation. Berms must have a minimum slope of 3:1 and have a silt fence at the base closest to the public road or neighboring property. The silt fence shall be maintained until vegetation is established, at which time it shall be removed. No haul roads, either temporary or permanent, material stockpiles or other mining-related activities shall occur on the berm.
  - (3) Fences, Solid. A solid fence shall be constructed of wood and shall form a continuous screen.
  - (4) Fences, Open. An open weave or mesh-type fence, when not used in combination with a berm, shall be combined with plant materials to form a continuous screen.
  - (5) Planting. Plant materials, when used as a screen, shall consist of dense evergreen plants or a majority of dense evergreen plant

materials combined with deciduous plants provided a continuous screen is established. They shall be of a kind or used in such a manner so as to provide a continuous screen within 24 months after commencement of operations in the area to be screened. Plant materials shall not be limited to a maximum height. The Screening Plan shall be prepared by a licensed landscape architect. Required screening shall be installed prior to commencement of operations.

The City may require that either (1), (2), or (3) above shall be installed if, 24 months after commencement of operations in the area to be screened, plant materials have not formed an opaque screen, or if an opaque screen is not maintained.

- (B) Required screening shall be setback at least 20 feet from:
  - (1) The point of intersection of a vehicular accessway or driveway and a street;
  - (2) The point of intersection of a vehicular accessway or driveway and a sidewalk or trail, and
  - (3) The point of intersection of two or more vehicular accessways, driveways, or streets.
  - (4) An adjoining property line. If a berm is the selected method of screening, the base of the berm shall not be closer than 20 feet of the adjoining property line.
- (5) Dust Control. The owner must construct, maintain and operate all equipment in such a manner as to minimize on-site and off-site dust conditions. All operations shall meet the standards of the Minnesota Pollution Control Agency.
  - (A) Access Roads. The driveway access to the sand and gravel operation must be setback at least 50 feet from neighboring property lines. The owner, as part of the Conditional Use Permit, must prepare a dust control plan. The operator shall maintain all ways and roads within the site to minimize dust conditions by providing such surfacing or other treatment as may be deemed necessary by the City. The treatment shall produce no potential pollution hazards to the ground and surface waters of the area. All gravel pit access roads shall be provided and maintained with a dustless, non-oiled surface not less than twenty-two (22) feet wide from the connection to a public road to a point within one hundred (100) feet of the loading area. The City may require a blacktopped access road if deemed necessary.
  - (B) Public Roads. Access roads shall also be constructed and maintained in such a manner that the deposit of earth materials on public roads is minimized. In the event that earth materials are deposited on the public road, the mine operator shall be responsible for clean-up. If the mining

operation does not access onto a paved road, the operator shall be responsible for dust control, including application of calcium chloride or other dust retardant.

- (6) Noise. All equipment and other sources of noise must operate so as to be in accordance with Federal, State and City noise standards. A noise mitigation plan shall be prepared by the mine operator and provided to the City.
- (7) Depth of Excavation. The maximum depth of excavation will be regulated based on groundwater protection and/or the ability to restore the property. Dewatering for the purposes of mining shall not be allowed.
- (8) Site Clearance. All stumps and other debris resulting from the excavation or related activities shall be disposed of by approved methods. The mine plan must address the disposal of stumps, trees, or other debris.
- (9) Appearance/Condition. The operator must maintain buildings, processing plants and equipment in a neat condition. Weeds and other unsightly or noxious vegetation shall be controlled as necessary to preserve the appearance of the landscaped area. Existing trees and topsoil along existing public rights-of-way shall be preserved, maintained and supplemented for the depth of the setback or as stipulated in the Conditional Use Permit.
- (10) Sanitary Facilities. Sanitary facilities through an approved septic system or portable facilities shall be provided.
- (11) Waste Disposal. Any waste generated from the mining operation, including waste from vehicle or equipment maintenance, shall be disposed of in accordance with Federal, State and City requirements.
- (12) Water Quality Monitoring. Water quality monitoring when required shall conform to the following standards:

Water from monitoring wells and water collected or discharged from the mining area shall be analyzed until one year after reclamation is completed. Samples from monitoring wells shall be taken and testing results submitted prior to the granting of an Annual Operators Permit (AOP). More frequent monitoring and sampling may be required by the City. Sampling and testing shall be done by an independent testing laboratory or an agency chosen by the City. Monitoring wells shall be sealed one year after reclamation efforts are complete if the site is determined to be uncontaminated. Water samples shall be required to be analyzed to determine the level of petroleum products and hydrocarbons. Testing for other contaminants directly related to the mining operation may be required by the City.

- (13) Fuel and Chemical Storage. Any mining operation and related activities must meet Federal, State and City requirements for storage of fuels. The mining operator must prepare a Pollution Prevention Plan and submit it to the City.



- (14) Contingency Response Plan. The operator shall prepare a Contingency Response Plan (CRP) and employee training to facilitate immediate and remedial response should any accident, release of containment, or other spills occur. The CRP must be on file with the City and its fire department.
- (15) Added Provisions. The operator must comply with such other requirements that the City, from time to time, may find necessary to adopt for protection of the health, safety, welfare and prevention of nuisances in the area.
- (16) Processing. Any mining operation in which processing is proposed must meet the following performance standards:
  - (A) A Conditional Use Permit or an amendment to an existing Conditional Use Permit is required for any new or existing mining operation which desires to add processing equipment on-site, except as provided in (C) below.
  - (B) The application must include the nature of the processing and equipment, location of the plant, source of water, disposal of water, and reuse of water.
  - (C) Operators who wish to have processing equipment on a temporary basis (processing to be done no more than fifteen (15) working days a calendar year, excluding time for assembly and disassembly) shall apply for a Certificate of Compliance and meet the following criteria:
    - (1) Only materials removed on site are allowed to be processed except recycled material and add rock materials. No materials may be hauled onto the property for processing, unless all material can be processed during the fifteen (15) day time period. No more than 50% of the material shall be recycled material or add rock on an annual basis.
    - (2) Setbacks as outlined in Section 7.1 (1) must be met.
    - (3) All Federal, State and City air, water and noise standards must be met.
    - (4) Processing shall not take place more than fifteen (15) working days per year.
    - (5) Crushing equipment must be placed in the bottom of the pit area if practical, otherwise located in such a manner as to have the least environmental and aesthetic impact.
  - (D) Operators desiring to have permanent processing equipment (more than fifteen { 15 } days per year) on site must meet the following standards:

- (1) All Federal, State and City air and water quality, and noise standards must be met.
  - (2) Processing equipment must be screened from view from other property and from public roads.
  - (3) Crushing equipment must be placed in the bottom of the pit if practical, otherwise located in such a manner as to have the least environmental and aesthetic impact.
  - (4) Setback requirements as set forth in Section 7.1 (1) of this Chapter must be met.
- (E) A temporary processing plant in conjunction with a specific road project, located in the right-of-way or in proximity to the subject road, will be allowed subject to the following conditions:
  - (1) All Federal, State and City air, water and noise quality standards must be met.
  - (2) A Certificate of Compliance must be obtained from the City.
  - (3) The processing equipment must be located so as to minimize its effect on surrounding property owners.
  - (4) The processing plant shall not be on the property for more than 120 calendar days.
  - (5) No materials, outside of the designated right-of-way, may be excavated or removed from the site without a conditional use permit for mining.
  - (6) A bond or other financial guarantee, in an amount determined by the City, must be posted to assure restoration of the site.
- (17) Recycling. The crushing/processing of used aggregate, concrete and asphalt will be permitted subject to the following conditions:
  - (A) Recycling in conjunction with a specific road project and within the right-of-way or proximity to the subject road, shall be permitted for a maximum of 120 days subject to obtaining a Certificate of Compliance and to the following standards:
    - (1) The processing equipment must be located so as to minimize the effect on surrounding property owners.
    - (2) Site selection shall be made as to minimize the effect on the public health, safety and welfare.

- (3) All Federal, State and City air, water and noise quality standards must be met.
- (B) Recycling in conjunction with an approved mining permit shall be allowed as part of an original or amended Conditional Use Permit subject to the following conditions:
  - (1) Applicable Standards contained in Section 7.1 (1) must be met.
  - (2) An estimate of the amount of material to be processed must be submitted. The stockpile of material to be recycled shall be limited to the amount that can reasonably be processed in two consecutive mining seasons.
- (18) Trucking Operations. All new mining operations must have access to the pit area from a nine (9) ton blacktop, concrete, or gravel road. The operator shall ensure all loads leaving any pit regulated by this Chapter are loaded so as to comply with state law. Trucks shall clean any loose material from the truck including the tires before leaving the operation.
- (19) Asphalt Plants and Concrete Ready Mix Plants. A Conditional Use Permit shall be required for any new or existing mining operation that wishes to have a permanent asphalt plant and/or a concrete ready mix plant. Temporary asphalt plants and concrete ready mix plants may be allowed if the following conditions are met:
  - (A) Operators desiring to have a temporary asphalt plant and/or a concrete ready mix plant must meet the following standards.
    - (1) Asphalt plants and concrete ready mix plants must not be on the property for more than fifteen (15) days per year.
    - (2) All setbacks as set forth in Section 7.1 (1) of this Chapter must be met.
    - (3) All Federal, State and City air, water, noise and odor quality standards must be met. An air quality permit must be obtained from the Minnesota Pollution Control Agency.
    - (4) Equipment must be located in such a manner as to have the least environmental and aesthetic impact.
  - (B) Operators desiring to have a permanent asphalt plant and/or a concrete ready mix plant (more than 15 days per year) must meet the following standards:

- (1) Asphalt operations and concrete ready mix plants established after the effective date of this Chapter must be located on permitted mining sites and maintain a setback of 1,000 feet from the property line.
  - (2) If the asphalt operation was in operation on the effective date of this ordinance, it may expand subject to the setbacks set forth in Section 7.1(1) of this Chapter.
  - (3) All Federal, State, and City air, water, and noise quality standards must be met. An air quality permit must be obtained from the Minnesota Pollution Control Agency.
  - (4) Equipment must be screened and located in such a manner so as to have the least environmental and aesthetic impact.
- (C) A temporary asphalt plant in conjunction with a specific road project will be allowed subject to the following conditions:
- (1) All Federal, State and City air, water and noise quality standards must be met. An air quality permit must be obtained from the Minnesota Pollution Control Agency.
  - (2) A Certificate of Compliance must be obtained from the City.
  - (3) The processing equipment must be located in such a manner so as to have the least environmental and aesthetic impact.
  - (4) Site selection shall be made as to minimize the effect on the public health, safety, and welfare.
  - (5) The asphalt plant shall not be on the property for more than one hundred twenty (120) days.
  - (6) No materials, outside of the designated right-of-way, may be excavated or removed from the site without a conditional use permit for mining.
  - (7) A bond or other financial guarantee, in an amount determined by the City, must be posted to assure restoration of the site.

#### ***SECTION 8. RECLAMATION***

- 8.1** The applicant must submit a reclamation plan consisting of graphic representation as required in Section 5 along with the written text. The plan must contain the following elements:



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- (1) Intent of reclamation.
- (2) Methods and processes of reclamation.
- (3) Initial condition of mining site.
- (4) Limits of various operational areas.
- (5) Phasing and timing of operations and reclamation including areas to be stripped of overburden.
- (6) Final condition of site, including proposed contours and landscaping.
- (7) Relation of final site condition to adjoining land forms and drainage features within 1/4 mile.
- (8) Relation of reclaimed site to planned or established uses of surrounding land.
- (9) A plan for maintenance of reclaimed area.
- (10) A detailed cost estimate of reclamation and maintenance.

**8.2** Timing. Restoration shall proceed concurrently and proportional to actual mining operations and will be subject to review and approval at each annual inspection and at the end of the permit period.

**8.3** Excavations resulting in the accumulation of substantial water areas after reclamation must meet the following requirements:

- (1) The water depth must not be less than three feet (3') measured from the low water mark, unless a plan for creation of a wetland or marsh has been approved.
- (2) All banks shall be sloped to the water line at a slope which shall not be steeper than four (4) feet horizontal to one (1) foot vertical.
- (3) All banks shall be surfaced with soil of a quality at least equal to the topsoil of land areas immediately surrounding and to a depth of at least four (4) inches. Sodding or seeding and mulching are also required. Mulch must be properly anchored.
- (4) Such topsoil as required by Subsection three (3) above shall be planted with trees, shrubs, legumes or grasses;
- (5) Slopes on reclaimed areas shall not be steeper than four (4) feet horizontal to one (1) foot vertical, except in cases where non-erodible conditions are present and the City approves the reclamation plan.

- (6) In man-made groundwater lakes, the bottom contour shall be gradually sloping from the shoreline to the deepest portion of the water body with a maximum slope of 6 feet horizontal to 1 foot vertical for at least 100 feet from the proposed shoreline toward the center of the water body. Beyond 100 feet in horizontal distance, the slope of the bottom contours may be no steeper than 3 feet horizontal to 1 foot vertical.

**8.4** Excavations not resulting in water areas after rehabilitation but which must be graded or backfilled, shall meet the following requirements:

- (1) Fill shall be inspected and certified as being clean (free of volatile organic compounds, heavy metals, or other contaminants) before being used for reclamation. Organic soil shall be used only for topsoil.
- (2) Such grading or back-filling shall be made with non-noxious, nonflammable, noncombustible solids;
- (3) The graded or backfilled area shall not collect or permit stagnant water to remain therein;
- (4) The peaks and depressions of the area shall be reduced to a gently rolling topography in substantial conformity to the land area surrounding and which will minimize erosion due to rainfall;
- (5) Such graded or backfilled area shall be surfaced with soil of a quality at least equal to the topsoil of land areas immediately surrounding, and to a depth at least four (4) inches;
- (6) Such topsoil as required by 7.4 (5) above shall be planted with trees, shrubs, legumes or grasses.
- (7) Slopes on reclaimed areas shall not be steeper than four (4) feet horizontal to one (1) foot vertical, except in cases where non-erodible conditions are present and the City approves the reclamation plan.
- (8) All rehabilitation areas which are planned for building purposes shall have a final elevation at least 10 feet above the normal ordinary groundwater level. Plans for on-site septic systems must be considered. If area is backfilled for purposes of future development, the soil must be compacted, and subsequently tested by a registered soils engineer and approved.

**8.5** Drainage. Reclamation shall proceed in such a way that natural and storm drainage, where it enters and leaves the premises, shall be altered only to the least degree necessary to carry out excavation and related activities. Any alteration of natural and storm drainage shall not adversely affect public roads or neighboring uses.

**8.6** Cover and Planting. The reclamation area shall be planted with grass, trees, shrubs, crops, or other vegetation to prevent erosion and provide for screening and natural beauty.

Technical assistance and soils data should be obtained from the appropriate county and state officials, conservation districts, and the nearest soil conservation service office.

- 8.7 Topsoil. When topsoil is stripped or removed, it must be set aside on the site for re-spreading over the excavated area. These overburden stockpiles must be used to minimize the effects of erosion of wind or water upon public roads, streams, or adjacent land uses and shall not be sold or removed from the property.
- 8.8 Removal of Structures. Within a period of six (6) months after the termination of a mining operation, or within six (6) months after abandonment of such operation for a period of six (6) months, or within six (6) months after expiration of a sand and gravel permit, all buildings and other structures not otherwise allowed under the Zoning Ordinance must be removed from the property and the property restored in conformance with the reclamation plan.

### ***SECTION 9. INSURANCE, FINANCIAL GUARANTEES AND FEES***

- 9.1 Insurance. The operator shall provide proof of bodily injury, property damage, and public liability insurance in the amount of \$1,000,000 for any occurrence, including blasting insurance if blasting is allowed as part of the permit.
- 9.2 Escrow. The Applicant for a CUP shall establish a non interest bearing account with the City in the minimum amount of \$10,000.00 to secure the payment of administrative, engineering and legal costs incurred by the City in connection with the application.

If the escrow is insufficient, the Applicant shall make such additional deposits as may be required by the City. The City shall have the right to reimburse itself from the escrow. Any excess amounts remaining in the escrow shall be reimbursed to the Applicant within sixty (60) days after the approval of the application provided that all City expense invoices have been received. If for any reason, escrow funds are insufficient to cover City costs, the Applicant shall reimburse the City for all of such costs upon receipt of an invoice therefore. Upon the failure of the Applicant to make payment of such invoice within 30 days of receipt of the invoice, the City may reimburse itself from the escrow account. The Applicant shall be responsible for the payment of all administrative, engineering and legal costs incurred by the City in connection with the application. The applicant for an AOP shall establish an escrow of \$5,000. Additionally, the applicant shall, upon receipt of an invoice, reimburse the City for inspection costs and any required dust control and nuisance abatement costs incurred by the City in approving the AOP or administering the permitted mining operation.-

- 9.3 Financial Guaranty. To assure compliance with the provisions in this Chapter, the completion of reclamation and restoration of the site, and the performance of the operator's obligations set forth in the CUP, the operator shall provide to the City an Irrevocable Letter of Credit or other security satisfactory to the City in the amount to be determined by the City. The operator shall be entitled to a reduction in the security amount on a dollar for dollar basis as reclamation is completed and approved by the City

engineer, except that the security shall not be reduced below an amount equal to 125% of the cost of the work to be completed as determined by the City Engineer nor below 5% of the security, unless the reclamation has been accepted by the City.

To obtain a reduction in the security the operator will give notice to the City of completion of a portion of the reclamation or fulfillment of its requirements. The City Engineer will inspect the completed improvements within ten (10) working days of the operator's notice, and, provided the engineer approves the completed reclamation or fulfillment of requirements, the reduction in the security will occur on a dollar for dollar basis within five (5) working days after the City Engineer's approval subject to the limitations stated above.

If the security does not automatically renew, then at least thirty (30) days prior to the expiration of the security, the operator shall provide the City with a new security for a period of at least one (1) year beyond the expiration date of and for the same amount as the security then in effect or the operator shall be in default hereunder with no opportunity to cure, and the City may immediately demand from the surety the amount of the security then in effect.

Any security provided under this section shall permit the City to draw upon the security immediately following any operator default hereunder that is not cured within any applicable notice period and for such portion thereof as is certified by the City Engineer to be reasonably necessary to cure such default.

Any request for a security reduction shall be accompanied by mechanics lien waivers covering completed work.

- 9.4** A permit fee of \$500 shall be paid with the application for a CUP. A permit fee of \$500 shall be paid with the application for an AOP. An AOP will not be issued unless all outstanding fees and taxes are paid.



***SECTION 10. VIOLATIONS, PENALTIES AND INSPECTION***

- 10.1*** Any firm, person or corporation who violates any of the provisions of these regulations shall be guilty of a misdemeanor and upon conviction thereof shall be subject to a fine and/or imprisonment as provided by law. Each day that a violation is permitted to exist shall constitute a separate offense.
- 10.2*** In the event of a violation or threatened violation of any of the terms of this Chapter, the City may take appropriate action to enforce these provisions, including application for injunctive relief, action to compel performance or other appropriate action in court if necessary to prevent, restrain, correct or abate such violations or threatened violations. Upon motion, the court may award costs, disbursements and reasonable attorney's fees and witness fees, which costs and fees can be assessed against the land.
- 10.3*** Whenever necessary to enforce any of the provisions of this Chapter or whenever there is reasonable cause to believe that a violation of this Chapter has occurred or is about to occur, an authorized agent of the City may enter any building or upon any premises at all reasonable times to inspect the same or to perform any duties imposed by this Chapter, provided that if such building or premises be occupied, the authorized agent shall first present proper credentials and demand entry and if such building or premises be unoccupied, shall first make a reasonable effort to locate the owner or other persons having charge or control of the building or premises and demand entry. If such entry is refused, the City shall have recourse to every remedy provided by law to secure entry, including administrative and judicial search warrants.

***SECTION 11. TERMINATION OF PERMIT***

- 11.1*** Any Conditional Use Permit or Annual Operators Permit granted pursuant to this Chapter may be revoked for a violation of any provisions of this Chapter or any conditions of the permit.
- 11.2*** Revocation shall not occur earlier than ten (10) working days from the time written notice of revocation is served upon the permittee or if a hearing is requested, until written notice of the City action has been served on the permittee. Notice to the permittee shall be served personally or by registered or certified mail at the address designated in the permit application. Such written notice of revocation shall contain the effective date of the revocation, the nature of the violation or violations constituting the basis of the revocation, the facts which support the conclusions that a violation or violations have occurred and a statement that if the permittee desires to appeal, the permittee must, within ten (10) working days, exclusive of the day of service, file a request for a hearing. The hearing request shall be in writing, stating the grounds for appeal and served personally or by registered or certified mail on the City Clerk by midnight of the tenth working day following service. Following the receipt of a request for hearing, the City Clerk shall set a

time and place for the hearing, and the hearing shall be conducted in accordance with the procedures set forth in Chapter 1, Section 7.8, of the Scandia Development Code.

- 11.3** A mining operation shall not be permitted to continue solely for the purpose of maintaining a bituminous or ready mix concrete plant or for crushing, washing, recycling or other processing operations. Upon removal of all commercially reasonable quantities of material from the mining site, the mining operation shall cease, all equipment and structures shall be removed and reclamation of the site shall be promptly completed. Failure to remove commercially reasonable quantities of material from the site for a period of two consecutive years shall constitute a presumption that the mining on the site has been completed, unless the operator has renewed the AOP yearly.

## ***SECTION 12. EFFECTUATION***

- 12.1** It is hereby declared to be the intention that the several provisions of this Chapter are separable in accordance with the following:

- (1) If any court of competent jurisdiction shall adjudge any provision of this Chapter to be invalid, such judgment shall not affect any other provisions of this Chapter not specifically included in said judgment.
- (2) If any court of competent jurisdiction shall adjudge invalid the application of any portion of this Chapter to a particular property, building, or other structure, such judgment shall not affect the application of said provision to any other property, building or structure not specifically included in said judgment.

## ***SECTION 13. REPEALER***

- 13.1** Any ordinance or provision of an ordinance heretofore existing pertaining to the subjects treated in the Chapter shall be deemed repealed from and after the effective date of this Chapter except as they are included and reordained in whole or in part in this Chapter; provided that this repeal shall not affect any right established prior to the effective date of this Chapter or the provisions of any valid permit issued prior to the effective date of this Chapter.

Ordinance No. 103

Section 2. Section 9.9 Mining of Chapter Two of the Development Code of the City of Scandia is hereby amended as follows:

9.9 Mining. Mining within the City is regulated by Chapter Four of this Development Code.

Adopted this 28th day of August, 2007.

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Dennis D. Seefeldt, Mayor

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Anne Hurlburt, Administrator

**CITY OF SCANDIA**

**ORDINANCE NO. 107**

**AN ORDINANCE ADOPTING A NEW CHAPTER 5 OF THE DEVELOPMENT CODE OF  
THE CITY OF SCANDIA AND PERTAINING TO SHORELAND MANAGEMENT  
REGULATIONS**

The City Council of the City of Scandia hereby ordains as follows:

**Section 1. Amendment.** Section 11.2 Shoreland Overlay District of Chapter Two of the Development Code of the City of Scandia is hereby amended to read as follows:

11.2 Shoreland Overlay District. Properties and uses within this district are regulated in accordance with Chapter Five of this Development Code.

**Section 2. Amendment.** Section 12.3 of Chapter Two of the Development Code of the City of Scandia is hereby amended to read as follows:

**12.3. Applicability**

The OSCS standards are an alternative set of standards for residential development within the Agricultural (AG) and Residential (SR, SFE), districts. OSCS shall be permitted with a conditional use permit within these districts. The regulations of this Development Code are applicable only to the OSCS approved after the effective date of this Development Code.

**Section 3. Amendment.** A new Chapter 5 entitled “Shoreland Management Regulations” is hereby adopted and added to the Development Code of the City of Scandia as hereinafter stated.



**CITY OF SCANDIA DEVELOPMENT CODE**  
**CHAPTER FIVE**  
**SHORELAND MANAGEMENT REGULATIONS**

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## **SHORELAND MANAGEMENT REGULATIONS**

This Chapter of the City of Scandia Development Code shall be known as the City of Scandia Shoreland Management Regulations and may be referred to in this Chapter as “this Chapter” or the “Shoreland Management Regulations”. This shoreland regulation is adopted pursuant to the authorization and policies contained in Minnesota Statutes, Chapter 103 F, and the planning and zoning enabling legislation in Minnesota Statutes, Chapter 462.

### **SECTION 1. INTENT AND PURPOSE**

- 1.1 The uncontrolled use of shorelands of the City of Scandia, Minnesota affects the public health, safety and general welfare by contributing to pollution of public waters, and potentially decreasing property value. It is the intent and purpose of these regulations to:
- (1) Designate suitable land use districts for each body of public water.
  - (2) Regulate the placement of sanitary and waste treatment facilities on lots.
  - (3) Regulate the area of a lot and the length of water frontage suitable for building sites.
  - (4) Regulate the alteration of shorelands of public waters.
  - (5) Regulate alterations of the natural vegetation and the natural topography along shorelands.
  - (6) Conserve natural resources and maintain a high standard of environmental quality.
  - (7) Preserve and enhance the quality of surface water.
  - (8) Preserve the economic and natural environmental values of shorelands.
  - (9) Provide for the utilization of water and related land resources.
  - (10) Maintain water quality, reduce flooding and erosion and to provide sources of food and habitat for a variety of fish and wildlife.

## **SECTION 2. SCOPE AND APPLICABILITY**

- 2.1 The provisions of this chapter shall apply to the shorelands of the public water bodies as classified in Section 5 of this regulation and unclassified water bodies where applicable.
- 2.2 The use of any shoreland of public waters; the size and shape of lots; the use, size, type and location of structures on lots; the installation and maintenance of water supply and waste treatment systems, the grading and filling of any shoreland area; the cutting of shoreland vegetation; and the subdivision of land shall be in full compliance with the terms of this regulation and other applicable regulations.
- 2.3 If any section, clause, provision, or portion of this Chapter is determined to be unconstitutional or invalid by a court of competent jurisdiction, the remainder of this Chapter shall not be affected thereby.
- 2.4 The regulations contained in this chapter of the City of Scandia Development Code are in addition to and not in lieu of other regulations contained in other chapters of the City of Scandia Development Code. Where the standards contained in any other chapters of the Development Code are inconsistent with standards of this chapter, the more restrictive standard shall apply, except that the standards pertaining to lot size, lot width, and permitted uses contained in this chapter shall apply.

### SECTION 3. DEFINITIONS

- 3.1 For the purpose of this Chapter, certain terms and words are hereby defined as follows. Where terms are not defined in this Chapter, they shall have the same meaning as the definitions found in other chapters of the City of Scandia Development Code.
- (1) Access Corridor. An area where vegetation is cut or removed through the buffer to provide access to a lake, stream or wetland.
  - (2) Bluffline. A line along the top of a slope connecting the points at which the slope, proceeding away from the water body or adjoining watershed channel, becomes less than eighteen percent (18%) and it only includes slopes greater than eighteen percent (18%) that meet the following criteria:
    - (A) Part or all of the feature is located in a shoreland area.
    - (B) The slope rises at least 20 feet above the ordinary high water level of the water body.
    - (C) The slope must drain toward the water body.
  - (3) Bluff Impact Zone. Bluff and land located within 20 feet from the top of a bluff.
  - (4) Building Line. A line parallel to a lot line or the ordinary high water level at the required setback beyond which a structure may not extend.
  - (5) Buffer Strip. Undisturbed strip of land adjacent to shorelines and wetlands consisting of native or existing vegetation.
  - (6) Buffer Width, Minimum. The least buffer distance allowable measured perpendicular to the delineated wetland edge or ordinary high water mark of the lake or stream.
  - (7) Commercial Use. The principal use of land or buildings for the sale, lease, rental, or trade of products, goods, and services.
  - (8) Commissioner. The commissioner of the Department of Natural Resources.
  - (9) Controlled Access Lots. Lots intended to provide access to the lake for residents of a particular development.
  - (10) Deck. A horizontal, unenclosed platform with or without attached railings, seats, trellises, or other features, attached or functionally related to a principal use or site and at any point extending more than six(6) inches above ground.
  - (11) Forest Land Conversion. The clear cutting of forested lands to prepare for a new land use other than reestablishment of a subsequent forest stand.

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- (12) Impervious Surface. The portion of the lot covered with buildings including all appurtenances, driveways and sidewalks.
- (13) Intensive Vegetation Clearing. The complete removal of trees or shrubs in a contiguous patch, strip, row, or block.
- (14) Lake – Natural environment. Generally small, often shallow lakes with limited capacities for assimilating the impacts of development and recreational use. They often have adjacent lands with substantial constraints for development such as high water tables, exposed bedrock, and unsuitable soils.
- (15) Lake – Recreational Development. Generally medium-sized lakes of varying depths and shapes with a variety of land form, soil, and groundwater situations on the lakes around them. They often are characterized by moderate levels of recreational use and existing development. Development consists mainly of seasonal and year-round residences and recreational oriented commercial uses.
- (16) Lot Width. The horizontal distance between the side lot lines of a lot measured at the ordinary high water mark, setback line, and road right-of-way.
- (17) Ordinary High Water Level. The boundary of public waters and wetlands, and shall be an elevation delineating the highest water level which has been maintained for a sufficient period of time to leave evidence upon the landscape, commonly that point where the natural vegetation changes from predominantly aquatic to predominantly terrestrial. For water courses, the ordinary high water level is the elevation of the top of the bank of the channel. For reservoirs and flowage, the ordinary high water level is the operating elevation of the normal summer pool. On lades with an established ordinary high water level by the Minnesota Department of Natural Resources, that elevation shall be considered the ordinary high water level.
- (18) Public Waters. Any water as defined in Minnesota Statutes, Section 103.G.005(15).
- (19) Riparian Lot. A lot with frontage on the lake.
- (20) Sensitive Resources Management. The preservation and management of areas unsuitable for development in their natural state due to constraints such as shallow soil over groundwater or bedrock, highly erosive or expansive soils, steep slopes, susceptibility to flooding, or occurrence of flora and fauna in need of special protection.
- (21) Shore Impact Zone. Land located between the ordinary high water level of a public water and a line parallel to it at a setback of 50 percent of the required structure setback.
- (22) Shoreland. Land located within the following distances from the ordinary high water elevation of public waters:
- (A) Land within 1,000 feet from the normal high watermark of a lake, pond or flowage;  
or,



- (B) Land within 300 feet of a river or stream or the landward side of a floodplain delineated by ordinance on the river or stream, whichever is greater.
- (23) Significant Historic Site. Any archaeological site, standing structure, or other property that meets the criteria for eligibility to the Natural Register of Historic Places or is listed in the State Register of Historic Sites, or is determined to be an unplatted cemetery that falls under the provisions of the Minnesota Statutes, Section 307.08. An historic site meets these criteria if it is presently listed on either register or if it is determined to meet the qualifications for listing after review by the Minnesota State Archaeologist or the Director of the Minnesota Historical Society. Any unplatted cemeteries are automatically considered to be significant historic sites.
- (24) Steep Slope. Land where agricultural activity or development is either not recommended or described as poorly suited due to slope steepness and the site's soil characteristics, as mapped and described in available County soil surveys or other technical reports, unless appropriate design and construction techniques and farming practices are used in accordance with provisions of this chapter. Where specific information is not available, steep slopes are lands having average slopes over 12 percent, as measured over horizontal distances of 50 feet or more, that are not bluffs.
- (25) Tier One. A lot or parcel of land with frontage on a waterbody regulated by the City of Scandia Shoreland Management Regulations.
- (26) Toe of the Bluff. The lower point of a bluff with an average slope exceeding eighteen percent (18%).
- (27) Top of the Bluff. The highest point of a bluff with an average slope exceeding eighteen percent (18%).
- (28) Tributary Streams. A stream classified as such by the Minnesota Department of Natural Resources.
- (29) Unclassified Body of Water. Unclassified body of water means any lake, pond, backwater, swamp, marsh, wetland, stream, drainage way, flowage, river, floodplain or other water oriented topographical features not designated as being a natural environment lake, recreational development lake, general development lake, or transition river or tributary stream on the zoning map.
- (30) Wetland. Lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of the Development Code, wetlands must a) have a predominance of hydric soils: b) be inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions: and c) under normal circumstances, support a prevalence of hydrophytic vegetation. Wetlands generally include swamps, marshes, bogs and similar areas

## SECTION 4. ADMINISTRATION

- 4.1. Administration. Administration of this Chapter, including issuance of variances, shall be in accordance with Chapter One of the City of Scandia Development Code.
- 4.2. Notices to Department of Natural Resources. Copies of all notices of any public hearings to consider variance, amendments, or conditional uses under this chapter must be sent to the commissioner or the commissioner's designated representative and postmarked at least ten days before the hearing. Notices of hearings to consider proposed subdivisions/plats must include copies of the subdivision/plat.
- 4.3. Conditional Uses. Conditional uses allowable within shoreland areas shall be subject to review and approval procedures, and criteria and conditions for review of conditional uses established in the City of Scandia Development Code. A thorough evaluation of the waterbody and the topographic, vegetative, and soils conditions on the site must be made to ensure:
- (1) The prevention of soil erosion or other possible pollution of public waters, both during and after construction.
  - (2) Limited visibility of structures and other facilities as viewed from public waters.
  - (3) The site is adequate for water supply and on-site sewage treatment.
  - (4) The types, uses, and numbers of watercraft that the project will generate are compatible in relation to the suitability of public waters to safely accommodate these watercraft.
- 4.4. Conditions Attached to Conditional Use Permits. The City of Scandia, upon consideration of the criteria listed above and the purposes of the chapter, shall attach such conditions to the issuance of the conditional use permits as it deems necessary to fulfill the purposes of this chapter. Such conditions may include, but are not limited to, the following:
- (1) Increased setbacks from the ordinary high water level.
  - (2) Limitations on the natural vegetation to be removed or the requirement that additional vegetation be planted.
  - (3) Special provisions for the location, design, and use of structures, sewage treatment systems, watercraft launching and docking areas and vehicle parking areas.

## SECTION 5. SHORELAND CLASSIFICATION SYSTEM

- 5.1 Protected Waters Inventory Map. The public waters of the City of Scandia have been classified below consistent with the criteria found in Minnesota Regulations, Part 6120.3300, and the Protected Waters Inventory Map for Washington County, Minnesota.
- 5.2 Official Zoning Map. The shoreland area for the water bodies listed in Section 5.3 and 5.4 shall be as defined in Section 3.1 (30) and as shown on the Official Zoning Maps adopted in Chapter 2, Section 1.1 of the City of Scandia Development Code.
- 5.3 Lakes.

(1) Natural Environment Lakes.

Protected Waters Inventory ID#	Name
53	Sea
55	Nielson (Nielsen)
56	Unnamed (German)
57	Unnamed
58	Wojtowicz Pond
59	Goose
60	Unnamed
61	Unnamed
62	Unnamed
64	Fish
65	Hay
66	Unnamed
67	Sand
68	Long
70	Rasmussen Pond
72	White Rock
78	Clear

(2) Recreation Development Lakes.

Protected Waters Inventory ID#	Name
52	Big Marine
54	Bone
80	Sylvan

## 5.4 Rivers and Streams

### (1) Wild & Scenic Rivers.

St. Croix River (82-1P). Requirements of the Lower St. Croix River Bluffland and Shoreland Management Regulations contained in the Washington County Development Code, Chapter 5 must be followed, and are herein adopted by reference.

### (2) Tributary Streams.

Falls Creek (Sections 1, 6, 7 and 12) T32N R20 W

## SECTION 6. LAND USE DISTRICTS

6.1 Land Use Districts for Lakes. All lands within shoreland areas of lakes in the City of Scandia shall be designated as Residential Use Districts.

(1) Permitted Uses:

- (A) Single family residential
- (B) Parks and historic sites
- (C) Agricultural: cropland and pasture

(2) Uses Permitted with a Certificate of Compliance:

- (A) Home occupation in accordance with Chapter Two, Section 10.13 of the Development Code.

(3) Uses Permitted with a Conditional Use Permit:

- (A) Bed and Breakfast in accordance with Chapter Two, Section 10.5 of the Development Code.
- (B) Accessory Apartment in accordance with Chapter Two, Section 10.1 of the Development Permit.
- (C) Place of Worship in accordance with Chapter Two, Section 10.22 of the City Development Code, except that the minimum lot area required shall be 20 acres above the Ordinary High Water level, the property must have frontage on a City Collector, County Collector, or Minor Arterial, the minimum setback from the Ordinary High Water level shall be 500 feet, and off-street parking areas shall not be located within the Ordinary High Water level setback.

(4) Uses Permitted with a Planned Unit Development Permit:

- (A) Open Space Conservation Subdivisions as specified in Chapter Two, Section 12 of the City of Scandia Development Code, providing following additional standards are met:
  - 1. at least 70 percent of the land area within the shore impact zone shall be maintained in its natural state and preserved as permanent open space; and
  - 2. any shore recreation facilities, including but not limited to swimming areas, docks, watercraft mooring areas and boat ramps shall be centralized and owned in common by all residents of the development.



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- 6.2 Land Use Districts for Rivers. All lands within the shoreland of the St. Croix River shall be governed by the Lower St. Croix River Bluffland and Shoreland Management Regulations contained in the Washington County Development Code, Chapter 5.
- 6.3 Tributary Streams. All lands abutting tributary streams covered by this Chapter shall be governed by the underlying zoning district as it pertains to minimum lot size and permitted uses. Setback and lot width requirements shall be as contained in this Chapter.

## SECTION 7. LOT REQUIREMENTS

7.1 Lot Area and Width Standards. The lot area (land above the normal ordinary high water mark) and lot width standards (at road, shoreline and building setback line) for single residential lots created after the date of enactment of this chapter for lake and river/stream classifications are the following:

- (1) Lake Standards. Newly created Tier 1 lots on Recreational Development lakes and on Goose Lake shall have a minimum lot size of 2 ½ acres and a minimum lot width of 150 feet. Newly created Tier 1 lots on Natural Environment lakes except Goose Lake shall have a minimum lot size of five (5) acre and a minimum lot width of 300 feet. All other lots shall conform to the general density standards for the area as designated in the Comprehensive Plan, and lot size and width shall conform with the underlying base zoning district.
- (2) Tributary Stream Standards. All lots within the Shoreland Overlay District of tributary streams shall meet underlying zoning density and lot size restrictions. The lot width standards for single family residential developments is 300 feet.

7.2 Additional Special Provisions:

- (1) Only land above the ordinary high water level of public waters can be used to meet lot area standards. Lot width standards must be met at the ordinary high water level, road and at the building setback line.
- (2) In any new subdivision lots intended as controlled accesses to public waters or as recreation areas for use by owners of nonriparian lots within subdivisions are permissible, providing all of the following standards are met.
  - (A) The lot must meet the width and size requirements for residential lots, and be suitable for the intended uses of controlled access lots;
  - (B) If docking, mooring, or over-water storage of more than six (6) watercraft is to be allowed at a controlled access lot, the width of the lot (keeping the same lot depth) must be increased by the percent of the requirements for riparian residential lots for each watercraft beyond six (6), consistent with the following table:

Controlled Access Lot Frontage Requirements

Ratio of Lake Size to Shore Length (acres/miles)	Percent of Required Increase in Frontage
Less than 100 to 1	25% per additional watercraft
100 to 200 to 1	20% per additional watercraft
201 to 300 to 1	15% per additional watercraft
301 to 400 to 1	10% per additional watercraft
Greater than 400 to 1	5% per additional watercraft

- (C) The lot/lots must be jointly owned by all purchasers of lots in the subdivision or by all purchasers of nonriparian lots in the subdivision who are provided riparian access rights on the access lot; and
  - (D) A development agreement is entered into between the developer and the City of Scandia specifying which lots owners have authority to use the access lot and what activities are allowed. The activities may include watercraft launching, loading, beaching, mooring, or docking. They must also include other outdoor recreational activities that do not significantly conflict with general public use of the public water or the enjoyment of normal property rights by adjacent property owners. Examples of the nonsignificant conflict activities include swimming, sunbathing, or picnicking. The development agreement must limit the total number of vehicles and trailers allowed to be parked and the total number of watercraft allowed to be continuously moored, docked, stored over water, or parked on the property, and must require centralization of all common facilities and activities in the most suitable locations on the lot to minimize topographic and vegetation alterations. The agreement must also require all parking areas and other facilities to be screened by vegetation or topography as much as practical from view from the public water, assuming summer, leaf-on conditions. No structures shall be constructed on these lots except for docking facilities as approved by the Minnesota Department of Natural Resources and the City of Scandia.
- (3) Any individual lot or lots which do not contain a seasonal or permanent home may have one dock with the capacity to accommodate up to three watercraft. No other temporary or permanent structures or recreational vehicles are allowed.

## SECTION 8. STRUCTURE AND SEWER SETBACK AND OTHER DESIGN CRITERIA

8.1 Placement of Structures on Lots. When more than one setback applies to a site, all structures and facilities must be located to meet all setbacks.

- (1) Structure and On-Site Sewage System Setbacks (in feet) from Ordinary High Water Level:

CLASSES OF PUBLIC WATERS	SETBACKS	
	STRUCTURES	SEWAGE TREATMENT SYSTEMS
<b>LAKES</b>		
Natural Environment	200	150
Recreational Development	100	75
Unclassified Waterbodies	75**	75
<b>RIVERS/STREAMS</b>		
Tributary Streams	200	150

- (2) Additional Structure Setbacks. The following additional structure setbacks apply, regardless of the classification of the waterbody:

SETBACK FROM:	SETBACK (in feet)
(a) top of bluff line	30
(b) unplatted cemetery	50
(c) arterial road	150 from centerline or 75' from road right-of-way whichever is greater.
(d) collector road	100 from centerline or 50' from road right-of-way whichever is greater
(e) right-of-way line of public street, or other roads or streets not classified	40
(f) side yard setback, existing parcels 1.0 acre or less in size	10 Recreational Development Lakes 20 Natural Environment Lakes, Tributary /Streams
(g) side yard setback, existing parcels greater than 1.0 acre in size	20 Recreational Development Lakes 20 Natural Environment Lakes, Tributary /Streams

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- 8.2 High Water Elevations: The lowest floor including basement of any structure constructed in a shoreland area must be 2 feet above the 100 year flood elevation or 3 feet above the highest known water level whichever is greater.
- 8.3 Height. No structure shall exceed 35' in height.
- 8.4 Lot Coverage. A maximum of 25% of the lot may be covered with impervious surface. This includes all structures, decks, patios, walks, and surfaced or unsurfaced driveways.
- 8.5 Stairways, Lifts, and Landings. Stairways and lifts are the only permitted alterations for achieving access up and down bluffs and steep slopes to shore areas. Stairways and lifts must meet all of the following design requirements:
- (1) Stairways and lifts must not exceed four (4) feet in width on residential lots;
  - (2) Landings for stairways and lifts on residential lots must not exceed 32 square feet in area;
  - (3) Canopies or roofs are not allowed on stairways, lifts, or landings.
  - (4) Stairways, lifts and landings may be either constructed above the ground on posts or pilings, or placed into the ground, provided they are designed and built in a manner that ensures control of soil erosion;
  - (5) Stairways, lifts and landings must be located in the most visually inconspicuous portions of lots, as viewed from the surface of the public water assuming summer, leaf-on conditions, whenever practical; and
  - (6) Facilities such as ramps, lifts, or mobility paths for physically handicapped persons are also allowed for achieving access to shore areas, provided that the dimensional and performance standards of sub items 1 to 5 are complied with in addition to the requirements of Minnesota Regulations, Chapter 1340.
  - (7) A certificate of compliance is required.
- 8.6 Significant Historic Sites. No structure may be placed on a significant historic site in a manner that affects the values of the site unless adequate information about the site has been removed and documented in a public repository.
- 8.7 Steep Slopes. The Zoning Administrator must evaluate possible soil erosion impacts and development visibility from public waters before issuing a permit for construction of sewage treatment systems, roads, driveways, structures, or other improvements on steep slopes. If necessary, conditions must be attached to permits to prevent erosion and to preserve existing vegetation screening of structures, vehicles, and other facilities as viewed from the surface of public waters, assuming summer, leaf-on vegetation.



## SECTION 9. SHORELAND ALTERATIONS

### 9.1 Vegetation Alterations.

- (1) No cutting or removal of trees over six (6) inches in diameter measured at a point fifty-four inches above ground level within the required building setback shall be permitted unless the trees are dead, diseased, or pose a documented safety hazard. A certificate of compliance must be obtained prior to removal of any trees.
- (2) Selective removal of natural vegetation shall be allowed, provided sufficient vegetative cover remains to screen cars, dwellings and other structures, piers, docks and marinas, when viewed from the water.
- (3) In order to retard surface run-off and soil erosion, natural vegetation shall be restored insofar as feasible after any construction project is completed.
- (4) The provisions of this section shall not apply to normal maintenance of trees such as pruning or removal of limbs or branches that are dead or pose safety hazards.
- (5) Vegetation alteration necessary for the construction of structures and sewage treatment systems and the construction of roads and parking areas under validly issued construction permits are exempt from these vegetation alteration standards.

### 9.2 Topographic Alterations/Grading and Filling.

- (1) Grading and filling and excavations necessary for the construction of structures, sewage treatment systems, and drive ways under validly issued construction permits for these facilities do not require the issuance of a separate grading and filling permit, provided the building plan included with the permit address all issues and meets all requirements and provisions of Section 9.2(3).
- (2) Public roads and parking areas are regulated by Section 9.3 of this chapter.
- (3) Grading or filling is prohibited within the bluff impact zone or shore impact zone. Grading/filling outside these areas shall require a grading permit. Standards for land alteration and grading contained in Chapter 2 of the City of the Scandia Development Code must be followed.
- (4) The filling of any wetland or below the normal ordinary high water mark must be permitted by appropriate Federal, State, and local units of government with jurisdiction.
- (5) Excavations where the intended purpose is connection to a public water, such as boat slips, canals, lagoons and harbors will be allowed only after the Department of Natural Resources has approved the proposed connection to public waters.
- (6) Placement of natural rock rip rap including associated grading of the shoreline and placement of a filter blanket, is permitted if the finished slope does not exceed three feet

horizontal to one foot vertical, the landward extent of the rip rap is within ten feet of the ordinary high water mark, and the height of the rip rap above the ordinary high water level does not exceed three feet. A permit and/or approval must be obtained from the Minnesota Department of Natural Resources and a grading permit is obtained from the Zoning Administrator.

### 9.3 Placement and Design of Roads, Driveways, and Parking Areas.

- (1) Public and private roads and parking areas must be designed to take advantage of natural vegetation and topography to achieve maximum screening from view from public waters. All roads and parking areas must be designed and constructed to minimize and control erosion to public waters consistent with the field office technical guides of the local soil and water conservation district, or other applicable technical materials.
- (2) All new roads, driveways, and parking areas must meet the lake setback requirements and must not be placed within bluff and shore impact zones.
- (3) Public and private watercraft access ramps, approach roads, and access-related parking areas may be placed within shore impact zones provided the vegetative screening and erosion control conditions of this subpart are met and a certificate of compliance is issued by the Zoning Administrator. Grading and filling provisions of Chapter 2, Part 3, Section 16 of this Development Code must also be met.

### 9.4 Buffer Strips. In order to maintain water quality, reduce flooding and erosion and to provide sources of food and habitat for a variety of fish and wildlife, a buffer strip shall be provided and maintained around all natural environment lakes and streams and type 3, 4 and 5 wetlands.

#### (1) Lake, Wetland, Stream Buffer Widths.

- (A) The minimum buffer width shall apply to all buffer widths including those that are restore, replaced or enhanced.
- (B) The City may require a variable buffer width to protect valuable adjacent habitat when considering variances for building setbacks.
- (C) The following buffer widths shall be maintained:

<b>Lake/Wetland Type</b>	<b>NE Lake</b>	<b>Type 3,4,5 Wetland</b>	<b>Stormwater Pond</b>
Minimum Buffer Width:	50 feet	50 feet	10 feet
Building Setback from outer edge of buffer	10 feet	10 feet	10 feet

- (2) An access corridor 50' wide is permitted to gain access to the waterbody.

## **SECTION 10. STORMWATER MANAGEMENT**

- 10.1 Stormwater Management. Standards for stormwater management as contained in Chapter 2 and Chapter 3 of the City of Scandia Development Code shall apply.

## **SECTION 11. STANDARDS FOR NON-RESIDENTIAL USES**

11.1 Standards for Non-Residential Uses. Any permitted use of land adjacent to public water which needs to have access to and use of public waters must meet the following standards in addition to any other requirements of this chapter or the City of Scandia Development Code:

- (1) In addition to meeting impervious coverage limits, setbacks, and other zoning standards in this Development Code, the uses must be designed to incorporate topographic and vegetative screening of parking areas and structures.
- (2) Uses that require short-term watercraft mooring for patrons must centralize these facilities and design them to avoid obstructions of navigation and to be minimum size necessary to meet the need.
- (3) Uses that depend on patrons arriving by watercraft may use signs and lighting to convey needed information to the public, subject to the following general standards:
  - (A) No advertising signs or supporting facilities for signs may be placed in or upon public waters. Signs conveying information or safety messages may be placed in or on public water by a public authority or under a permit issued by the County Sheriff.
  - (B) Signs may be placed, when necessary, within the shore impact zone if they are designed and sized to be the minimum necessary to convey the location and name of the establishment and the general type of goods or services available. The signs must not contain other detailed information such as product brands and prices, must not be located higher than six (6) feet above the ground, and must not exceed 16 square feet in size. The sign shall not be lighted and shall be of an earthen tone color. A sign permit must be obtained from the Zoning Administrator.
  - (C) Other outside lighting may be located within the shore impact zone or over public waters if it is used primarily to illuminate potential safety hazards, and is shielded or otherwise directed to prevent direct illumination out across public waters. This does not preclude use of navigational lights.

## **SECTION 12. AGRICULTURAL USE STANDARDS**

- 12.1 Agricultural Use Standards. General cultivation farming, grazing, nurseries, horticulture, truck farming, sod farming, and wild crop harvesting are permitted uses if steep slopes and shore and bluff impact zones are maintained in permanent vegetation or operated under an approved conservation plan (Resource Management Systems) consistent with the field office technical guides of the local soil and water conservation districts or the United States Natural Resources Conservation Service (NRCS), as provided by a qualified individual or agency. The shore impact zone for parcels with permitted agricultural land uses is equal to a line parallel to and 50 feet from the ordinary high water level.



### **SECTION 13. FOREST MANAGEMENT STANDARDS**

- 13.1 Forest Management Standards. The harvesting of timber and associated reforestation must be conducted consistent with the provisions of the Minnesota Nonpoint Sources Pollution Assessment-Forestry and the provisions of Water Quality in Forest Management “Best Management Practices in Minnesota”.

## **SECTION 14. WATER SUPPLY**

- 14.1 Water Supply. Any public or private supply of water for domestic purposes must meet or exceed standards for water quality of the Minnesota Department of Health and the Minnesota Pollution Control Agency.

## **SECTION 15. SEWAGE DISPOSAL**

- 15.1 Sewage Treatment. Any premises used for human occupancy must be provided with an adequate method of sewage treatment in accordance with the Washington County Individual Sewage Treatment System Code and meet appropriate setback requirements as contained in Section 8.1 of this chapter.
- 15.2 Non-conforming Sewage Treatment Systems. Non-conforming sewage treatment systems shall be regulated and upgraded in accordance with Section 7.1 of this chapter and the Washington County Individual Sewage Treatment System Ordinance. A sewage treatment system not meeting the requirements of the Washington County Individual Sewage Treatment System Ordinance must be upgraded at a minimum, at any time a permit or variance of any type is required for any improvement on, or use of, the property, with the exception of nonhabitable spaces.

## **SECTION 16. FENCES**

- 16.1 In addition to the standards contained in Chapter 2 of the City of Scandia Development Code, the following standards must also be met on shoreland property.
- 16.2 No fence shall exceed 4 feet in height unless all required building setbacks are met. If the fence is located so as to meet required building setbacks, a 6-foot high fence is permitted.
- 14.3 No fence shall be constructed closer to the lake than the required lake setback requirement unless the existing home is located closer to the lake than the required setback in which case the fence may be constructed even with the lake side of the home.

## SECTION 17. NONCONFORMING SITUATIONS

Non-conforming situations shall be regulated in accordance with Chapter 1, Section 12 of the City of Scandia Development Code with the following exceptions:

### 17.1

- (1) A lot or parcel of land which was of record as a separate lot or parcel in the Office of the Washington County Recorder or Registrar of Titles, on or before January 1, 1973 which is in a residential or agricultural district, and is not a contiguous lot or parcel as that term is described and regulated under Chapter One of the City of Scandia Development Code, may be used for single family detached dwelling purposes, without a variance, provided that:
  - (A) The area and width thereof are within sixty percent (60%) of the minimum requirements of Section 7.1 of this chapter.
  - (B) All setbacks requirements of this chapter can be maintained.
  - (C) It can be demonstrated that either two (2) safe and adequate sewage treatment systems can be installed to service such permanent dwelling or the dwelling is served by public sanitary sewer.
  - (D) On Natural Environment Lakes, any separate lot or parcel of record, and not under common ownership with adjacent parcels, legally created and recorded prior to the adoption of this chapter may be used for single family detached dwelling purposes without a variance if it is at least 1.5 acres in size, is 120 feet in width, and meets item (B) and (C) above (17.1 (1) (B) and (C)).
- (2) Deck additions may be allowed without a variance to a structure not meeting the required setback from the ordinary high water level if all of the following criteria and standards are met:
  - (A) The structure existed on the date the structure setbacks were established.
  - (B) A thorough evaluation of the property and structure reveals no reasonable location for a deck meeting or exceeding the existing ordinary high water level setback of the structure.
  - (C) The deck encroachment toward the ordinary high water level does not exceed 15 percent of the existing setback of the structure from the ordinary high water level or does not encroach closer than 30 feet, whichever is more restrictive.
  - (D) No deck on a nonconforming structure shall exceed 10 feet in width.
  - (E) The deck is constructed primarily of wood, and is not roofed or screened.



- (F) A certificate of compliance is obtained from the Zoning Administrator.

## **SECTION 18. SUBDIVISION PROVISIONS**

- 18.1 Land Suitability. Each lot created through subdivision must be suitable in its natural state for the proposed use with minimal alteration. Suitability analysis shall consider susceptibility to flooding, existence of wetlands, soil and rock formations with severe limitations for development, severe erosion potential, steep topography, inadequate water supply or sewage treatment capabilities, near-shore aquatic conditions unsuitable for water-based recreation, important fish and wildlife habitat, presence of significant historic sites, or any other feature of the natural land likely to be harmful to the health, safety, or welfare of future residents of the proposed subdivision or of the community.
- 18.2 Subdivision Process. All subdivision of land shall be in accordance with Chapter 3 and all other applicable provision of the Development Code.

**Section 4: Effective Date.** This ordinance shall be effective following its review by the Minnesota Department of Natural Resources and upon publication according to law.

Adopted this 4<sup>th</sup> day of December, 2007.

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Dennis D. Seefeldt, Mayor

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Anne Hurlburt, Administrator

**CITY OF SCANDIA DEVELOPMENT CODE**

**CHAPTER SIX**

**FLOODPLAIN MANAGEMENT REGULATIONS**

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## **FLOODPLAIN MANAGEMENT ORDINANCE**

### **SECTION 1.0 STATUTORY AUTHORIZATION, FINDINGS OF FACT AND PURPOSE**

1.1 Statutory Authorization. The legislature of the State of Minnesota has, in Minnesota Statutes Chapter 103F and Minnesota Statutes 462.357 delegated the responsibility to local government units to adopt regulations designed to minimize flood losses. This Chapter of the City of Scandia Development Code shall be known as the City of Scandia Floodplain Management Ordinance and may be referred to in this Chapter as “this Chapter” or the “Floodplain Management Ordinance”.

1.2 Findings of Fact.

- (1) The flood hazard areas of the City of Scandia, Minnesota, are subject to periodic inundation which results in potential loss of life, loss of property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures or flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.
- (2) Methods Used to Analyze Flood Hazards. This Chapter is based upon a reasonable method of analyzing flood hazards which is consistent with the standards established by the Minnesota Department of Natural Resources.
- (3) National Flood Insurance Program Compliance. This Chapter is adopted to comply with the rules and regulations of the National Flood Insurance Program codified as 44 Code of Federal Regulations Parts 59 -78, as amended, so as to maintain the community’s eligibility in the National Flood Insurance Program.

1.3 Statement of Purpose. It is the purpose of this Chapter to promote the public health, safety, and general welfare and to minimize those losses described in Section 1.21 by provisions contained herein.



## SECTION 2.0 GENERAL PROVISIONS

- 2.1 Lands to Which Chapter Applies. This Chapter shall apply to all lands within the jurisdiction of the City of Scandia shown on the Official Zoning Map and/or the attachments thereto as being located within the boundaries of the Floodway, Flood Fringe, or General Flood Plain Districts.
- 2.2 Establishment of Official Zoning Map. The Flood Insurance Study, Washington County, Minnesota And Incorporated Areas and Flood Insurance Rate Map Panels therein numbered 27163C0045E, 27163C0065E, 27163C0067E, 27163C0069E, 27163C0070E, 27163C0086E, 27163C0132E, 27163C0134E, 27163C0151E, 27163C0152E, 27163C0153E, 27163C0154E, 27163C0157E, 27163C0159E, and 27163C0160E, all dated February 3, 2010 and prepared by the Federal Emergency Management Agency are hereby adopted by reference and declared to be a part of the Official Zoning Map, as established by Chapter 2, Section 1.1 of the Scandia Development Code and this Chapter. The Official Zoning Map shall be on file in the Office of the City Clerk and the Building Official.
- 2.3 Regulatory Flood Protection Elevation. The regulatory flood protection elevation shall be an elevation no lower than one foot above the elevation of the regional flood plus any increases in flood elevation caused by encroachments on the flood plain that result from designation of a floodway.
- 2.4 Interpretation.
- (1) In their interpretation and application, the provisions of this Chapter shall be held to be minimum requirements and shall be liberally construed in favor of the Governing Body and shall not be deemed a limitation or repeal of any other powers granted by state statutes.
  - (2) The boundaries of the zoning districts shall be determined by scaling distances on the Official Zoning Map. Where interpretation is needed as to the exact location of the boundaries of the district as shown on the Official Zoning Map, as for example where there appears to be a conflict between a mapped boundary and actual field conditions and there is a formal appeal of the decision of the Building Official, the Board of Adjustments and Appeals shall make the necessary interpretation. All decisions will be based on elevations on the regional (100-year) flood profile, the ground elevations that existed on the site at the time the Community adopted its initial floodplain ordinance or on the date of the first National Flood Insurance Program map showing the area within the 100-year floodplain if earlier, and other available technical data. Persons contesting the location of the district boundaries shall be given a reasonable opportunity to present their case to the Board of Adjustments and Appeals and to submit technical evidence.
- 2.5 Abrogation and Greater Restrictions. It is not intended by this Chapter to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this Chapter imposes greater restrictions, the provisions of this Chapter shall prevail.
- 2.6 Warning and Disclaimer of Liability. This Chapter does not imply that areas outside the flood plain districts or land uses permitted within such districts will be free from flooding or flood damages. This Chapter shall not create liability on the part of the City of Scandia or any officer or employee thereof for any flood damages that result from reliance on this Chapter or any administrative decision lawfully made thereunder.

- 2.7 Severability. If any section, clause, provision, or portion of this Chapter is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of this Chapter shall not be affected thereby.
- 2.8 Definitions. Unless specifically defined below, words or phrases used in this Chapter shall be interpreted so as to give them the same meaning as they have in common usage and so as to give this Chapter its most reasonable application.
- (1) Accessory Use or Structure. A use or structure on the same lot with, and of a nature customarily incidental and subordinate to, the principal use or structure.
  - (2) Basement. Any area of a structure, including crawl spaces, having its floor or base subgrade (below ground level) on all four sides, regardless of the depth of excavation below ground level.
  - (3) Conditional Use. A specific type of structure or land use listed in the official control that may be allowed but only after an in-depth review procedure and with appropriate conditions or restrictions as provided in the official zoning controls or building codes and upon a finding that:
    - (A) Certain conditions as detailed in the zoning ordinance exist.
    - (B) The structure and/or land use conform to the comprehensive land use plan if one exists and are compatible with the existing neighborhood.
  - (4) Equal Degree of Encroachment. A method of determining the location of floodway boundaries so that flood plain lands on both sides of a stream are capable of conveying a proportionate share of flood flows.
  - (5) Flood. A temporary increase in the flow or stage of a stream or in the stage of a wetland or lake that results in the inundation of normally dry areas.
  - (6) Flood Frequency. The frequency for which it is expected that a specific flood stage or discharge may be equaled or exceeded.
  - (7) Flood Fringe. That portion of the flood plain outside of the floodway. Flood fringe is synonymous with the term "floodway fringe" used in the Flood Insurance Study for Washington County.
  - (8) Flood Plain. The beds proper and the areas adjoining a wetland, lake or watercourse which have been or hereafter may be covered by the regional flood.
  - (9) Flood Proofing. A combination of structural provisions, changes, or adjustments to properties and structures subject to flooding, primarily for the reduction or elimination of flood damages.
  - (10) Floodway. The bed of a wetland or lake and the channel of a watercourse and those portions of the adjoining flood plain which are reasonably required to carry or store the regional flood discharge.

- (11) Lowest Floor. The lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, used solely for parking of vehicles, building access, or storage in an area other than a basement area, is not considered a building's lowest floor.
- (12) Manufactured Home. A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include the term "recreational vehicle."
- (13) Obstruction. Any dam, wall, wharf, embankment, levee, dike, pile, abutment, projection, excavation, channel modification, culvert, building, wire, fence, stockpile, refuse, fill, structure, or matter in, along, across, or projecting into any channel, watercourse, or regulatory flood plain which may impede, retard, or change the direction of the flow of water, either in itself or by catching or collecting debris carried by such water.
- (14) Ordinary High Water Level. The boundary of water basins, watercourses, public waters, and public waters wetlands as defined in Minnesota Statutes 103G.005, subdivision 14.
- (15) Principal Use or Structure. All uses or structures that are not accessory uses or structures.
- (16) Reach. A hydraulic engineering term to describe a longitudinal segment of a stream or river influenced by a natural or man-made obstruction. In an urban area, the segment of a stream or river between two consecutive bridge crossings would most typically constitute a reach.
- (17) Recreational Vehicle. A vehicle that is built on a single chassis, is 400 square feet or less when measured at the largest horizontal projection, is designed to be self-propelled or permanently towable by a light duty truck, and is designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use. For the purposes of this Chapter, the term recreational vehicle shall be synonymous with the term travel trailer/travel vehicle.
- (18) Regional Flood. A flood which is representative of large floods known to have occurred generally in Minnesota and reasonably characteristic of what can be expected to occur on an average frequency in the magnitude of the 100-year recurrence interval. Regional flood is synonymous with the term "base flood" used in a flood insurance study.
- (19) Regulatory Flood Protection Elevation. The regulatory flood protection elevation shall be an elevation no lower than one foot above the elevation of the regional flood plus any increases in flood elevation caused by encroachments on the flood plain that result from designation of a floodway.
- (20) Structure. Anything constructed or erected on the ground or attached to the ground or on-site utilities, including, but not limited to, buildings, factories, sheds, detached garages, cabins, manufactured homes, recreational vehicles not meeting the exemption criteria specified in Section 9.1 (1) of this Chapter and other similar items.

- (21) Substantial Damage. Damage of any origin sustained by a structure where the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.
  - (22) Substantial Improvement. Within any consecutive 365-day period, any reconstruction, rehabilitation (including normal maintenance and repair), repair after damage, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures that have incurred “substantial damage,” regardless of the actual repair work performed. The term does not, however, include either:
    - (A) Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions.
    - (B) Any alteration of an “historic structure,” provided that the alteration will not preclude the structure’s continued designation as an “historic structure.” For the purpose of this Chapter, “historic structure” shall be as defined in 44 Code of Federal Regulations, Part 59.1.
  - (23) Variance. A modification of a specific permitted development standard required in an official control including this Chapter to allow an alternative development standard not stated as acceptable in the official control, but only as applied to a particular property for the purpose of alleviating a hardship, practical difficulty or unique circumstance as defined and elaborated upon in a community's respective planning and zoning enabling legislation.
- 2.9 Annexations. The Flood Insurance Rate Map panels adopted by reference into Section 2.2 above may include floodplain areas that lie outside of the corporate boundaries of City of Scandia at the time of adoption of this Chapter. If any of these floodplain land areas are annexed into the City of Scandia after the date of adoption of this Chapter, the newly annexed floodplain lands shall be subject to the provisions of this Chapter immediately upon the date of annexation into the City of Scandia.

### **SECTION 3.0 ESTABLISHMENT OF ZONING DISTRICTS**

3.1 Districts. The floodplain areas within the jurisdiction of this Chapter are hereby divided into three Districts:

- (1) Floodway District. The Floodway District shall include those areas shown on the Flood Insurance Rate Map as adopted in Section 2.2 as being within Zone AE and that are at or below the ordinary high water elevation of public waters lakes or public waters wetlands basins as defined in Minnesota Statutes, Section 103G.005, subdivision 14.
- (2) Flood Fringe District. The Flood Fringe District shall include those areas shown within Zone AE on the Flood Insurance Rate Map adopted in Section 2.2 but being located above the ordinary high water level of public waters lakes and public waters wetlands as defined in Minnesota Statutes, Section 103G.005, subdivision 14 and below the 100-year flood elevation.
- (3) General Flood Plain District. The General Flood Plain District shall include those areas designated as Zone AE for the St. Croix River and all Zone A areas on the Flood Insurance Rate Map adopted in Section 2.2.

3.2 Compliance. No new structure or land shall hereafter be used and no structure shall be constructed, located, extended, converted, or structurally altered without full compliance with the terms of this Chapter and other applicable regulations which apply to uses within the jurisdiction of this Chapter. Within the Floodway, Flood Fringe and General Flood Plain Districts, all uses not listed as permitted uses or conditional uses in Sections 4.0, 5.0 and 6.0 that follow, respectively, shall be prohibited. In addition, a caution is provided here that:

- (1) Recreational vehicles are subject to the general provisions of this Chapter and specifically Section 9.0.
- (2) Modifications, additions, structural alterations, normal maintenance and repair, or repair after damage to existing nonconforming structures and nonconforming uses of structures or land are regulated by the general provisions of this Chapter and specifically Section 11.0.
- (3) As-built elevations for elevated or flood proofed structures must be certified by ground surveys and flood proofing techniques must be designed and certified by a registered professional engineer or architect as specified in the general provisions of this Chapter and specifically as stated in Section 10.0 of this Chapter.

## **SECTION 4.0 FLOODWAY DISTRICT (FW)**

### **4.1 Permitted Uses.**

- (1) General open space uses only such as private and public boat launching ramps, swimming areas, parks, wildlife and nature preserves, fish hatcheries, and hunting and fishing areas.
- (2) On the St. Croix River only, residential lawns, gardens, parking areas, and play areas located above the ordinary high water elevation.

### **4.2 Standards for Floodway Permitted Uses.**

- (1) The use shall have a low flood damage potential.
- (2) The use shall be permissible in the underlying zoning district if one exists.
- (3) The use shall not obstruct flood flows or increase flood elevations and shall not involve structures, fill, obstructions, excavations or storage of materials or equipment.
- (4) The use in public waters and public waters wetlands shall comply with Minnesota Statutes 103G.245.

### **4.3 Conditional Uses.**

- (1) Structures accessory to the uses listed in 4.1 above.
- (2) Marinas, boat rentals, docks, piers, wharves, and water control structures.
- (3) Railroads, streets, bridges, utility transmission lines, and pipelines.
- (4) Placement of fill or construction of fences.
- (5) Structural works for flood control such as levees, dikes and floodwalls constructed to any height where the intent is to protect individual structures and levees or dikes where the intent is to protect agricultural crops for a frequency flood event equal to or less than the 10-year frequency flood event.

### **4.4 Standards for Floodway Conditional Uses.**

- (1) All Uses. No structure (temporary or permanent), fill (including fill for roads and levees), deposit, obstruction, storage of materials or equipment, or other uses may be allowed as a conditional use that will cause any increase in the stage of the 100-year or regional flood or cause an increase in flood damages in the reach or reaches affected.
- (2) All floodway conditional uses in public waters and public waters wetlands shall comply with Minnesota Statutes 103G.245.



- (3) All floodway conditional uses shall be subject to the procedures and standards contained in Section 10.4 of this Chapter.
- (4) The conditional use shall be permissible in the underlying zoning district if one exists.
- (5) Fill.
  - (A) Fill, dredge spoil, and all other similar materials deposited or stored in the flood plain shall be protected from erosion by vegetative cover, mulching, riprap or other acceptable method.
  - (B) Dredge spoil sites and sand and gravel operations shall not be allowed in the floodway unless a long-term site development plan is submitted which includes an erosion/sedimentation prevention element to the plan.
  - (C) As an alternative, and consistent with Subsection (b) immediately above, dredge spoil disposal and sand and gravel operations may allow temporary, on-site storage of fill or other materials which would have caused an increase to the stage of the 100-year or regional flood but only after the Governing Body has received an appropriate plan which assures the removal of the materials from the floodway based upon the flood warning time available. The conditional use permit must be title registered with the property in the Office of the County Recorder.
  - (D) Fill in public waters and public waters wetlands shall comply with Minnesota Statutes 103G.245.
- (6) Accessory Structures.
  - (A) Accessory structures shall not be designed for human habitation.
  - (B) Accessory structures, if permitted, shall be constructed and placed on the building site so as to offer the minimum obstruction to the flow of flood waters:
    - 1. Whenever possible, structures shall be constructed with the longitudinal axis parallel to the direction of flood flow; and
    - 2. So far as practicable, structures shall be placed approximately on the same flood flow lines as those of adjoining structures.
  - (C) Accessory structures shall be elevated on fill or structurally dry flood proofed in accordance with the FP-1 or FP-2 flood proofing classifications in the State Building Code. As an alternative, an accessory structure may be flood proofed to the FP-3 or FP-4 flood proofing classification in the State Building Code provided the accessory structure constitutes a minimal investment, does not exceed 500 square feet in size at its largest projection, and for a detached garage, the detached garage must be used solely for parking

of vehicles and limited storage. All flood proofed accessory structures must meet the following additional standards:

1. The structure must be adequately anchored to prevent flotation, collapse or lateral movement of the structure and shall be designed to equalize hydrostatic flood forces on exterior walls;
2. Any mechanical and utility equipment in a structure must be elevated to or above the regulatory flood protection elevation or properly flood proofed; and
3. To allow for the equalization of hydrostatic pressure, there must be a minimum of two “automatic” openings in the outside walls of the structure having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding. There must be openings on at least two sides of the structure and the bottom of all openings must be no higher than one foot above the lowest adjacent grade to the structure. Using human intervention to open a garage door prior to flooding will not satisfy this requirement for automatic openings.

(7) Storage of Materials and Equipment.

- (A) The storage or processing of materials that are, in time of flooding, flammable, explosive, or potentially injurious to human, animal, or plant life is prohibited.
- (A) Storage of other materials or equipment may be allowed if readily removable from the area within the time available after a flood warning and in accordance with a plan approved by the Governing Body.

(8) Structural works for flood control that will change the course, current or cross section of protected wetlands or public waters shall be subject to the provisions of Minnesota Statute, Chapter 103G. Community-wide structural works for flood control intended to remove areas from the regulatory flood plain shall not be allowed in the floodway.

(9) A levee, dike or floodwall constructed in the floodway shall not cause an increase to the 100-year or regional flood and the technical analysis must assume equal conveyance or storage loss on both sides of a stream.

## SECTION 5.0 FLOOD FRINGE DISTRICT (FF)

5.1 Permitted Uses. Permitted uses shall be those uses of land or structures listed as permitted uses in the underlying zoning use district and any other applicable overlay zoning district. All permitted uses shall comply with the standards for Flood Fringe District "Permitted Uses" listed in Section 5.2 and the "Standards for all Flood Fringe Uses" listed in Section 5.5.

5.2 Standards for Flood Fringe Permitted Uses.

- (1) All structures, including accessory structures, must be elevated on fill so that the lowest floor including basement floor is at or above the regulatory flood protection elevation. The finished fill elevation for structures shall be no lower than one (1) foot below the regulatory flood protection elevation and the fill shall extend at such elevation at least fifteen (15) feet beyond the outside limits of the structure erected thereon.
- (2) As an alternative to elevation on fill, accessory structures that constitute a minimal investment and that do not exceed 500 square feet at its largest projection may be internally flood proofed in accordance with Section 4.4 (6) (C).
- (3) The cumulative placement of fill where at any one time in excess of one-thousand (1,000) cubic yards of fill is located on the parcel shall be allowable only as a conditional use, unless said fill is specifically intended to elevate a structure in accordance with Section 5.2 (1) of this Chapter.
- (4) The storage of any materials or equipment shall be elevated on fill to the regulatory flood protection elevation.
- (5) The provisions of Section 5.5 of this Chapter shall apply.

5.3 Conditional Uses. Any structure that is not elevated on fill or flood proofed in accordance with Section 5.2 (1) - 5.2 (2) and or any use of land that does not comply with the standards in Section 5.2 (3) - 5.2 (4) shall only be allowable as a conditional use. An application for a conditional use shall be subject to the standards and criteria and evaluation procedures specified in Sections 5.4-5.5 and 10.4 of this Chapter.

5.4 Standards for Flood Fringe Conditional Uses.

- (1) Alternative elevation methods other than the use of fill may be utilized to elevate a structure's lowest floor above the regulatory flood protection elevation. These alternative methods may include the use of stilts, pilings, parallel walls, etc., or above-grade, enclosed areas such as crawl spaces or tuck under garages. The base or floor of an enclosed area shall be considered above-grade and not a structure's basement or lowest floor if: 1) the enclosed area is above-grade on at least one side of the structure; 2) it is designed to internally flood and is constructed with flood resistant materials; and 3) it is used solely for parking of vehicles, building access or storage. The above-noted alternative elevation methods are subject to the following additional standards:
  - (A) Design and Certification - The structure's design and as-built condition must be certified by a registered professional engineer or architect as being in compliance with the general

design standards of the State Building Code and, specifically, that all electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities must be at or above the regulatory flood protection elevation or be designed to prevent flood water from entering or accumulating within these components during times of flooding.

- (B) Specific Standards for Above-grade, Enclosed Areas - Above-grade, fully enclosed areas such as crawl spaces or tuck under garages must be designed to internally flood and the design plans must stipulate:
  - 1. A minimum area of openings in the walls where internal flooding is to be used as a flood proofing technique. There shall be a minimum of two openings on at least two sides of the structure and the bottom of all openings shall be no higher than one-foot above grade. The automatic openings shall have a minimum net area of not less than one square inch for every square foot of enclosed area subject to flooding unless a registered professional engineer or architect certifies that a smaller net area would suffice. The automatic openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of flood waters without any form of human intervention; and
  - 2. That the enclosed area will be designed of flood resistant materials in accordance with the FP-3 or FP-4 classifications in the State Building Code and shall be used solely for building access, parking of vehicles or storage.
- (2) Basements, as defined by Section 2.8 (2) of this Chapter, shall be subject to the following:
  - (A) Residential basement construction shall not be allowed below the regulatory flood protection elevation.
  - (B) Non-residential basements may be allowed below the regulatory flood protection elevation provided the basement is structurally dry flood proofed in accordance with Section 5.4 (3) of this Chapter.
- (3) All areas of non residential structures including basements to be placed below the regulatory flood protection elevation shall be flood proofed in accordance with the structurally dry flood proofing classifications in the State Building Code. Structurally dry flood proofing must meet the FP-1 or FP-2 flood proofing classification in the State Building Code and this shall require making the structure watertight with the walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. Structures flood proofed to the FP-3 or FP-4 classification shall not be permitted.
- (4) When at any one time more than 1,000 cubic yards of fill or other similar material is located on a parcel for such activities as on-site storage, landscaping, sand and gravel operations, landfills, roads, dredge spoil disposal or construction of flood control works, an erosion/sedimentation control plan must be submitted unless the community is enforcing a state approved shoreland management ordinance. In the absence of a state approved shoreland ordinance, the plan must clearly specify methods to be used to stabilize the fill on site for a flood event at a minimum of

the 100-year or regional flood event. The plan must be prepared and certified by a registered professional engineer or other qualified individual acceptable to the Governing Body. The plan may incorporate alternative procedures for removal of the material from the flood plain if adequate flood warning time exists.

(5) Storage of Materials and Equipment:

- (A) The storage or processing of materials that are, in time of flooding, flammable, explosive, or potentially injurious to human, animal, or plant life is prohibited.
- (B) Storage of other materials or equipment may be allowed if readily removable from the area within the time available after a flood warning and in accordance with a plan approved by the Governing Body.

(6) The provisions of Section 5.5 of this Chapter shall also apply.

5.5 Standards for All Flood Fringe Uses.

- (1) All new principal structures must have vehicular access at or above an elevation not more than two (2) feet below the regulatory flood protection elevation. If a variance to this requirement is granted, the Board of Adjustments and Appeals must specify limitations on the period of use or occupancy of the structure for times of flooding and only after determining that adequate flood warning time and local flood emergency response procedures exist.
- (2) Commercial Uses - accessory land uses, such as yards, railroad tracks, and parking lots may be at elevations lower than the regulatory flood protection elevation. However, a permit for such facilities to be used by the employees or the general public shall not be granted in the absence of a flood warning system that provides adequate time for evacuation if the area would be inundated to a depth and velocity such that when multiplying the depth (in feet) times velocity (in feet per second) the product number exceeds four (4) upon occurrence of the regional flood.
- (3) Manufacturing and Industrial Uses - measures shall be taken to minimize interference with normal plant operations especially along streams having protracted flood durations. Certain accessory land uses such as yards and parking lots may be at lower elevations subject to requirements set out in Section 5.52 above. In considering permit applications, due consideration shall be given to needs of an industry whose business requires that it be located in flood plain areas.
- (4) Fill shall be properly compacted and the slopes shall be properly protected by the use of riprap, vegetative cover or other acceptable method. The Federal Emergency Management Agency (FEMA) has established criteria for removing the special flood hazard area designation for certain structures properly elevated on fill above the 100-year flood elevation - FEMA's requirements incorporate specific fill compaction and side slope protection standards for multi-structure or multi-lot developments. These standards should be investigated prior to the initiation of site preparation if a change of special flood hazard area designation will be requested.

- (5) Flood plain developments shall not adversely affect the hydraulic capacity of the channel and adjoining flood plain of any tributary watercourse or drainage system where a floodway or other encroachment limit has not been specified on the Official Zoning Map.
- (6) Standards for recreational vehicles are contained in Section 9 of this Chapter.
- (7) All manufactured homes must be securely anchored to an adequately anchored foundation system that resists flotation, collapse and lateral movement. Methods of anchoring may include, but are not to be limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state or local anchoring requirements for resisting wind forces.



## **SECTION 6.0 GENERAL FLOOD PLAIN DISTRICT (GFP)**

### **6.1 Permissible Uses.**

- (1) The uses listed in Section 4.1 of this Chapter shall be permitted uses.
- (2) All other uses shall be subject to the floodway/flood fringe evaluation criteria pursuant to Section 6.2 below. Section 4.0 shall apply if the proposed use is in the Floodway District and Section 5.0 shall apply if the proposed use is in the Flood Fringe District.

### **6.2 Procedures for Floodway and Flood Fringe Determinations Within the General Flood Plain District.**

- (1) Upon receipt of an application for a permit or other approval within the General Flood Plain District, the applicant shall be required to furnish such of the following information as is deemed necessary by the Building Official for the determination of the regulatory flood protection elevation and whether the proposed use is within the Floodway or Flood Fringe District.
  - (A) A typical valley cross-section(s) showing the channel of the stream, elevation of land areas adjoining each side of the channel, cross-sectional areas to be occupied by the proposed development, and high water information.
  - (B) Plan (surface view) showing elevations or contours of the ground, pertinent structure, fill, or storage elevations, the size, location, and spatial arrangement of all proposed and existing structures on the site, and the location and elevations of streets.
  - (C) Photographs showing existing land uses, vegetation upstream and downstream, and soil types.
  - (D) Profile showing the slope of the bottom of the channel or flow line of the stream for at least 500 feet in either direction from the proposed development.
- (2) The applicant shall be responsible to submit one copy of the above information to a designated engineer or other expert person or agency for technical assistance in determining whether the proposed use is in the Floodway or Flood Fringe District and to determine the regulatory flood protection elevation. Procedures consistent with Minnesota Regulations 1983, Parts 6120.5000 - 6120.6200 and 44 Code of Federal Regulations Part 65 shall be followed in this expert evaluation. The designated engineer or expert is strongly encouraged to discuss the proposed technical evaluation methodology with the respective Department of Natural Resources' Area Hydrologist prior to commencing the analysis. The designated engineer or expert shall:
  - (A) Estimate the peak discharge of the regional flood.
  - (B) Calculate the water surface profile of the regional flood based upon a hydraulic analysis of the stream channel and overbank areas.
  - (C) Compute the floodway necessary to convey or store the regional flood without increasing flood stages more than 0.5 foot. A lesser stage increase than .5' shall be required if, as a

result of the additional stage increase, increased flood damages would result. An equal degree of encroachment on both sides of the stream within the reach shall be assumed in computing floodway boundaries. For the mapped lake and wetland basins within the City of Scandia as shown on the Flood Insurance Rate Map Panels adopted in Section 2.2 of this Chapter, the floodway shall be that area of the floodplain below the Ordinary High Water level, as defined in Minnesota Statute, Section 103G.005, subdivision 14.

- (3) The Building Official shall present the technical evaluation and findings of the designated engineer or expert to the Governing Body. The Governing Body must formally accept the technical evaluation and the recommended Floodway and/or Flood Fringe District boundary or deny the permit application. The Governing Body, prior to official action, may submit the application and all supporting data and analyses to the Federal Emergency Management Agency, the Department of Natural Resources or the Planning Commission for review and comment. Once the Floodway and Flood Fringe District Boundaries have been determined, the Governing Body shall refer the matter back to the Building Official who shall process the permit application consistent with the applicable provisions of Section 4.0 and 5.0 of this Chapter.

## SECTION 7.0 SUBDIVISIONS

- 7.1 Review Criteria. No land shall be subdivided which is unsuitable for the reason of flooding, inadequate drainage, water supply or sewage treatment facilities. All lots within the flood plain districts shall be able to contain a building site outside of the Floodway District at or above the regulatory flood protection elevation. All subdivisions shall have water and sewage treatment facilities that comply with the provisions of this Chapter and have road access, both to the subdivision and to the individual building sites, no lower than two feet below the regulatory flood protection elevation. For all subdivisions in the flood plain, the Floodway and Flood Fringe District boundaries, the regulatory flood protection elevation and the required elevation of all access roads shall be clearly labeled on all required subdivision drawings and platting documents.
- 7.2 Floodway/Flood Fringe Determinations in the General Flood Plain District. In the General Flood Plain District, applicants shall provide the information required in Section 6.2 of this Chapter to determine the 100-year flood elevation, the Floodway and Flood Fringe District boundaries and the regulatory flood protection elevation for the subdivision site.
- 7.3 Removal of Special Flood Hazard Area Designation. The Federal Emergency Management Agency (FEMA) has established criteria for removing the special flood hazard area designation for certain structures properly elevated on fill above the 100-year flood elevation. FEMA's requirements incorporate specific fill compaction and side slope protection standards for multi-structure or multi-lot developments. These standards should be investigated prior to the initiation of site preparation if a change of special flood hazard area designation will be requested.

## **SECTION 8.0 PUBLIC UTILITIES, RAILROADS, ROADS, AND BRIDGES**

- 8.1 Public Utilities. All public utilities and facilities such as gas, electrical, sewer, and water supply systems to be located in the flood plain shall be flood proofed in accordance with the State Building Code or elevated to above the regulatory flood protection elevation.
- 8.2 Public Transportation Facilities. Railroad tracks, roads, and bridges to be located within the flood plain shall comply with Sections 4.0 and 5.0 of this Chapter. Elevation to the regulatory flood protection elevation shall be provided where failure or interruption of these transportation facilities would result in danger to the public health or safety or where such facilities are essential to the orderly functioning of the area. Minor or auxiliary roads or railroads may be constructed at a lower elevation where failure or interruption of transportation services would not endanger the public health or safety.
- 8.3 On-site Sewage Treatment and Water Supply Systems: Where public utilities are not provided: 1) On-site water supply systems must be designed to minimize or eliminate infiltration of flood waters into the systems; and 2) New or replacement on-site sewage treatment systems must be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters and they shall not be subject to impairment or contamination during times of flooding. Any sewage treatment system designed in accordance with the State's current statewide standards for on-site sewage treatment systems shall be determined to be in compliance with this Section.

## SECTION 9.0 PLACEMENT OF RECREATIONAL VEHICLES

9.1 Vehicles. Recreational vehicles that do not meet the exemption criteria specified in Section 9.1 (1) below shall be subject to the provisions of this Chapter and as specifically spelled out in Sections 9.1 (2) - 9.1 (4) below.

- (1) Exemption - Recreational vehicles are exempt from the provisions of this Chapter if they are placed in any of the areas listed in Section 9.1 (2) below and further they meet the following criteria:
  - (A) Have current licenses required for highway use.
  - (B) Are highway ready meaning on wheels or the internal jacking system, are attached to the site only by quick disconnect type utilities commonly used in campgrounds and recreational vehicle parks and the recreational vehicle has no permanent structural type additions attached to it.
  - (C) The recreational vehicle and associated use must be permissible in any pre-existing, underlying zoning use district.
- (2) Areas Exempted For Placement of Recreational Vehicles:
  - (A) Individual lots or parcels of record.
  - (B) Existing commercial recreational vehicle parks or campgrounds.
  - (C) Existing condominium type associations.
- (3) Recreational vehicles exempted in Section 9.1 (1) lose this exemption when development occurs on the parcel exceeding \$500 for a structural addition to the recreational vehicle or exceeding \$500 for an accessory structure such as a garage or storage building. The recreational vehicle and all additions and accessory structures will then be treated as a new structure and shall be subject to the elevation/flood proofing requirements and the use of land restrictions specified in Sections 4.0 and 5.0 of this Chapter. There shall be no development or improvement on the parcel or attachment to the recreational vehicle that hinders the removal of the recreational vehicle to a flood free location should flooding occur.
- (4) New commercial recreational vehicle parks or campgrounds and new residential type subdivisions and condominium associations and the expansion of any existing similar use exceeding five (5) units or dwelling sites shall be subject to the following:
  - (A) Any new or replacement recreational vehicle will be allowed in the Floodway or Flood Fringe Districts provided said recreational vehicle and its contents are placed on fill above the regulatory flood protection elevation and proper elevated road access to the site exists in accordance with Section 5.5 (1) of this Chapter. No fill placed in the floodway to meet the requirements of this Section shall increase flood stages of the 100-year or regional flood.

- (B) All new or replacement recreational vehicles not meeting the criteria of (a) above may, as an alternative, be allowed as a conditional use if in accordance with the following provisions and the provisions of 10.4 of the Chapter. The applicant must submit an emergency plan for the safe evacuation of all vehicles and people during the 100 year flood. Said plan shall be prepared by a registered engineer or other qualified individual, shall demonstrate that adequate time and personnel exist to carry out the evacuation, and shall demonstrate the provisions of Section 9.1 (1) (A) and (B) of this Chapter will be met. All attendant sewage and water facilities for new or replacement recreational vehicles must be protected or constructed so as to not be impaired or contaminated during times of flooding in accordance with Section 8.3 of this Chapter.



## SECTION 10.0 ADMINISTRATION

10.1 Building Official. The Building Official or other official designated by the Governing Body shall administer and enforce this Chapter. If the Building Official finds a violation of the provisions of this Chapter the Building Official shall notify the person responsible for such violation in accordance with the procedures stated in Section 12.0 of this Chapter.

### 10.2 Permit Requirements.

- (1) **Permit Required.** A Permit issued by the Building Official in conformity with the provisions of this Chapter shall be secured prior to the erection, addition, modification, rehabilitation (including normal maintenance and repair), or alteration of any building, structure, or portion thereof; prior to the use or change of use of a building, structure, or land; prior to the construction of a dam, fence, or on-site septic system; prior to the change or extension of a nonconforming use; prior to the repair of a structure that has been damaged by flood, fire, tornado, or any other source; and prior to the placement of fill, excavation of materials, or the storage of materials or equipment within the flood plain.
- (2) **Application for Permit.** Application for a permit shall be made in duplicate to the Building Official on forms furnished by the Building Official and shall include the following where applicable: plans in duplicate drawn to scale, showing the nature, location, dimensions, and elevations of the lot; existing or proposed structures, fill, or storage of materials; and the location of the foregoing in relation to the stream channel.
- (3) **State and Federal Permits.** Prior to granting a permit or processing an application for a conditional use permit or variance, the Building Official shall determine that the applicant has obtained all necessary state and federal permits, including any permit to work below the ordinary high water level of public waters or public waters wetlands.
- (4) **Use Permit Required for a New, Altered, or Nonconforming Use.** It shall be unlawful to use, occupy, or permit the use or occupancy of any building or premises or part thereof hereafter created, erected, changed, converted, altered, or enlarged in its use or structure until a use permit has been secured from the Building Official certifying that the use of the building or land conforms to the requirements of this Chapter.
- (5) **Construction and Use to be as provided in Application, Plans and Permits.** All permits issued on the basis of approved plans and applications authorize only the use, arrangement, and construction set forth in such approved plans and applications, and no other use, arrangement or construction. Any use, arrangement, or construction at variance with that authorized shall be deemed a violation of this Chapter, and punishable as provided by Section 12.0 of this Chapter.
- (6) **Certification.** The applicant shall be required to submit certification by a registered professional engineer, registered architect, or registered land surveyor that the finished fill and building elevations were accomplished in compliance with the provisions of this Chapter. Flood proofing measures shall be certified by a registered professional engineer or registered architect.

- (7) **Record of First Floor Elevation.** The Building Official shall maintain a record of the elevation of the lowest floor (including basement) of all new structures and alterations or additions to existing structures in the flood plain. The Building Official shall also maintain a record of the elevation to which structures or alterations and additions to structures are flood proofed.
- (8) **Notifications for Watercourse Alterations.** The Building Official shall notify, in riverine situations, adjacent communities and the Commissioner of the Department of Natural Resources prior to the community authorizing any alteration or relocation of a watercourse. If the applicant has applied for a permit to work in the beds of public waters pursuant to Minnesota Statute, Chapter 103G, this shall suffice as adequate notice to the Commissioner of Natural Resources. A copy of said notification shall also be submitted to the Chicago Regional Office of the Federal Emergency Management Agency (FEMA).
- (9) **Notification to FEMA When Physical Changes Increase or Decrease the 100-year Flood Elevation.** As soon as is practicable, but not later than six (6) months after the date such supporting information becomes available, the Building Official shall notify the Chicago Regional Office of FEMA of the changes by submitting a copy of said technical or scientific data.

### 10.3 Board of Adjustments and Appeals.

- (1) **Rules.** Pursuant to Minnesota Statutes, Section 462.354, a Board of Adjustments and Appeals has been established. The City Council shall serve as the Board of Adjustments and Appeals. The Planning Commission shall conduct required hearings for the Board and make recommendations to it on all variance applications according to the procedures established by Chapter 1 of the Scandia Development Code and this Chapter.
- (2) **Administrative Review.** The Board of Adjustments and Appeals shall hear and decide appeals where it is alleged there is error in any order, requirement, decision, or determination made by an administrative official in the enforcement or administration of this Chapter.
- (3) **Variances.** The Board of Adjustments and Appeals may authorize upon appeal in specific cases such relief or variance from the terms of this Chapter as will not be contrary to the public interest and only for those circumstances such as hardship, practical difficulties or circumstances unique to the property under consideration. In the granting of such variance, the Board of Adjustments and Appeals shall clearly identify in writing the specific conditions that existed consistent with the criteria specified in this Chapter and by Chapter 1, Section 6 of the Scandia Development Code, and in the respective enabling legislation that justified the granting of the variance. No variance shall have the effect of allowing in any district uses prohibited in that district, permit a lower degree of flood protection than the regulatory flood protection elevation for the particular area, or permit standards lower than those required by state law. The following additional variance criteria of the Federal Emergency Management Agency must be satisfied:
  - (A) Variances shall not be issued within any designated regulatory floodway if any increase in flood levels during the base flood discharge would result.

- (B) Variances shall only be issued upon (i) a showing of good and sufficient cause, (ii) a determination that failure to grant the variance would result in exceptional hardship to the applicant, and (iii) a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
  - (C) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
- (4) Notice of Hearings. Upon filing with the Board of Adjustments and Appeals of an appeal from a decision of the Building Official, or an application for a variance, a hearing shall be fixed and due notice shall be given to the parties in interest as specified in Chapter 1 of the Scandia Development Code. A copy of the application for proposed variances shall be submitted by mail to the Commissioner of Natural Resources sufficiently in advance so that the Commissioner will receive at least ten days notice of the hearing.
  - (5) Decisions. In passing upon an appeal, the Board may, so long as such action is in conformity with the provisions of this Chapter, reverse or affirm, wholly or in part, or modify the order, requirement, decision or determination of the Building Official or other public official. It shall make its decision in writing setting forth the findings of fact and the reasons for its decisions. In granting a variance the Board of Adjustments and Appeals may prescribe appropriate conditions and safeguards such as those specified in Section 10.4 (6), which are in conformity with the purposes of this Chapter. Violations of such conditions and safeguards, when made a part of the terms under which the variance is granted, shall be deemed a violation of this Chapter punishable under Section 12.0. A copy of all decisions granting variances shall be forwarded by mail to the Commissioner of Natural Resources within ten (10) days of such action.
  - (6) Appeals. Appeals from any decision of the Board of Adjustments and Appeals may be made as provided by Minnesota Statutes.
  - (7) Flood Insurance Notice and Record Keeping. The Building Official shall notify the applicant for a variance that: 1) The issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage and 2) Such construction below the 100-year or regional flood level increases risks to life and property. Such notification shall be maintained with a record of all variance actions. A community shall maintain a record of all variance actions, including justification for their issuance, and report such variances issued in its annual or biennial report submitted to the Administrator of the National Flood Insurance Program.

10.4 Conditional Uses. Applications for conditional uses permissible under this Chapter shall be made and considered in the manner prescribed by Chapter 1 of the Scandia Development Code.

- (1) Notice of Hearings. Upon filing of a complete application for a conditional use permit a hearing shall be fixed and due notice shall be given to the parties in interest as specified in Chapter 1 of the Scandia Development Code. A copy of the application for proposed conditional uses shall

be submitted by mail to the Commissioner of Natural Resources sufficiently in advance so that the Commissioner will receive at least ten days notice of the hearing.

- (2) **Decisions.** In granting a conditional use permit the City Council shall prescribe appropriate conditions and safeguards, in addition to those specified in Section 10.4 (5), which are in conformity with the purposes of this Chapter. Violations of such conditions and safeguards, when made a part of the terms under which the conditional use permit is granted, shall be deemed a violation of this Chapter punishable under Section 12.0. A copy of all decisions granting conditional use permits shall be forwarded by mail to the Commissioner of Natural Resources within ten (10) days of such action.
- (3) **Procedures.** In addition to the procedures for reviewing Conditional User Permits specified by Chapter 1 of the Scandia Development Code, the following additional requirements shall apply:
  - (A) The applicant shall furnish such of the following information and additional information as deemed necessary by the City Council for determining the suitability of the particular site for the proposed use:
    1. Plans in triplicate drawn to scale showing the nature, location, dimensions, and elevation of the lot, existing or proposed structures, fill, storage of materials, flood proofing measures, and the relationship of the above to the location of the stream channel; and
    2. Specifications for building construction and materials, flood proofing, filling, dredging, grading, channel improvement, storage of materials, water supply and sanitary facilities.
  - (B) The applicant shall transmit one copy of the information described in subsection (a) to a designated engineer or other expert person or agency for technical assistance, where necessary, in evaluating the proposed project in relation to flood heights and velocities, the seriousness of flood damage to the use, the adequacy of the plans for protection, and other technical matters.
  - (C) Based upon the technical evaluation of the designated engineer or expert, the City Council shall determine the specific flood hazard at the site and evaluate the suitability of the proposed use in relation to the flood hazard.
- (4) **Factors Upon Which the Decision of the City Council Shall Be Based.** In passing upon conditional use applications, the Council shall consider all relevant factors specified in other sections of this Chapter, and:
  - (A) The danger to life and property due to increased flood heights or velocities caused by encroachments.
  - (B) The danger that materials may be swept onto other lands or downstream to the injury of others or they may block bridges, culverts or other hydraulic structures.

- (C) The proposed water supply and sanitation systems and the ability of these systems to prevent disease, contamination, and unsanitary conditions.
  - (D) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner.
  - (E) The importance of the services provided by the proposed facility to the community.
  - (F) The requirements of the facility for a waterfront location.
  - (G) The availability of alternative locations not subject to flooding for the proposed use.
  - (H) The compatibility of the proposed use with existing development and development anticipated in the foreseeable future.
  - (I) The relationship of the proposed use to the comprehensive plan and flood plain management program for the area.
  - (J) The safety of access to the property in times of flood for ordinary and emergency vehicles.
  - (K) The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters expected at the site.
  - (L) Such other factors which are relevant to the purposes of this Chapter.
- (5) Conditions Attached to Conditional Use Permits. Upon consideration of the factors listed above and the purpose of this Chapter, the City Council shall attach such conditions to the granting of conditional use permits as it deems necessary to fulfill the purposes of this Chapter. Such conditions may include, but are not limited to, the following:
- (A) Modification of waste treatment and water supply facilities.
  - (B) Limitations on period of use, occupancy, and operation.
  - (C) Imposition of operational controls, sureties, and deed restrictions.
  - (D) Requirements for construction of channel modifications, compensatory storage, dikes, levees, and other protective measures.
  - (E) Flood proofing measures, in accordance with the State Building Code and this Chapter. The applicant shall submit a plan or document certified by a registered professional engineer or architect that the flood proofing measures are consistent with the regulatory flood protection elevation and associated flood factors for the particular area.

## SECTION 11.0 NONCONFORMING USES

11.1 A structure or the use of a structure or premises which was lawful before the passage or amendment of this Chapter but which is not in conformity with the provisions of this Chapter may be continued subject to the following conditions. Historic structures, as defined in Section 2.831(b) of this Chapter, shall be subject to the provisions of Sections 11.1 (1) – 11.1 (5) of this Chapter.

- (1) No such use shall be expanded, changed, enlarged, or altered in a way that increases its nonconformity.
- (2) Any structural alteration or addition to a nonconforming structure or nonconforming use which would result in increasing the flood damage potential of that structure or use shall be protected to the Regulatory Flood Protection Elevation in accordance with any of the elevation on fill or flood proofing techniques (i.e., FP-1 thru FP-4 floodproofing classifications) allowable in the State Building Code, except as further restricted in 11.1 (3) and 11.1 (6) below.
- (3) The cost of all structural alterations or additions to any nonconforming structure over the life of the structure shall not exceed 50 percent of the market value of the structure unless the conditions of this Section are satisfied. The cost of all structural alterations and additions must include all costs such as construction materials and a reasonable cost placed on all manpower or labor. If the cost of all previous and proposed alterations and additions exceeds 50 percent of the market value of the structure, then the structure must meet the standards of Section 4.0 or 5.0 of this Chapter for new structures depending upon whether the structure is in the Floodway or Flood Fringe District, respectively.
- (4) If any nonconforming use is discontinued for 12 consecutive months, any future use of the building premises shall conform to this Chapter. The Assessor shall notify the Building Official in writing of instances of nonconforming uses that have been discontinued for a period of 12 months.
- (5) If any nonconforming use or structure is substantially damaged, as defined in Section 2.8 (21) of this Chapter, it shall not be reconstructed except in conformity with the provisions of this Chapter. The applicable provisions for establishing new uses or new structures in Sections 4.0, 5.0 or 6.0 will apply depending upon whether the use or structure is in the Floodway, Flood Fringe or General Flood Plain District, respectively.
- (6) If a substantial improvement occurs, as defined in Section 2.8 (22) of this Chapter, from any combination of a building addition to the outside dimensions of the existing building or a rehabilitation, reconstruction, alteration, or other improvement to the inside dimensions of an existing nonconforming building, then the building addition and the existing nonconforming building must meet the requirements of Section 4.0 or 5.0 of this Chapter for new structures, depending upon whether the structure is in the Floodway or Flood Fringe District, respectively.



## **SECTION 12.0 PENALTIES FOR VIOLATION**

- 12.1 Violation of the provisions of this Chapter or failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with grants of variances or conditional uses) shall constitute a misdemeanor and shall be punishable as defined by law.
- 12.2 Nothing herein contained shall prevent the City of Scandia from taking such other lawful action as is necessary to prevent or remedy any violation. Such actions may include but are not limited to:
- (1) In responding to a suspected violation of this Chapter, the Building Official and the City of Scandia may utilize the full array of enforcement actions available to it including but not limited to prosecution and fines, injunctions, after-the-fact permits, orders for corrective measures or a request to the National Flood Insurance Program for denial of flood insurance availability to the guilty party. The Community must act in good faith to enforce these official controls and to correct violations to the extent possible so as not to jeopardize its eligibility in the National Flood Insurance Program.
  - (2) When a violation of this Chapter is either discovered by or brought to the attention of the Building Official, the Building Official shall immediately investigate the situation and document the nature and extent of the violation of the official control. As soon as is reasonably possible, this information will be submitted to the appropriate Department of Natural Resources' and Federal Emergency Management Agency Regional Office along with the Community's plan of action to correct the violation to the degree possible.
  - (3) The Building Official shall notify the suspected party of the requirements of this Chapter and all other official controls and the nature and extent of the suspected violation of these controls. If the structure and/or use is under construction or development, the Building Official may order the construction or development immediately halted until a proper permit or approval is granted by the Community. If the construction or development is already completed, then the Building Official may either: (1) issue an order identifying the corrective actions that must be made within a specified time period to bring the use or structure into compliance with the official controls; or (2) notify the responsible party to apply for an after-the-fact permit/development approval within a specified period of time not to exceed 30-days.
  - (4) If the responsible party does not appropriately respond to the Building Official within the specified period of time, each additional day that lapses shall constitute an additional violation of this Chapter and shall be prosecuted accordingly. The Building Official shall also upon the lapse of the specified response period notify the landowner to restore the land to the condition which existed prior to the violation of this Chapter.

## **SECTION 13.0 AMENDMENTS**

- 13.1 Amendments to Floodplain Designations. The flood plain designation on the Official Zoning Map shall not be removed from flood plain areas unless it can be shown that the designation is in error or that the area has been filled to or above the elevation of the regulatory flood protection elevation and is contiguous to lands outside the flood plain. Special exceptions to this rule may be permitted by the Commissioner of Natural Resources if he determines that, through other measures, lands are adequately protected for the intended use.
- 13.2 Amendments to this Chapter. All amendments to this Chapter, including amendments to the Official Zoning Map affecting the Floodway, Flood Fringe or General Flood Plain Districts, must be submitted to and approved by the Commissioner of Natural Resources prior to adoption. Changes in the Official Zoning Map must meet the Federal Emergency Management Agency's (FEMA) Technical Conditions and Criteria and must receive prior FEMA approval before adoption. The Commissioner of Natural Resources must be given 10-days written notice of all hearings to consider an amendment to this Chapter and said notice shall include a draft of the ordinance amendment or technical study under consideration.

## Appendix C: Met Council Lake Grades

## Big Marine Lake (82-0052) Carnelian — Marine — St. Croix Watershed District

Volunteer: Washington Conservation District staff

Big Marine Lake is located in City of Scandia (Washington County). The lake is considered a Priority Lake by the Metropolitan Council for its high regional recreation value. The lake covers an area of 1,706 acres and has a maximum and mean depth of 15.2 m (roughly 50 feet) and 7.6 m (25 feet). Roughly 67 percent of the lake's area is considered littoral, the shallow (0-15 foot depth) area dominated by aquatic vegetation. The approximate volume of the lake is 42,527 acre-feet (ac-ft). The lake's watershed of 2,659 acres translates to a small watershed-to-lake size ratio of 1.5:1. The larger the ratio the greater the potential stress put on the lake from surface runoff.

The MPCA listed the lake as impaired with respect to aquatic consumption (mercury in fish tissue) in 1998. The MN DNR designated the lake as being infested with Eurasian water milfoil (*Myriophyllum spicatum*) in 2007.

On each sampling day surface samples were collected for laboratory analysis of total phosphorus (TP), total Kjeldahl nitrogen (TKN), and chlorophyll including chlorophyll-a (CLA). Secchi transparency and surface temperature were measured during each monitoring visit. The resulting data are summarized in tables and figures on the following pages.

### 2015 summer (May - September) data summary

Parameter	Mean	Minimum	Maximum	Grade
TP (µg/l)	14	8	26	A
CLA (µg/l)	5.8	2.5	12	A
Secchi (m)	3.9	2.3	5.2	A
TKN (mg/l)	0.67	0.56	0.83	
			<b>Lake Grade</b>	A

The lake received a lake grade of A which is consistent with its historical water quality database over the past 10 years.

During each monitoring visit, the volunteer's opinions of the lake's physical condition and recreational suitability were ranked on a 1-to-5 scale. These user perception rankings are shown on the following page.

The Fisheries Section of the Minnesota Department of Natural Resources (MDNR) has conducted a fisheries survey on the lake. Information on the survey can be obtained through the MDNR Fisheries Section by calling (651) 259-5831 or by downloading the information off the Internet at <http://www.dnr.state.mn.us/lakefind/>.

If you notice any errors in the lake's data or physical information, or are aware of any additional or missing information, please contact Brian Johnson of the Metropolitan Council at (651) 602-8743 or [brian.johnson@metc.state.mn.us](mailto:brian.johnson@metc.state.mn.us).

## Bone Lake (82-0054) Comfort Lake-Forest Lake Watershed District

Volunteer: Julie Morse and Washington Conservation District staff

Bone Lake is located in the City of Scandia (Washington County). The lake is considered a Priority Lake by the Metropolitan Council for its high regional recreational value. The lake has a maximum and mean depth of 9.8 m and 3.7 m (32 ft and 12 ft), respectively.

The MPCA listed the lake as impaired with respect to aquatic recreational use (nutrient/eutrophication biological indicators) in 2004 and aquatic consumption (mercury in fish tissue) in 1998. The MN DNR designated the lake as being infested with Eurasian water milfoil (*Myriophyllum spicatum*) in 2007.

On each sampling day surface samples were collected for laboratory analysis of total phosphorus (TP), total Kjeldahl nitrogen (TKN), and chlorophyll including chlorophyll-a (CLA). Secchi transparency and surface temperature were measured during each site visit. Depth profiles of dissolved oxygen and temperature were also made by Washington Conservation District staff during their monitoring visits. The resulting surface data are summarized in tables and figures on the following pages. For depth profile data, please refer to the MCES's EIMS system at <http://es.metc.state.mn.us/eims/>.

### 2015 summer (May - September) data summary

Parameter	Mean	Minimum	Maximum	Grade
TP (µg/l)	35	21	59	C
CLA (µg/l)	22	5.3	56	C
Secchi (m)	1.2	0.8	2.0	D
TKN (mg/l)	1.29	0.77	1.70	
			<b>Lake Grade</b>	C

The lake received a lake grade of C this year, which is consistent with its historical database.

During each monitoring visit, the volunteer's opinions of the lake's physical condition and recreational suitability were ranked on a 1-to-5 scale. These user perception rankings are shown on the following page.

The Fisheries Section of the Minnesota Department of Natural Resources (MDNR) has conducted a fisheries survey on the lake. Information on the survey can be obtained through the MDNR Fisheries Section by calling (651) 259-5831 or by downloading the information off the Internet at <http://www.dnr.state.mn.us/lakefind/>.

If you notice any errors in the lake's data or physical information, or are aware of any additional or missing information, please contact Brian Johnson of the Metropolitan Council at (651) 602-8743 or [brian.johnson@metc.state.mn.us](mailto:brian.johnson@metc.state.mn.us).

## Fish Lake [Washington County] (82-0064) *Carnelian – Marine Watershed District*

Fish Lake is located in City of Scandia in Washington County. The lake has a surface area of 72 acres, and a maximum and mean depth of 3.0 m (10 feet) and 1.5 m (5 feet), respectively. The entire lake is considered littoral zone, which is the shallow 0 – 15 feet depth zone that is typically dominated by aquatic plants. Since the lake is relatively shallow, it does not maintain a thermocline, which is a density gradient caused by changing water temperatures throughout the water column.

The MPCA listed the lake as impaired with respect to aquatic recreational use (nutrient/eutrophication biological indicators)

On each sampling day surface samples were collected for laboratory analysis of total phosphorus (TP), total Kjeldahl nitrogen (TKN), and chlorophyll including chlorophyll-a (CLA). Secchi transparency and surface temperature were measured during each monitoring visit. The resulting data are summarized in tables and figures on the following pages.

### 2015 summer (May - September) data summary

Parameter	Mean	Minimum	Maximum	Grade
TP (µg/l)	37	22	54	C
CLA (µg/l)	13	2.5	59	B
Secchi (m)	+1.5	0.6	+2.1	
TKN (mg/l)	0.95	0.77	1.60	
			<b>Lake Grade</b>	

+ indicates that the Secchi disk was visible on the bottom of the lake at the depth indicated.

There was an insufficient quantity of valid Secchi transparency measurements to determine a Secchi grade. An invalid measurement occurred if the Secchi disk was either visible on the lake bottom or the disk's visibility was blocked by aquatic vegetation. In both of these situations the water clarity would have been greater than that indicated by the measurement. A lake grade was not given because all three parameter grades are required to issue a lake grade. Continued monitoring is suggested to determine if the improvement in water quality is an on-going trend.

During each monitoring visit, the volunteer's opinions of the lake's physical condition and recreational suitability were ranked on a 1-to-5 scale. These user perception rankings are shown on the following page.

The Fisheries Section of the Minnesota Department of Natural Resources (MDNR) has conducted a fisheries survey on the lake. Information on the survey can be obtained through the MDNR Fisheries Section by calling (651) 259-5831 or by downloading the information off the Internet at <http://www.dnr.state.mn.us/lakefind/>.

If you notice any errors in the lake's data or physical information, or are aware of any additional or missing information, please contact Brian Johnson of the Metropolitan Council at (651) 602-8743 or [brian.johnson@metc.state.mn.us](mailto:brian.johnson@metc.state.mn.us).



## Goose Lake [Scandia] (82-0059) Carnelian — Marine — St. Croix Watershed District

Washington Conservation District staff

Goose Lake is located in the City of Scandia (Washington County). The lake has a surface area of 83 acres. The lake has a maximum and mean depth of 7.6 m (25 feet) and 2.4 m (8 feet), respectively.

The MPCA listed the lake as impaired with respect to aquatic consumption (mercury in fish tissue) in 2012 and aquatic recreational use (nutrient/eutrophication biological indicators) in 2002.

On each sampling day surface samples were collected for laboratory analysis of total phosphorus (TP), total Kjeldahl nitrogen (TKN), and chlorophyll including chlorophyll-a (CLA). Secchi transparency was measured during each site visit. Depth profiles of dissolved oxygen and temperature were also made. The resulting surface data are summarized in tables and figures on the following pages. For depth profile data, please refer to the MCES's EIMS system at <http://es.metc.state.mn.us/eims/>.

### 2015 summer (May - September) data summary

Parameter	Mean	Minimum	Maximum	Grade
TP (µg/l)	41	14	74	C
CLA (µg/l)	36	2.8	99	C
Secchi (m)	1.8	0.3	4.3	C
TKN (mg/l)	1.22	0.79	1.70	
			<b>Lake Grade</b>	C

The lake received a lake grade of C this year, which is consistent with its historical water quality database. Continued monitoring is recommended to determine if this recent improvement in water quality is part of a longer term trend.

During each monitoring visit, the volunteer's opinions of the lake's physical condition and recreational suitability were ranked on a 1-to-5 scale. These user perception rankings are shown on the following page.

The Fisheries Section of the Minnesota Department of Natural Resources (MDNR) has conducted a fisheries survey on the lake. Information on the survey can be obtained through the MDNR Fisheries Section by calling (651) 259-5831 or by downloading the information off the Internet at <http://www.dnr.state.mn.us/lakefind/>.

If you notice any errors in the lake's data or physical information, or are aware of any additional or missing information, please contact Brian Johnson of the Metropolitan Council at (651) 602-8743 or [brian.johnson@metc.state.mn.us](mailto:brian.johnson@metc.state.mn.us).

## Hay Lake (82–0065) Carnelian – Marine – St. Croix Watershed District

Volunteer: Washington Conservation District staff

Hay lake is located in the City of Scandia (Washington County). The lake has a surface area of 33 acres. It has a maximum depth of 6.1 m (20 feet).

The MPCA listed the lake as impaired with respect to aquatic recreational use (nutrient/eutrophication biological indicators) in 2002.

On each sampling day surface samples were collected for laboratory analysis of total phosphorus (TP), total Kjeldahl nitrogen (TKN), and chlorophyll including chlorophyll-a (CLA). Secchi transparency was measured during each site visit. Depth profiles of dissolved oxygen and temperature were also made. The resulting surface data are summarized in tables and figures on the following pages. For depth profile data, please refer to the MCES's EIMS system at <http://es.metc.state.mn.us/eims/>.

hay

### 2015 summer (May - September) data summary

Parameter	Mean	Minimum	Maximum	Grade
TP (µg/l)	43	17	61	C
CLA (µg/l)	15	6.3	29	B
Secchi (m)	>1.2	0.9	>1.4	
TKN (mg/l)	0.97	0.79	1.20	
			<b>Lake Grade</b>	

> indicates that the visibility of the Secchi disk was blocked by aquatic vegetation at the depth indicated.

There was an insufficient quantity of valid Secchi transparency measurements to determine a Secchi grade. An invalid measurement occurred if the Secchi disk was either visible on the lake bottom or the disk's visibility was blocked by aquatic vegetation. In both of these situations the water clarity would have been greater than that indicated by the measurement. The primary production of this lake is dominated by aquatic macrophytes as given by the observations of moderate aquatic macrophyte population, lower pelagic algal populations (as given by lower CLA concentrations), and the visibility of the Secchi disk being frequently blocked by aquatic vegetation. There has been a consistent downward trend of summertime mean CLA concentrations since 1998. Continued monitoring is suggested to determine if this trend continues.

During each monitoring visit, the volunteer's opinions of the lake's physical condition and recreational suitability were ranked on a 1-to-5 scale. These user perception rankings are shown on the following page.

The Fisheries Section of the Minnesota Department of Natural Resources (MDNR) has conducted a fisheries survey on the lake. Information on the survey can be obtained through the MDNR Fisheries Section by calling (651) 259-5831 or by downloading the information off the Internet at <http://www.dnr.state.mn.us/lakefind/>.

If you notice any errors in the lake's data or physical information, or are aware of any additional or missing information, please contact Brian Johnson of the Metropolitan Council at (651) 602-8743 or [brian.johnson@metc.state.mn.us](mailto:brian.johnson@metc.state.mn.us).

## **Jellum's Bay [Site-1] (82-0052-02) Carnelian — Marine Watershed District**

Jellum's Bay is located in the City of Scandia in Washington County. It has a surface area of 72 acres. The maximum depth of the lake is 4.9 m (16 feet). Therefore the majority of the surface area of the lake is considered littoral zone, which is the 0-15 feet depth zone that is dominated by aquatic vegetation. The lake does not maintain a thermocline, which is a density gradient caused by changing water temperatures throughout the lake's water column.

The MPCA listed the lake as impaired with respect to aquatic recreational use (nutrient/eutrophication biological indicators) in 2004.

On each sampling day surface samples were collected for laboratory analysis of total phosphorus (TP), total Kjeldahl nitrogen (TKN), and chlorophyll including chlorophyll-a (CLA). Secchi transparency and surface temperature were measured during each monitoring visit. The resulting data are summarized in tables and figures on the following pages.

### **2015 summer (May - September) data summary**

<b>Parameter</b>	<b>Mean</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Grade</b>
TP (µg/l)	35	27	42	C
CLA (µg/l)	11	3.3	22	B
Secchi (m)	1.6	1.1	2.3	C
TKN (mg/l)	1.01	0.85	1.20	
			<b>Lake Grade</b>	C

The lake received a lake grade of C this year, which is consistent with water quality since 2007.

During each monitoring visit, the volunteer's opinions of the lake's physical condition and recreational suitability were ranked on a 1-to-5 scale. These user perception rankings are shown on the following page.

If you notice any errors in the lake's data or physical information, or are aware of any additional or missing information, please contact Brian Johnson of the Metropolitan Council at (651) 602-8743 or [brian.johnson@metc.state.mn.us](mailto:brian.johnson@metc.state.mn.us).

## Long Lake [Washington County] (82–0068) Carnelian — Marine Watershed District

Volunteer: Washington Conservation District staff

Long Lake is located within the City of Scandia (Washington County). The lake has a surface area of 35 acres. The maximum and mean depths are 2.1 m (6.9 ft) and 1.1 m (3.6 ft), respectively. The entire lake is considered littoral zone, which is the shallow 0 – 15 feet depth zone that is typically dominated by aquatic plants. Since the lake is relatively shallow, it does not maintain a thermocline, which is a density gradient caused by changing water temperatures throughout the water column.

The MPCA listed the lake as impaired with respect to aquatic recreational use (nutrient/eutrophication biological indicators) in 2004.

On each sampling day surface samples were collected for laboratory analysis of total phosphorus (TP), total Kjeldahl nitrogen (TKN), and chlorophyll including chlorophyll-a (CLA). Secchi transparency and surface temperature were measured during each monitoring visit. The resulting data are summarized in tables and figures on the following pages.

### 2015 summer (May - September) data summary

Parameter	Mean	Minimum	Maximum	Grade
TP (µg/l)	56	40	106	C
CLA (µg/l)	51	4.3	110	D
Secchi (m)	+0.7	0.2	+1.7	F
TKN (mg/l)	1.66	0.83	2.80	
			<b>Lake Grade</b>	D

+ indicates that the Secchi disk was visible on the bottom of the lake at the depth indicated.

The lake received a lake grade of D this year. The lake grades have fluctuated in the range of F to B to D since 1998, which is quite variable. However, the F grades were received prior to 2004, suggesting that the lake's water quality is better than it was during the late 1990s and early 2000s.

During each monitoring visit, the volunteer's opinions of the lake's physical condition and recreational suitability were ranked on a 1-to-5 scale. These user perception rankings are shown on the following page.

If you notice any errors in the lake's data or physical information, or are aware of any additional or missing information, please contact Brian Johnson of the Metropolitan Council at (651) 602-8743 or [brian.johnson@metc.state.mn.us](mailto:brian.johnson@metc.state.mn.us).

## **Sand Lake (82-0067) Carnelian — Marine — St. Croix Watershed District**

Volunteer: Washington Conservation District staff

Sand Lake is located within the City of Scandia (Washington County). The lake has a surface area of 46 acres. It has a maximum and mean depths of 5.5 m and 2.4 m, respectively. More than 80 percent of the surface area is considered littoral zone, which is the 0 — 15 feet depth zone typically dominated by aquatic vegetation. The lake is defined as a shallow lake because of the dominance of the littoral zone.

On each sampling day surface samples were collected for laboratory analysis of total phosphorus (TP), total Kjeldahl nitrogen (TKN), and chlorophyll including chlorophyll-a (CLA). Secchi transparency was measured during each site visit. Depth profiles of dissolved oxygen and temperature were also made. The resulting surface data are summarized in tables and figures on the following pages. For depth profile data, please refer to the MCES's EIMS system at <http://es.metc.state.mn.us/eims/>.

### **2015 summer (May - September) data summary**

Parameter	Mean	Minimum	Maximum	Grade
TP (µg/l)	40	21	65	C
CLA (µg/l)	21	2.7	58	C
Secchi (m)	1.4	0.3	3.2	C
TKN (mg/l)	1.18	0.82	1.70	
			<b>Lake Grade</b>	C

The received a lake grade of C this year, which is consistent with its historical water quality database. Water clarity has varied between grades A and C over the past decade.

During each monitoring visit, the volunteer's opinions of the lake's physical condition and recreational suitability were ranked on a 1-to-5 scale. These user perception rankings are shown on the following page.

The Fisheries Section of the Minnesota Department of Natural Resources (MDNR) has conducted a fisheries survey on the lake. Information on the survey can be obtained through the MDNR Fisheries Section by calling (651) 259-5831 or by downloading the information off the Internet at <http://www.dnr.state.mn.us/lakefind/>.

If you notice any errors in the lake's data or physical information, or are aware of any additional or missing information, please contact Brian Johnson of the Metropolitan Council at (651) 602-8743 or [brian.johnson@metc.state.mn.us](mailto:brian.johnson@metc.state.mn.us).

## Appendix D: Engineering Standards



# **Engineering Standards and Detail Specifications**

**Adopted September 20, 2011**

## **City of Scandia**

14727 209<sup>th</sup> St. N.

Scandia, Minnesota 55073

Phone: 651 433-2274 Fax: 651 433-5112

[www.ci.scandia.mn.us](http://www.ci.scandia.mn.us)



## ***PURPOSE***

This document establishes engineering standards and detail specifications for public and private improvements in new subdivisions within the City of Scandia. It has been adopted by reference in Ordinance No. 128 adopting Chapter 3 (Subdivision Regulations) of the City of Scandia Development Code.

The standards of this document supplement the Minimum Design Standards contained in the Subdivision Regulations. Adherence to these standards will help assure that new subdivisions will contribute toward and attractive orderly, stable a livable and safe community. Compliance will help assure the quality of design and construction of new streets, utilities and other infrastructure in the city of Scandia, and help prevent future problems and unnecessary maintenance expense in the future.

These guidelines will be updated from time to time to reflect new materials and practices, subject to approval by the City Council.

Specific questions about these guidelines should be directed to:

Ryan J. Goodman, PE  
Scandia City Engineer  
Stantec  
2335 Highway 36 W.  
St. Paul, MN 55113  
E-mail: [ryan.goodman@bonestroo.com](mailto:ryan.goodman@bonestroo.com)  
Telephone: (651) 967-4616

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## ***ENGINEERING PRODUCT MATERIAL REQUIREMENTS***

The following list of items provides product material requirements for development projects in the City of Scandia. The product material requirements have been established and adopted by the City to provide consistency in the materials installed for rural and Village Core streets, storm sewer, storm sewer, sanitary sewer, and watermain. Material product requirements identify items that are consistent with today's engineering and construction practices, and provide for consistent maintenance practices.

### **STREET MATERIALS**

- Street Section (ALL)
  - Subgrade ..... minimum 12 inch Select Granular Borrow
  - Base ..... minimum 8 inch Aggregate, Cl. 5
  - Fabric ..... Type V (woven), 4.5oz/sq yd
  - Bit. Wear Course..... 1.5 inch – SPWEB240C Wearing Course
  - Bit Base Course..... 2.5 inches – SPNWB230C Non-Wearing Course
  - Draintile .. 4" PVC/HDPE Perforated with trench rock and geotextile wrap
  - Commercial Pavement. Thickness & Mix Design..... varies
- Shoulder
  - Material ..... 4" Aggregate Base Cl.2
- Boulevard
  - Topsoil ..... minimum 6 inch, conforming to MnDOT Spec 3877.2A
  - Treatment – Sod.....conforming to MnDOT Spec. 3878
  - Treatment – Seed ..... conform to MnDOT Spec 3876, types vary
- Curb
  - Type – Concrete Curb & Gutter Design .... **B618** and Surmountable (Residential)  
.....B618 (Commercial)
  - Bituminous Curb..... Not Allowed
- Street Name Signs
  - 9-inch plates .....speed limits less than 40mph
  - Reflective sheeting..... Diamond Grade DG3
- Signing and Striping
  - Street Signs (informational and regulatory).....

### **SIDEWALK/ TRAIL MATERIALS**

- Sidewalk Section
  - Base ..... 6 inch Aggregate, Cl. 5
  - Concrete ..... 6 inch – Mix Number 3Y32A
  - Width (min).....5 foot

- Trail Section

- Base ..... 6 inch Aggregate, Cl. 5
- Bituminous Wear Course .....3 inch – SPWEA240B Wearing Course
- Width (min).....10 foot

## STORM SEWER / CULVERT MATERIALS

- Main Pipe

- Material ..... RCP Only
- Depth and Class ..... Varies
- Culvert Material ..... CMP or RCP (rural driveway only) /RCP (street crossing)

- Manhole

- Type .....Precast, RCP
- HDPE Rings... ..... 2 minimum, 8” height maximum
- Set bottom ring in mortar, glue remaining rings
- Chimney seal .....Infi-Shield or approved equal
- Minimum MH depth .....3.5 feet
- Sump Depth ..... n/a
- Type of Casting.....R-1642-B, Stamped “Storm Sewer”

- Catch Basin

- Type .....Precast, RCP
- Concrete Rings..... 2 minimum, 8” height maximum
- Chimney seal.. .....Infi-Shield or approved equal
- Minimum CB Depth to Invert.....3.5 feet
- Sump Depth ..... **2’ in CB upstream of pond**
- Type of Casting.....R-3067-V (Standard)
- ..... and R-3067VB (Low Points)

## SANITARY SEWER MATERIALS (for development areas with community collection systems)

- Main Pipe

- Material .....PVC
- Class .....
  - Depth to 18 feet .....SDR 35
  - Depth 18 feet to 26 feet .....SDR 26
  - Depth > 26 feet.....As required by Engineer

- Manhole

- Type .....Precast, RCP
- Wrap each MH barrel joint with 12” mastic seal or ram-nek in barrel joint
- Type of Casting.....R-1642-B Stamped “Sanitary Sewer”
- Outside drop Material .....DR 18 DIPS C-900
- HDPE adjustment rings..... 2 minimum, 8” height maximum
- Set bottom ring in mortar, glue remaining rings
- Chimney seal .....Infi-Shield or approved equal

- Service Pipe – 4 inch standard
  - Material .....PVC
  - Class .....schedule 40, 150 psi pressure rating ASTM 2241
- Cleanout / Riser Pipe - 4 inch standard
  - Material ..... PVC
  - Class .....schedule 80, 150 psi pressure rating ASTM 2241

**WATERMAIN MATERIALS** (for development areas with community supply and distribution systems)

- Main Pipe
  - Material ..... Class 52, DIP (poly wrapped)
  - Alternate Material (*Engineer review*).....PVC DR 18 DIPS C-900
  - Fittings ..... DIP, Epoxy Coated, U.S. Manufacture
  - Fitting Bolts ... .....Cor-*Blue*
  - Restraints ..... Mega-Lug
  - Tracer Wire ..... Min. No. 12 AWG - Copper Clad Steel rated to 30 volts
- Hydrant
  - Type ..... Waterous Pacer WB-67-250
  - Operating Rod ..... Heavy Duty
  - Body bolts .....Stainless Steel
- Valves
  - Type ..... Resilient Seat Gate
  - Manufacturer..
    - ..... Waterous, American Flow Control 2500 Series or approved equal
  - Valve in Box ..... 4” through 12” – *Tyler 6860 Series*
  - Gate Valve Box Adaptor Plate.....Required on all valves
  - Valve Body Bolts.....Stainless Steel
  - Extension Rod (single piece steel) .....Top Nut - 2’ below finished surface
- Residential Service Pipe
  - Service Size ..... 1” to 2.5” Diameter
  - Service Material ..... Type “K” Copper to curb box
    - ..... Long stainless steel saddles for PVC watermain
  - Type of Corporation Stop .....Mueller ball valve. H-25000 or approved equal
  - Type of Curb Stop..... Mueller ball valve H-25154 or approved equal
  - Type of Curb Box ..... Mueller H-10300 or approved equal
    - .....Extension rods required
  - Pigtail Length ..... 10 feet with crimped end

## ***ENGINEERING DESIGN REQUIREMENTS***

The following list of items provides engineering design requirements for development projects in the City of Scandia. The requirements have been established and adopted by the City to provide consistency with today's engineering and construction practices.

### **STREET DESIGN REQUIREMENTS**

- Street Width and Rights-of-way

- Street Widths & Rights-of-Ways are indicated in the Development Code, Chapter 3 (Subdivision) of the City of Scandia.

- Street Section (ALL)

- The Standard Street Section shall meet the minimum requirements for Local and Arterial/Collector Streets as follows:

- Local/residential low volume roadways (Urban Design and Rural Design) -

- 1.5 inches bituminous wearing course

- 2.5 inches bituminous non-wearing course

- 8 inches aggregate base class 5

- Subgrade as approved by City Engineer

- Arterial/Collector medium to high volume roadways and commercial roadways -

- 1.5 inches bituminous wearing course

- 2.5 inches bituminous non-wearing course

- 10 inches aggregate base class 5

- Subgrade as approved by City Engineer

- Additional street section requirements may be required based on traffic type and volume anticipated for the proposed roadway.

- Refer to City Detail "Typ-Rural Design", or "Typ-Urban Design", or "Typ-Arterial/Collector".

- Boulevard

- Width ..... varies

- Sidewalk Width.....5 feet

- Bituminous Trail Width ..... 10 feet

- Entrances (Single family residential)

- Driveway – Width ..... 12 feet – Minimum

- ..... 24 feet – Maximum

- .....Cul-de-sac widths to be reviewed by City Staff

- ....All driveways are to meet minimum side yard setbacks - 5 feet

- Driveway location – 50 feet from the curb of an intersecting street

- One access per Residential Property

- Commercial Entrances
  - Driveway width.....32 feet - Maximum
  - ..... Driveway location requires Engineering approval
- Street Miscellaneous
  - Crown ..... 2.5%
  - Minimum percent of grade..... 0.5%
  - Maximum approach grade at intersection for 50' distance ..... 2.0%
  - Maximum percent of grade ..... 6.0%
  - Diameter of Cul-de-sac (no islands allowed)..... 100 feet
  - Minimum % of grade around Cul-de-sac *Curb Flow line* ..... 0.5%
  - Minimum intersection radii for local and Arterial streets .....20 feet
  - Maximum length of Cul-de-sac ..... 600 feet Urban Development
  - ..... Varies for Rural Development
  - Minimum Radius for Cul-de-sac return required.....30 feet
  - Temporary Cul-de-sac at plat line..... yes
- Horizontal Street Alignment
  - When a horizontal street centerline deflections at any one point, by more than 10 degrees, a horizontal curve shall be introduced into the alignment with radius no less than 100 feet in length.
  - Street “jogs” or offsets shall be spaced at least 150 feet, centerline of street to centerline of street for minor streets. Major street intersections shall not be offset.
  - Intersecting streets shall have centerlines that intersect at a single point, with the angle between the intersecting street centerlines of no less than 80 degrees and no more than 100 degrees. 90 degree intersections are preferred.
- Vertical Street Alignment
  - Vertical street centerline alignment with different connecting gradients shall be connected with vertical curves. Minimum length, in feet, of these vertical curves shall be thirty (30) times the algebraic difference in the percent of grade of the two adjacent slopes.
- Sign requirements
  - All signs shall conform to the Minnesota Manual on Uniform Traffic Control Devices, May 2005 Edition and subsequent revisions, and Mn/DOT Standard Specifications for Construction, 2005 Edition, Section 2564.
  - Sign sheeting shall meet new Federal regulatory Retroreflectivity requirements.
- Mailbox requirements ..... COORDINATE LOCATIONS WITH THE POSTMASTER

All private utilities, including gas, electric, telephone, and cable television are to be constructed in a joint trench in accordance with City Detail.

## STORM SEWER DESIGN REQUIREMENTS

- Main Pipe
  - Minimum pipe diameter..... 12 inch
  - Minimum culvert diameter..... 15 inch
  - Minimum culvert length..... 24 feet
  - Maximum culvert length..... 30 feet
  - Apron and Trash Guard requirements..... All Culverts
- Manhole
  - Minimum diameter..... 4 feet
  - Minimum Build height..... 3.5 feet
- Catch Basin
  - Minimum pipe cover..... 2 feet
  - Sumps ..... 2' in last CB prior to outlet
- Design
  - Design frequency of storms ..... 10 yr.
  - Minimum storm sewer design velocity ..... 3 fps
  - Maximum storm sewer discharge velocity ..... 5.5 fps
  - Design frequency for detention basins..... 100 yr.
  - Design flood level below adjacent basement floor elevations ..... 2.0 feet
  - Emergency overflow swale below building openings ..... 1.0 foot
  - Maximum basin side slope..... 3:1
  - Minimum detention basin depth ..... 4.0 feet
  - Maximum detention basin depth..... 10.0 feet
  - Minimum swale grade..... 2.0%

## SANITARY SEWER DESIGN REQUIREMENTS

- Manhole
  - Maximum Manhole Spacing ..... 400 feet
  - Maximum inlet/outlet elevation difference ..... 2 feet
  - Minimum depth of Manhole ..... 10 feet
  - Outside drop ..... 2.0 feet minimum
- Service
  - Extend from mainline pipe to property line with cleanout
- Cleanout
  - Extend to 8' bury at property line



## **WATERMAIN DESIGN REQUIREMENTS**

- Main Pipe
  - Minimum diameter.....8 inch
  - Maximum Length of Dead Ends.....600 feet
  - Air Release measures.....Hydrant
  - Minimum Cover.....8 feet
  - Side of Street North and East side of centerline preferred
  
- Hydrant
  - Depth .....9'-0" Bury (8 feet cover)
  - Spacing .....250'R to cover Building Pad
  - Gate valve on 6" Hydrant leads ..... Yes
  - Supply two (2) Spring Mounted snow flags per hydrant
  
- Valves
  - Maximum distance between Valves on Trunk Mains.....600 feet
  - Maximum No. house services between Valves on Lateral Mains .....20
  
- Residential Service Pipe
  - No splices in services are allowed
  
- Irrigation Service Pipe

## ***PROJECT PLAN REQUIREMENTS***

### **PLAN SHEET FORMAT REQUIREMENTS**

1. The maximum plan sheet size shall be 22" x 34".
2. The electronic file must be in AutoCAD.DWG format.
3. The electronic file must have layered designations for various items and text as indicated by the table named Minimum Layering Requirements.
4. The intent of the layering requirements is to separate various items of the drawing. The general concept of the layering is to separate;
  - Proposed features from existing features
  - Proposed text labeling from existing text labeling
  - Different utilities of the construction project
  - Proposed lateral and trunk features from utility services
5. Additional layering from that indicated by the Minimum Layering Requirements is encouraged, and can be completed according to your needs and/or company policy.
6. All electronic files must be accompanied by a "layer description list" that clearly identifies the elements of each layer or level.
7. Horizontal control of the Plans must be on Washington County Coordinate System.
8. Vertical control of the Plans must be on the City's Benchmark System.

#### **Minimum Layering Requirements:**

<u>Layer/ Level</u>	<u>Items</u>
1.	Legend, bar scales, north arrows, headings, and sheet numbers, match lines and text, sheet references, and other general information
2.	Removals, hatching, shading, etc.
3.	Existing underground utilities (gas, electric, telephone, cable TV)
4.	Existing property lines, right-of-way lines and easements
5.	Existing sanitary sewer and services
6.	Existing sanitary sewer text
7.	Existing watermain and services
8.	Existing watermain text
9.	Existing storm sewer
10.	Existing storm sewer text
11.	Existing daintile and daintile service stubs
12.	Existing daintile text
13.	Existing curb line or edge of pavement
14.	Text for miscellaneous existing items
15.	Proposed sanitary sewer and appurtenances
16.	Proposed sanitary sewer text
17.	Proposed watermain and appurtenances
18.	Proposed watermain text
19.	Proposed sanitary sewer and watermain services
20.	Proposed sanitary sewer and watermain service text
21.	Proposed storm sewer and appurtenances

22. Proposed storm sewer text
23. Proposed draintile and appurtenances
24. Proposed draintile text
25. Proposed curb lines, walks, trails, etc.
26. Proposed street construction text
27. Centerline
28. Proposed vertical alignment
29. Proposed vertical alignment text

For grading plans or when applicable:

30. Existing contours
31. Existing contour text
32. Proposed contours
33. Proposed contours text

As noted previously, additional layering is encouraged. However, placing similar items on multiple layers is not acceptable.

## **PLAN REQUIREMENTS**

### **I. Title Sheet – With Location Map**

### **II. Sheet Index Map**

### **III. Legend, Typical Section**

### **IV. Details**

### **V. Grading, Drainage, and Erosion Control Plans**

- A. Show building Pads with building location. Define location of house and garage.
- B. Indicate NWL and 100-year HWL, Low floor elevations, and emergency overflow elevations.

### **VI. Storm Sewer and Street Plan Sheets:**

- A. Plan and Profile shall be shown on the same sheet
- B. The following information shall be shown:  
(North arrow up or to the right on all sheets)
  1. Scale: 1"=50' horizontal and 1"=10' vertical  
Maximum sheet size 22" x 34"
  2. Sizes of storm sewer pipe.
  3. Types of storm sewer pipe, class of pipe.
  4. Lengths of storm sewer pipe.
  5. Sizes and types of manholes and catch basins.
  6. Proposed grades of storm sewer pipe.
  7. Proposed drainage swale locations and elevations.
  8. Elevations on all inverts and elevations of castings of all storm sewer structures.

9. Arrows indicating the direction of flow on the storm sewer plan views.
10. Number of each storm sewer structure on both plan and profile views.
11. Proposed watermain and sanitary sewer shown in plan and profile views, dashed line.
12. Proposed storm sewer pipe crossings on the storm sewer profile views.
13. Existing profile over storm sewer pipe.
14. Finished profile over storm sewer pipe.
15. Show concrete walks and bituminous paths.
16. Finished centerline street elevations every 50 feet.
17. Drainage flow arrows at street intersections.
18. Street names.
19. Lot and block numbers.
20. Existing and proposed easements/right-of-ways.
21. Centerline stationing needs to be shown.

VII. Street Light Plan – Standard street lights are “Traditional Coach Lantern” (Connexus Energy) and” Traditional”( Xcel Energy) Luminaires. The Developer can upgrade street lights to an “Acorn”(Xcel and Connexus) style. All street lights are to be furnished, paid, and installed by the Developer, with the City taking over the maintenance and repair costs after the system is approved by the Engineer and accepted by the City.

VIII. Street Signage and Pavement Marking Plan

1. All signing and pavement markings are to be in accordance with the Minnesota Manual on Uniform Traffic Control Devices (MMUTCD), 2001 Edition, and Mn/DOT Specification 2564.

IX. Sanitary Sewer and Watermain Plan Sheets:

- A. Plan and profile sheets shall contain both sanitary sewer and watermain on the same sheet.
- B. The following information shall be shown:  
(North arrow up or to the right on all sheets.)
  1. Scale: 1”=50’ horizontal and 1”=10’ vertical  
Maximum sheet size 22” x 34”.
  2. Size of proposed mains.
  3. Type of mains and class of pipe.
  4. Length of mains.
  5. Size and type of manholes.
  6. Proposed grade of sewer mains.
  7. Elevations of inverts of all sanitary sewer stubs, @ MH and stub end.
  8. Arrows indicating the direction of flow on the sanitary sewer plan views.
  9. Number of each sanitary sewer structure on both plan and profile views.  
Stationing of sanitary sewer structures on profile view.
  10. Proposed main line pipe crossings on the profile views.
  11. Proposed storm sewer shown in plan and profile views, dashed line.
  12. Hydrant, valve and fitting locations on the plan view.
  13. Existing profile over main line pipe.
  14. Finished profile over main line pipe.
  15. Street names

16. Lot and block numbers.
17. Location of all existing utilities.
18. Existing and proposed easements.
19. Centerline stationing needs to be shown.

## **RECORD DRAWINGS, COMMERCIAL PROJECTS**

- I. After construction is completed, two sets of asbuilt construction record drawings are to be prepared and provided to the City by the Developer. The final record drawings must also be submitted in electronic form in accordance with the Plan Sheet Format Requirements. The developer shall perform the following field work prior to preparation of the record drawings:
  - A. Sanitary and storm sewer manhole and catch basin casting/inlet tops and inverts, flared and section inverts, and any other structure elevations shown on the as-bid drawings must be surveyed, the actual elevations recorded to the nearest 0.1', and the actual pipe grades recorded to the nearest .01%.
  - B. Sanitary and storm sewer lines must be field measured from center of casting to center of casting or from center of casting to end of flared end and the lengths recorded to the nearest 0.5'.
  - C. All changes from planned pipe, structure, or hydrant locations must be recorded.
  - D. All top of hydrant elevations will be required on each construction plan sheet.
  - E. Service invert elevations at R/W line.
  - F. Service ties to curb boxes and stationing of sanitary sewer service wyes shown. Ties to draintile service stub and clean-outs.
  - G. Ties from watermain valves to permanent structures.
  - H. Location of watermain fittings (i.e. bends, tees, etc.).
  - I. Manufacturer, type, size, and class of piping, fittings, valves and boxes, brass, stop boxes.
- II. All changes from the as-bid plans should be indicated on the asbuilt Construction Record Drawings.
- III. The developer needs to supply the City with two complete sets of asbuilt prints.

## ***ISSUANCE OF BUILDING PERMITS***

- Building Permits, in a platted subdivision, will not be issued until the public improvements are completed, including public sanitary sewer, water main, services, private utilities (gas, electric, telephone, and cable television), concrete curb and gutter, aggregate base, bituminous base, and storm water management basins are constructed, street signs installed, and street lights installed.
- Building permits will not be issued until the developer has installed silt fence along the back of curb on all streets and along the back property lines for all lots. Side lot line silt fence is required adjacent to lots that have been finished graded, and have established turf.
- The individual builders shall maintain silt fence throughout home/building construction.
- Street sweeping is to be performed on a weekly basis, at the developer's cost, until 75% of the homes in the subdivision are constructed, or for a period of two years after the placement of the bituminous base course.
- The bituminous wearing course is to be constructed after a minimum of one frost cycle season and 75% of the homes are constructed, or two years after placement of the bituminous base course.

## Appendix E: Agreements and Resolutions



**CITY OF SCANDIA, MINNESOTA  
RESOLUTION NO. 12-17-13-02**

**RESOLUTION ADOPTING THE  
MEMORANDUM OF UNDERSTANDING (MOU) BETWEEN THE CITY OF SCANDIA  
AND THE CARNELIAN-MARINE-SAINT CROIX WATERSHED DISTRICT  
(CMSCWD)**

**WHEREAS**, in September 2010, the CMSCWD (the "District") adopted its revised Water Resource Management Plan (WRMP) under Minnesota Statutes 103B.231 which details the existing physical environment, land use and development in the watershed and establishes a plan to regulate water resource use and management to protect water resources, improve water quality, prevent flooding and otherwise achieve the goals of the Minnesota Statutes 103B and 103D; and

**WHEREAS**, the WRMP incorporates the Rules adopted by the District to protect water resources, improve water quality, prevent flooding and otherwise achieve the goals of Minnesota Statutes Chapters 103B and 103D; and

**WHEREAS**, the City has developed and adopted its Local Water Management Plan (LWMP), Appendix E of the City of Scandia Comprehensive Plan, that describes the existing and proposed physical environmental and land use within the City and sets forth an implementation plan for bringing local water management into conformance with the District's WRMP in accordance with the requirements of MN Statutes 103B.325 and 473.859; and

**WHEREAS**, the Local Water Management Plan has been reviewed and approved by the Carnelian Marine St. Croix Watershed District, the Comfort Lake Forest Lake Watershed District, the Rice Creek Watershed District and the Metropolitan Council; and

**WHEREAS**, the City's LWMP includes a policy that the District continue being responsible for implementation of the District's rules and permitting program; and

**WHEREAS**, the City is responsible for regulating land use and development and manages the review of zoning applications and permits that frequently require information, comments and coordination with the District; and

**WHEREAS**, the City and the District recognize that the objectives of the WRMP and LWMP can best be realized through close coordination and cooperation between their respective staffs and officials during the review of zoning applications permit applications, environmental reviews, site visits and inspections;

**NOW, THEREFORE, BE IT HEREBY RESOLVED BY THE CITY COUNCIL  
OF THE CITY OF SCANDIA, WASHINGTON COUNTY, MINNESOTA**, that it should  
and hereby does enter into this MOU in order to document the understanding of the City and the



District as to the roles and responsibilities of each for coordination of regulatory and enforcement activities, land use reviews and permitting related to surface and ground water management and erosion and sediment control. The MOU applies within those portions of the City of Scandia lying within the District. Through these procedures and processes both parties will give due consideration to water and related land resources for which the City and District have regulatory responsibilities.

## COORDINATION COMMITMENTS

Each party commits to a comprehensive coordination process for the activities identified below or other regulatory and permitting actions that involve both parties. This process shall begin early in the application and permitting process at each organization.

- For purposes of this agreement Coordinators shall be designated by the City and the District, respectively. The designated Coordinators shall be responsible for coordinating all activities between the City and the District.

### The City agrees to:

- Provide copies of zoning permit applications to the District, including subdivision applications, variance applications, and other zoning applications for activities proposed within the District that may impact surface or ground waters, floodplain or shoreland areas, or require District or MPCA permits. The City will provide copies of the applications to the District within five (5) working days of the date when the application is determined to be complete. The City will provide information regarding the process and schedule for application review, and the date that comments are needed from the District in order to be considered in the review of the applications.
- Provide copies of environmental reviews (EAW's, EIS's, AUAR's) submitted to the City for projects within the District. The City will provide copies of the environmental review documents within five (5) working days of the date when the document is received by the City, and will provide information regarding the process and schedule for review and the date when comments are needed from the District in order to be considered in the review document.
- Incorporate the comments of the District, such as permit requirements, required best management practices, and other recommendations and conditions, in the staff reports and recommendations for zoning permit applications.
- Contact District staff to inform them when the City receives inquiries from property owners that proposed work within shoreland and floodplain areas.



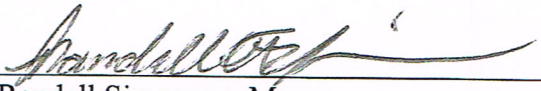
- Conduct staff site visits with District staff as requested to share information and assess the potential impact from proposed activities to take place in shoreland and/or floodplain areas.
- Inform the District, within 24 hours, of reported shoreland or floodplain permit violations. If the violation appears to have included work below the Ordinary High Water elevation and/or wetlands, the City or the District will report the activity to the DNR Conservation Officer and Area Hydrologist.
- Provide information to City residents on the City's website regarding contacts for reporting possible violations of state or local regulations observed by residents during non-business hours.

The District agrees to:

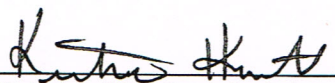
- Contact the City when the District receives inquiries from property owners that propose work within shoreland and floodplain areas.
- Advise the City of all permit applications to the District for areas of the City having territory within the District.
- Participate in site visits as requested to share information and assess the potential impact from proposed development projects and projects proposed in shoreland and/or floodplain areas or other areas of the District.
- If requested by the City, assist in making determinations on the need for and type of permit that may be required including District, WCA (Wetland Conservation Act), DNR, and COE (U.S. Army Corps of Engineers) permits.
- Notify the City when a permit has been issued. District staff shall coordinate site inspections with City staff when needed and will provide copies of inspection reports to the City.
- Inform the City, within 24 hours, of reported shoreland or floodplain permit violations. If the violation appears to have include work below the Ordinary High Water elevation and/or wetlands, the District or the City will report the activity to the DNR Conservation Officer and Area Hydrologist.
- If requested by the City or DNR, provide technical assistance for the preparation of wetland and shoreland restoration plans.

The procedures outlined herein shall be effective immediately upon signature of the City and the District, and shall remain in effect until decided otherwise by either party.

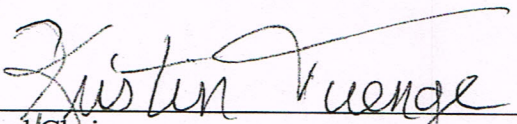
Adopted by the Scandia City Council this 17<sup>th</sup> day of December, 2013.

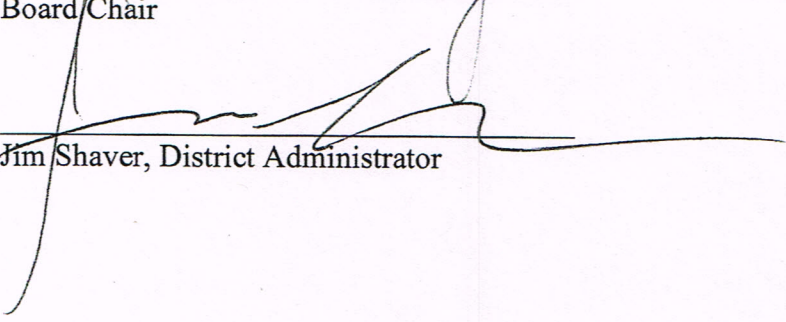
  
\_\_\_\_\_  
Randall Simonson, Mayor

ATTEST:

  
\_\_\_\_\_  
Kristina Handt, Administrator/Clerk

Adopted by the Carnelian-Marine-St. Croix Watershed District this \_\_ day of \_\_, 2013

  
\_\_\_\_\_  
Board/Chair

  
\_\_\_\_\_  
Jim Shaver, District Administrator



**RESOLUTION NO. 04-20-10-04  
CITY OF SCANDIA, MINNESOTA**

**RESOLUTION ACCEPTING AUTHORITY FOR AND ADMINISTRATION OF THE  
MINNESOTA WETLAND CONSERVATION ACT**

**WHEREAS**, the Minnesota Wetland Conservation Act of 1991 (WCA) requires local government units (LGUs) to implement the rules and regulations promulgated by the Board of Water and Soil Resources (BWSR) pertaining to wetland draining, filling and excavation; and

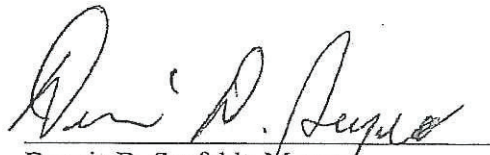
**WHEREAS**, Minnesota Rules, chapter 8420 have been adopted by BWSR in accordance with the rulemaking provisions of Minnesota Statutes, chapter 14, for the purpose of implementing WCA; and

**WHEREAS**, the City of Scandia agrees to provide knowledgeable and trained staff with expertise in water resource management to manage the program as required by Minnesota Rule 8420.0200, Subpart 2, Item B; and

**WHEREAS**, Minnesota Rule 8420.0200, Subpart 2, Item A requires that each LGU of the State send a written acknowledgement, including a copy of the adopting resolution, to BWSR that it is assuming its responsibilities under chapter 8420 and the act;

**NOW, THEREFORE, BE IT HEREBY RESOLVED BY THE CITY COUNCIL OF THE CITY OF SCANDIA, WASHINGTON COUNTY, MINNESOTA**, that the City of Scandia hereby accepts the authority and administrative responsibility to implement WCA as the LGU within the legal boundaries of the City of Scandia except that portion of the city within the boundaries of the Rice Creek Watershed District, as of April 20, 2010 in accordance with Minnesota Rules, Chapter 8420.

Adopted by the Scandia City Council this 20th day of April, 2010.

  
Dennis D. Seefeldt, Mayor

ATTEST:

  
\_\_\_\_\_  
Administrator/ Clerk

**RESOLUTION NO. 04-20-10-05  
CITY OF SCANDIA, MINNESOTA**

**RESOLUTION REGARDING THE ADMINISTRATION OF THE  
MINNESOTA WETLAND CONSERVATION ACT**

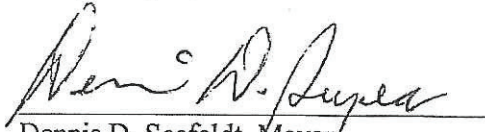
**WHEREAS**, the City of Scandia has accepted the authority and administrative responsibility to implement the Wetland conservation Act (WCA) within the legal boundaries of the City of Scandia except that portion of the city within the boundaries of the Rice Creek Watershed District, in accordance with Minnesota Rules, Chapter 8420; and

**WHEREAS**, the City of Scandia is authorized by Minnesota Administrative Rules Part 8420.0200, Subpart 2, Item C, to delegate certain functions with regard to implementation of WCA, including the authority to make decisions on applications to its staff; and

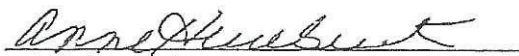
**NOW, THEREFORE, BE IT HEREBY RESOLVED BY THE CITY COUNCIL  
OF THE CITY OF SCANDIA, WASHINGTON COUNTY, MINNESOTA:**

- that decision-making authority for WCA exemption, no-loss, wetland boundary and type and sequencing applications is delegated to the city staff or their designate, including the Washington Conservation District or consulting engineer by contractual agreement;
- that staff may request that the City Council exercise decision-making authority for exemption, no-loss, wetland boundary and type and sequencing applications, in cases such as, but not limited to, the following: controversial projects, disputes with land owners or when an application is recommended for denial;
- that decision-making authority for replacement plan and wetland banking determinations is retained by the City Council of the City of Scandia; and
- that appeals of staff decisions will be heard by the City Council.

Adopted by the Scandia City Council this 20th day of April, 2010.

  
Dennis D. Seefeldt, Mayor

ATTEST:

  
Administrator/ Clerk

RESOLUTION 2012-07-001

COMFORT LAKE-FOREST LAKE WATERSHED DISTRICT  
BOARD OF MANAGERS

APPROVAL OF CITY OF SCANDIA  
LOCAL WATER MANAGEMENT PLAN  
(JUNE 2012) AMENDMENT

Manager Moe offered the following Resolution and moved its adoption,  
seconded by Manager Spence,

**WHEREAS** on October 27, 2011, the CLFLWD adopted an updated Water Management Plan (WMP) under Minnesota Statutes 103B.231 subdivision 10, which, as amended, details the existing physical environment, land use and development in the watershed and establishes a plan to manage water resources and regulate water resource use to improve water quality, prevent flooding and otherwise achieve the goals of Minnesota Statutes Chapters 103B and 103D;

**WHEREAS** the WMP, as amended, incorporates the Rules adopted by the CLFLWD to improve water quality, prevent flooding and otherwise achieve the goals of Minnesota Statutes Chapters 103B and 103D;

**WHEREAS** after submission of an initial draft plan in May 2012 and a process of CLFLWD review and comment, on June 29, 2012 the City of Scandia ("City") submitted an amendment to its local water management plan under Minnesota Statutes 103B.235 for formal CLFLWD review and approval;

**WHEREAS** the Metropolitan Council received a copy of the local plan amendment and provided comments on that amendment to the CLFLWD in accordance with Minnesota Statutes 103B.235, and the CLFLWD finds that the City has adequately addressed those comments;

**WHEREAS** the CLFLWD has determined that the local plan amendment, as revised, meets the requirements for approval set forth in the WMP, except that the amended local plan does not provide for the adoption of official controls or implementation of inspection and administrative procedures necessary to insure that the full regulatory standards of the CLFLWD are met, as required by the WMP in order for the City to assume sole regulatory authority;

**WHEREAS** the City does not wish to assume sole regulatory authority but, instead, wishes to authorize the CLFLWD to continue to require permits for the use and development of land, and otherwise exercise its regulatory authority within the City, within the meaning of Minnesota Statutes 103B.211, subd. 1(a)(3); and

**WHEREAS** the CLFLWD's approval of the local plan rests on the City's agreement that the CLFLWD will continue to exercise its present regulatory authority; and



WHEREAS the CLFLWD and the City understand that the CLFLWD would deem a future withdrawal of the City's authorization without an CLFLWD determination that the City's official Controls meet WMP standards to constitute a failure to adopt the implementation program of the local plan as specified in Minnesota Statutes 103B.211, subdivision 1(a)(3)(i); and

WHEREAS the CLFLWD and the City recognize and agree that the City at a later time may amend its plan in order to assume sole regulatory authority, subject to CLFLWD approval;

THEREFORE BE IT RESOLVED that the CLFLWD Board of Managers hereby approves the City's local water management plan, 2012 amendment.

The question was on the adoption of the Resolution and there were 5 yeas and 0 nays as follows:

	Yea	Nay	Absent
DAMCHIK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ANDERSON	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MOE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LYNCH	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SPENCE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Upon vote, the Chair declared the Resolution adopted.

Wayne Moe Wayne Moe, Secretary

Dated July 26, 2012

\*\*\*\*\*

I, Wayne Moe, Secretary of the Comfort Lake-Forest Lake Watershed District, do hereby certify that I have compared the above resolution with the original thereof as the same appears of record and on file with the District and find the same to be a true and correct transcript thereof.

IN TESTIMONY WHEREOF, I have hereunto set my hand this 26th day of July, 2012.

Wayne Moe, Secretary



## Carnelian-Marine-St. Croix Watershed District

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Scandia Plaza II + 21150 Ozark Avenue + P.O. Box 188 + Scandia, MN 55073 + Tel 651.433.2150

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August 14, 2012

Ms. Anne Hurlebert  
City of Scandia  
14727 209<sup>th</sup> Street N  
Scandia, MN 55073

Re: City of Scandia Local Water Management Plan

Dear Ms. Hurlebert:

I am pleased to inform you that last night the Board of Managers of the Carnelian-Marine-St. Croix Watershed District approved Scandia's Local Surface Water Management Plan Amendment dated June, 2012. Enclosed is a copy of the Board's resolution for your records.

The Board of Managers appreciates Scandia's concern for the water resources of the District and looks forward to working with the City in implementing this plan and improving water quality in Scandia.

Sincerely,



Jim Shaver, Administrator

enc.

cc:	Berry Ferrington	TKDA
	Sherri Buss	TKDA
	Melissa Lewis	BWSR
	Judy Sventek	Metropolitan Council
	file	

RESOLUTION 2012-08-001  
CARNELIAN-MARINE-ST. CROIX WATERSHED DISTRICT  
BOARD OF MANAGERS

APPROVAL OF CITY OF SCANDIA  
LOCAL WATER MANAGEMENT PLAN  
JUNE 2012

Manager JK offered the following Resolution and moved its adoption seconded by Manager TP

WHEREAS ON September 12, 2010, the CMSCWD adopted an updated Water Management Plan (WMP) under Minnesota Statutes 103B.231 subdivision 10, which, as amended, details the existing physical environment, land use and development in the watershed and establishes a plan to manage water resources and regulate water resource use to improve water quality, prevent flooding and otherwise achieve the goals of Minnesota Statutes Chapters 103B and 103D;

WHEREAS the WMP, as amended, incorporates the Rules adopted by the CMSCWD to improve water quality, prevent flooding and otherwise achieve the goals of Minnesota Statutes Chapters 103B and 103D;

WHEREAS after submission of an initial draft plan in May 2012 and a process of CMSCWD review and comment, on June 29, 2012 the City of Scandia ("City") submitted an amendment to its local water management plan under Minnesota Statutes 103B.235 for formal CMSCWD review and approval;

WHEREAS the Metropolitan Council received a copy of the local plan amendment and provided comment on that amendment to the CMSCWD in accordance with Minnesota Statutes 103B.235, and the CMSCWD finds that the City has adequately addressed those comments;

WHEREAS the CMSCWD has determined that the goals and policies established by the local plan amendment are consistent with the WMP and the implementation actions proposed are consistent with the WMP;

WHEREAS the City does not wish to assume sole regulatory authority but, instead, wishes to authorize the CMSCWD to continue to require permits for the use and development of land, and otherwise exercise its regulatory authority within the City, within the meaning of Minnesota Statutes 103B.211, subd 1(a)(3);

WHEREAS the CMSCWD's approval of the local plan rests on the City's agreement that the CMSCWD will continue to exercise its present regulatory authority and that the City will enter into an understanding with CMSCWD to standardize and simplify permitting procedures;

WHEREAS the City will continue to be the responsible Local Government Unit for the enforcement of WCA and will implement the CMSCWD Wetland Management Plan with coordination from CMSCWD;

WHEREAS the CMSCWD and the City recognize and agree that the City at a later time may amend its plan in order to assume sole regulatory authority, subject to CMSCWD approval and failure to obtain

approval will constitute a failure to adopt the implementation program of the local plan as specified in Minnesota Statutes 103B.211, subdivision 1(a)(3)(i);

THEREFORE BE IT RESOLVED that the CMSCWD Board of Managers hereby approves the City's local water management plan, 2012.

Date 8-13-12

Motion by John LEWIS Second by Tori DUKE

In Favor 5 Against 0

President

Steve Smith

Secretary

Kristen Mengel



**RESOLUTION 2012-36**

**RICE CREEK WATERSHED DISTRICT  
BOARD OF MANAGERS**

**RESOLUTION TO APPROVE SCANDIA  
LOCAL SURFACE WATER MANAGEMENT PLAN**

Manager Haake offered the following Resolution and moved its adoption, seconded by Manager Waller,

WHEREAS on June 9, 2010, the RCWD adopted a new Watershed Management Plan (WMP) under Minnesota Statutes 103B.231, which details the existing physical environment, land use and development in the watershed and establishes a plan to manage water resources and regulate water resource use to improve water quality, prevent flooding and otherwise achieve the goals of Minnesota Statutes Chapters 103B and 103D;

WHEREAS the WMP incorporates the Rules adopted by the RCWD to improve water quality, prevent flooding and otherwise achieve the goals of Minnesota Statutes Chapters 103B and 103D;

WHEREAS after submission of an initial draft and a process of RCWD review and comment, on August 22, 2012 the City of Scandia (City) submitted its local surface water management plan under Minnesota Statutes 103B.235 for formal RCWD review and approval;

WHEREAS the Metropolitan Council received a copy of the local plan and provided comments on that plan to the RCWD in accordance with Minnesota Statutes 103B.235, and the RCWD finds that the City has adequately addressed those comments;

WHEREAS the RCWD has determined that the local plan, as revised, meets the requirements for approval set forth in the WMP, except that the local plan does not provide for the adoption of official controls or implementation of inspection and administrative procedures necessary to insure that the full regulatory standards of the RCWD are met, as required by the WMP in order for the City to assume sole regulatory authority;

WHEREAS the City does not wish to assume sole regulatory authority but, instead, wishes to authorize the RCWD to continue to require permits for the use and development of land, and otherwise exercise its regulatory authority within the City, within the meaning of Minnesota Statutes 103B.211, subd. 1(a)(3); and

WHEREAS the RCWD's approval of the local plan rests on the City's agreement that the RCWD will continue to exercise its present regulatory authority; and

WHEREAS the RCWD and the City understand that the RCWD would deem a future withdrawal of the City's authorization without an RCWD determination that the City's official Controls meet WMP standards to constitute a failure to adopt the implementation program of the local plan as specified in Minnesota Statutes 103B.211, subdivision 1(a)(3)(i); and

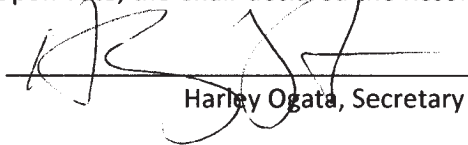
WHEREAS the RCWD and the City recognize and agree that the City at a later time may amend its plan in order to assume sole regulatory authority, subject to RCWD approval;

THEREFORE BE IT RESOLVED that the RCWD Board of Managers hereby approves the City of Scandia local surface water management plan, as submitted on August 22, 2012.

The question was on the adoption of the Resolution and there were 5 yeas and 0 nays as follows:

	Yea	Nay	Absent
WALLER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HAAKE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OGATA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
WAGAMON	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PREINER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Upon vote, the Chair declared the Resolution passed.

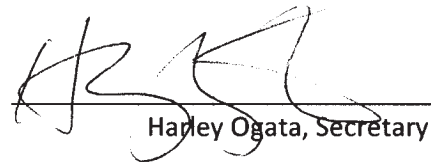
  
\_\_\_\_\_  
Harley Ogata, Secretary

Dated September 26, 2012

\*\*\*\*\*

I, Harley Ogata, Secretary of the Rice Creek Watershed District, do hereby certify that I have compared the above resolution with the original thereof as the same appears of record and on file with the District and find the same to be a true and correct transcript thereof.

IN TESTIMONY WHEREOF, I have hereunto set my hand this 26th day of September, 2012.

  
\_\_\_\_\_  
Harley Ogata, Secretary



**CONTRACT BETWEEN WASHINGTON CONSERVATION DISTRICT AND CITY OF  
SCANDIA FOR TECHNICAL ASSISTANCE**

**2018 General Technical Services Program**

**A. PARTIES**

This Agreement is made and entered into by Washington Conservation District, (WCD), and City of Scandia (City).

**B. PURPOSE**

WHEREAS, the City has requested assistance from the WCD to implement the policies specified in MINN. STAT. § 103A.206; and WHEREAS, the WCD is authorized to enter agreements to provide such assistance pursuant to MINN. STAT. § 103C.331, SUBD. 3 and 7. NOW, THEREFORE, the parties agree as follows:

**C. TERM OF CONTRACT**

The term of this agreement shall be from **January 1, 2018 to December 31, 2018** unless terminated earlier as provided herein.

**D. SCOPE OF SERVICES**

The WCD will perform all services and furnish and deliver work products generally described in Exhibits A.

**E. COST**

In full consideration for services under this agreement, the WCD shall charge the City a fee for its staff services and actual costs for project expenses in accordance with Exhibit A. Costs for services for activities detailed in the attached Exhibits include:

Exhibit A: WCA LGU Support - \$2,835

Any additional costs for special studies or capital projects must be set forth in a written amendment to this Agreement.

**F. BILLING PAYMENTS**

WCD will bill the City for staff services and actual direct project expenses. For calendar year **2018**, the services provided by the WCD hereunder shall be billed at a maximum rate of \$81 per hour. Invoices will be sent monthly and are payable by the City net 60 days.

**G. EQUAL EMPLOYMENT OPPORTUNITY- CIVIL RIGHTS**

During the performance of this Agreement, the WCD agrees to the following:

No person shall, on the grounds of race, color, religion, age, sex, disability, marital status, public assistance, criminal record, creed or national origin, be excluded from full employment rights in, be denied the benefits of, or be otherwise subjected to discrimination under any program, service, or activity under the provisions of all applicable federal and state laws against discrimination including the Civil Rights Act of 1964.

If during the term of this Agreement, it is discovered the WCD is not in compliance with the applicable regulations as aforesaid, or if the WCD engages in any discriminatory practices, then the City through the office, may cancel said Agreement as provided by the cancellation clause of this Agreement.

**H. STANDARDS**

The WCD shall comply with all applicable Federal and State statutes and regulations as well as local ordinances now in effect or hereafter adopted.

Failure to meet the requirements of the above may be cause for cancellation of this contract effective the date of receipt of the Notice of Cancellation.

**I. DATA PRIVACY**

All data collected, created, received, maintained, or disseminated, or used for any purpose in the course of the WCD's performance of the Agreement is governed by the Minnesota Government Data Practices Act, Minnesota 1984, Section 13.01, et seq., or any other applicable state statutes and state rules adopted to implement the Act, as well as state statutes and federal regulations on data privacy. The WCD agrees to abide by these statutes, rules and regulations and as they may be amended.

**J. AUDITS, REPORTS, AND MONITORING PROCEDURES**

The WCD will:

1. Maintain records that reflect all revenues, cost incurred and services provided in the performance of the Agreement.
2. Agree that the City, County, the State Auditor, or legislative authority, or any of their duly authorized representatives at any time during normal business hours, and as often as they may deem reasonably necessary, shall have access to the rights to examine audit, excerpt, and transcribe any books, documents, papers, records, etc., and accounting procedures and practices of the WCD which are relevant to the contract.

**K. INDEMNITY**

The WCD and the City mutually agree, to the fullest extent permitted by law, to indemnify and hold each other harmless for any and all damages, liability or cost (including reasonable attorneys' fees and costs of defense) arising from their own negligent acts, errors or omissions in the performance of their services under this agreement, to the extent each party is responsible for such damages and losses on a comparative basis of fault. Parties agree to provide proof of contractual liability insurance upon request.

**L. INDEPENDENT CONTRACTOR**

It is agreed that nothing herein contained is intended or should be construed in any manner as creating or establishing the relationship of co-partners between the parties hereto or as constituting the WCD as the agent, representative, or employee of the City for any purpose or in

any manner whatsoever. The WCD is to be and shall remain an independent contractor with respect to all services performed under this Agreement.

The WCD represents that it has, or will secure at its own expense, all personnel required in performing services under this Agreement. Any and all personnel of the WCD or other person, while engaged in the performance of any work or services required by the WCD under this Agreement, shall have no contractual relationship with the City and shall not be considered employees of the City.

**M. MODIFICATIONS**

Any material alteration or variation shall be reduced to writing as an amendment and signed by the parties. Any alterations, modification, or variations deemed not to be material by agreement of the WCD and the City shall not require written approval.

**N. MERGER**

It is understood and agreed that the entire agreement of the parties is contained here and that this contract supersedes oral agreements and negotiations between the parties relating to this subject matter. All items referred to in this contract are incorporated or attached and deemed to be part of the contract.

**O. TERMINATION**

Either the WCD or the City may terminate this Agreement with or without cause by giving the other party thirty (30) days written notice prior to the effective date of such termination. If the City terminates this Agreement without cause, it shall pay to the WCD for services performed up to the date of termination.

IN TESTIMONY WHEREOF the parties have duly executed this agreement by their duly authorized officers.

**APPROVED:**


**CITY**

**WCD**

BY:  11/22/17  
Mayor Date

BY:  11-8-17  
Board Chair Date

BY:  11/8/17  
Clerk Date

BY:  11-8-17  
WCD Manager Date

**EXHIBIT A**  
**2018 SCOPE OF SERVICES FOR THE CITY OF SCANDIA**  
**TECHNICAL SERVICES AGREEMENT**  
**BETWEEN THE WASHINGTON CONSERVATION DISTRICT (WCD) AND**  
**CITY OF SCANDIA (City)**

At the request of the City the WCD shall furnish the following services under the terms of the AGREEMENT.

**Local Government Unit (LGU) administration of Wetland Conservation Act (WCA)**

**TASK 1. Technical assistance**

The WCD will review wetland related applications as per Mn Rule 8420 (e.g. no loss, exemption, boundary/type, replacement plan, sequencing, banking) and review monitoring reports for authorized wetland impacts and mitigation areas.

- Estimate: 6 hrs/application x 2 applications = 12 hours

**TASK 2. Administrative assistance**

The WCD will process wetland related applications, following the LGU procedures described in the WCA. This includes mailing of application notices, consolidation of public comments, preparation of TEP reports, preparation of Findings of Facts, and mailing of decision notices. The WCD will make the decision on applications on behalf of the City, consult the City, or defer the final decision to the City Council, as per City of Scandia Resolution No. 04-20-10-05. Appeal of decisions made by the WCD on the City's behalf will be directed to the City Council.

- Estimate: 10 hrs/application x 2 applications = 20 hours

**TASK 3. Miscellaneous Services**

The WCD will provide other services, related to wetland permitting or monitoring, at the request of the City. Examples include supplemental construction monitoring, education programs, or pre-application review of City-sponsored projects.

- Estimate: 3 hrs/year

**LGU – WCA administration Summary**

**Estimated 2018 Total: 35 hours @ \$81/hour = \$2,835**

The costs associated with the review of additional applications are not included in this scope and would be billed on an hourly basis at the rate provided above.

## Appendix F: City of Scandia Capital Improvement Plan



# **City of Scandia Capital Improvement Program 2018 – 2022**

**Recommendations from Capital Improvement Committee  
July 20, 2017**

**Capital Improvement Committee Members:**

**Terry Gorham,  
Perry Rynders  
Cami Van Abel  
Mike White**

**Adam Hawkinson, Public Works Director  
Mike Hinz, Fire Chief  
Neil Soltis, City Administrator**

**Public Hearing by Planning Commission – September 5, 2017**



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## **INTRODUCTION**

The Capital Improvement Program (CIP) for the five-year period of 2018 through 2022 is the eighth such document prepared by the City of Scandia. It would amend the CIP included in the March, 2009 Comprehensive Plan (as amended through December 17, 2014) replacing Appendix F of the plan in its entirety.

### **What is a CIP?**

A capital improvement plan (CIP) is a multi-year plan identifying capital projects to be funded during the planning period. The CIP identifies each proposed capital project to be undertaken, the year the assets will be acquired or the project started, the amount of funds expected to be expended in each year of the CIP and the means of funding the expenditures. A CIP is not a static document. It should be reviewed at an appropriate cycle to reflect changing priorities, unexpected events and opportunities. The CIP should include the maintenance, repair and rehabilitation of existing infrastructure as well as the construction of new infrastructure. Including a project in a CIP does not commit the city to that project. The City Council must specifically authorize each project and the associated funding before any project may proceed. The basic function of a CIP is to provide a formal mechanism for decision making, a link to long range plans, a financial management tool and a reporting document.

The Minnesota Land Planning Act requires that the implementation plan portion of the Comprehensive Plan include a CIP for major infrastructure needs (transportation, wastewater, water supply, parks and open space) for a five-year time period. Cities often expand the scope of their CIPs to include other capital needs (major equipment replacements, for example) and sometimes look beyond the five-year time period, up to 20 years in the future for some projects. Such projects represent more of a “wish-list” that can be evaluated each time the plan is updated.

As a part of the Comprehensive Plan, the CIP has some legal standing. Minnesota Statutes Chapter 473.865 provides that “a local governmental unit shall not adopt any official control or fiscal device which is in conflict with its comprehensive plan.” A fiscal device includes a budget or bond issue; so it is important that the plan and CIP be kept up to date and in synch with city budgets. Once the CIP has been completed, it will be reviewed by the Planning Commission for consistency with the Comprehensive Plan

### **Scope of the CIP**

Scandia’s CIP includes all capital projects that cost at least \$10,000 and have a useful life span of five years or longer. Projects include all capital needs including major repairs to buildings and equipment purchases and replacements. Any projects not meeting these parameters would be reviewed as part of the annual operating budget, but would not be included in the CIP.

## Funding Sources

The CIP identifies a possible funding source(s) for each project listed. The various funding sources are as follows:

Capital Improvement Fund	<i>The City has been levying \$30,000 per year in property tax to fund these general capital projects.</i>
Equipment Replacement Fund	<i>Most major equipment purchases are funded through the issuance off debt which is then repaid with property taxes. Other sources of funding include the sale of unused assets and transfers from General Fund operating budgets.</i>
General Fund	<i>Annual operating budget, primarily funded by property tax revenues.</i>
Park Improvement Fund	<i>The primary sources of funds are from park dedication fees paid by developers as a part of any subdivision, revenues generated by the park facilities, such as advertising revenues, and grant revenues.</i>
Local Road Improvement Fund	<i>This fund was established in 2014 to segregate funds for major road improvement projects. The property taxes levy is the primary source of funds with a base levy in 2016 of \$581,000. Pursuant to the City's fund balance policy any general fund balance in excess of 50% of budgeted expenditures can be transferred to this fund. The 2017 transfer to this fund totaled \$523,200. Additionally any special assessments on the 2007 road improvement projects received after the associated debt was retired are transferred to this fund.</i>
201 Sewer	<i>Funds come from fees paid by users on the 201 Wastewater System which serves the Anderson Erickson and Bliss subdivisions.</i>
Uptown Sewer	<i>Funds come from fees paid by users on the Uptown Wastewater System</i>

In addition to these sources, it is possible that future projects could be funded from donations, grants, user fees or other sources not listed. Projects benefiting the utility funds, which are intended to operate as stand-alone businesses supported by user fees, would be paid from the appropriate fund.

## Project Priorities

Capital improvement projects should be prioritized in some way so that limited funding can be allocated to those which are most important. This is difficult because the varying nature of the projects and their benefits and objectives are so disparate as to be essentially not comparable. Some public agencies have developed elaborate rating and ranking systems to try to set priorities. Complicated scoring systems may have some disadvantages because they may give a false sense of objectivity or precision to the priority setting process. Others use simpler systems, or simply do not try to compare projects that are like “apples and oranges.” There is no accepted system or “industry standard” for prioritizing projects.

The following priority rating system was identified in 2008 and have been used in subsequent updates.

- |     |  |
|-----|--|
| 1   | Critical or urgent, high-priority projects that should be done if at all possible; a special effort should be made to find sufficient funding for all of the projects in this group. |
| 2   | Very important, high-priority projects that should be done as funding becomes available.   |
| 3   | Important and worthwhile projects to be considered if funding is available; may be deferred to a subsequent year.  |
| 4   | Less important, low-priority projects; desirable but not essential.  |
| N/A | Used for replacements of existing equipment.   |

In reviewing the 2018 – 2022 plan the Committee identified a scored evaluation criteria to be used if evaluating projects if sufficient funding is not available:

- Does the project help meet the goals of the Comprehensive Plan or City Priorities?
- Does the project eliminate or prevent an existing health, environmental, or safety hazard?
- Does the project protect and preserve the City’s infrastructure?
- Does the project will have a positive, neutral, or negative impact on the City’s operational Finances?
- Does the project leverage outside funding?
- Does the project tie into other projects?
- Can the project be completed in partnership with another organization?
- Is the project mandated to comply with environmental standards?
- Does the project support the City’s Green Cities efforts?
- Project directly the allows the City to meet environmental compliance standards or meet sustainability goals, where applicable?
- Does the project help stimulate development or redevelopment of properties and/or encourage economic development in the City corridors?
- Does the project improve and/or increase the level of service provided by the City?

## 2018-2022 CIP OVERVIEW

For 2018 through 2022, the draft CIP includes projects with a total estimated cost of \$10,360,500. All cost estimates are preliminary and based on current dollars. No assumptions have been made about inflation. Project costs will need to be updated annually, especially for projects in the first year or two of the plan.

Just as for other capital projects, the decision whether or not to replace a particular piece of equipment, and what to replace it with, will need to be made by the City Council at the time of the purchase. The City could decide to keep some equipment longer than planned or equipment could wear out more quickly than expected. It is likely that some items will not be replaced, or that new technology or equipment could alter plans to replace a particular item.

The breakdown of recommended projects is shown by fund below:

<b>Fund</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
<b>Capital Improvement Fund</b>	\$ 139,300	\$ 127,000	\$ 41,000	\$ 75,000	\$ 30,000
<b>Equipment Replacement Fund</b>	\$ 43,500	\$ 118,000	\$ 267,000	\$ 25,500	\$ 240,000
<b>Park Improvement Fund</b>	\$ 15,000	\$ -	\$ 20,000	\$ -	\$ 45,000
<b>Local Road Improvement fund</b>	\$ 6,500,000	\$ -	\$ 620,000	\$ 450,000	\$ 320,000
<b>201 Sewer Fund</b>	\$ -	\$ 62,000	\$ -	\$ 36,000	\$ 1,160,000
<b>Uptown Sewer Fund</b>	\$ 3,000	\$ -	\$ -	\$ -	\$ 23,200
	<b>\$ 6,700,800</b>	<b>\$ 307,000</b>	<b>\$ 948,000</b>	<b>\$ 586,500</b>	<b>\$ 1,818,200</b>

The revenue sources for the projects shown below do not include the use of accumulated fund balances:

	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
<b>Property Tax Levy</b>	\$ 755,050	\$ 377,208	\$ 409,340	\$ 448,429	\$ 481,220
<b>Issuance of Debt</b>	\$ 4,400,000	\$ -	\$ -	\$ -	\$ 200,000
<b>Park Dedication Fees</b>	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000
<b>Grants &amp; Donations</b>	\$ 57,000	\$ 6,000	\$ 35,000	\$ 15,000	\$ -
<b>Sale of Fixed Assets</b>	\$ 220,000	\$ 30,000	\$ 10,000	\$ 3,000	\$ 25,000
<b>Transfer from other Funds</b>	\$ 417,700	\$ 4,100	\$ 4,100	\$ 4,100	\$ 4,100
<b>Capital Fund Balance</b>	\$ 842,050	\$ (178,308)	\$ 483,560	\$ 73,971	\$ (81,320)
<b>Sewer Utility User Fees</b>	\$ 3,000	\$ 62,000	\$ -	\$ 36,000	\$ 1,183,200
	<b>\$ 6,700,800</b>	<b>\$ 307,000</b>	<b>\$ 948,000</b>	<b>\$ 586,500</b>	<b>\$ 1,818,200</b>

A primary consideration in the review of the projects was the impact on the property tax levy, particularly the funds needed to finance the local road improvement projects.

Based on the Committee recommendation, a breakdown of property tax levy amounts and how those funds would be allocated is shown below. The major items are the redistribution of the levy funds from the General and Local Road Improvement Funds and the use of those funds to repay the debt incurred for the 2018 Street Improvement program.

<b>PROPERTY TAX LEVY</b>					
<b>Fund</b>	<b>2018 Proposed</b>	<b>2019 Projected</b>	<b>2020 Projected</b>	<b>2021 Projected</b>	<b>2022 Projected</b>
General Fund	\$ 1,349,820	\$ 1,442,750	\$ 1,442,750	\$ 1,442,750	\$ 1,442,750
Debt Service Fund	\$ 152,202	\$ 559,375	\$ 558,578	\$ 505,161	\$ 505,824
Capital Improvement Fund	\$ -	\$ -	\$ -	\$ -	\$ -
Park Capital Improvement	\$ -	\$ -	\$ -	\$ -	\$ -
Equipment Replacement	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000
Local Road Improvement	\$ 725,050	\$ 347,208	\$ 379,340	\$ 418,429	\$ 451,220
Economic Development Authority	\$ 800	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000
<b>Total Levy</b>	<b>\$ 2,257,872</b>	<b>\$ 2,384,332</b>	<b>\$ 2,415,669</b>	<b>\$ 2,401,340</b>	<b>\$ 2,434,794</b>

### CAPITAL IMPROVEMENT FUND

The Capital Improvement Fund is utilized to fund projects that are not equipment related, do not have a dedicated funding source, or rely on donations or grants to be funded.

The projects recommended from 2018 – 2022 are as follows:

		2018	2019	2020	2021	2022
<b>Community Building</b>						
	LED lighting conversion	\$ 33,300				
	Tennis court replacement	\$ 40,000				
	Skateboard ramps		\$ 12,000			
	Chair replacement			\$ 11,000		
	Playground equipment				\$ 60,000	
	HVAC replacement					\$ 30,000
<b>Fire</b>						
	Emergency generator	\$ 66,000				
	Roof replacement		\$ 100,000			
	HVAC replacement		\$ 15,000		\$ 15,000	
	Warning sirens			\$ 30,000		
		<b>\$ 139,300</b>	<b>\$ 127,000</b>	<b>\$ 41,000</b>	<b>\$ 75,000</b>	<b>\$ 30,000</b>

The projected balance in the fund as of December 31, 2017 is \$401,532. For 2018 The Council has recommended that the excess General Fund balance, projected to be \$403,500, be transferred to this fund. It is further recommended that grant funding be obtained for at a minimum 75% of the emergency generator, 50% of the cost of the skateboard equipment, 100% of the warning sirens, and 25% of the playground equipment. It is also proposed that the conversation to LED lighting be repaid in the future based on actual energy savings.



\$800,000

\$700,000

\$600,000

\$500,000

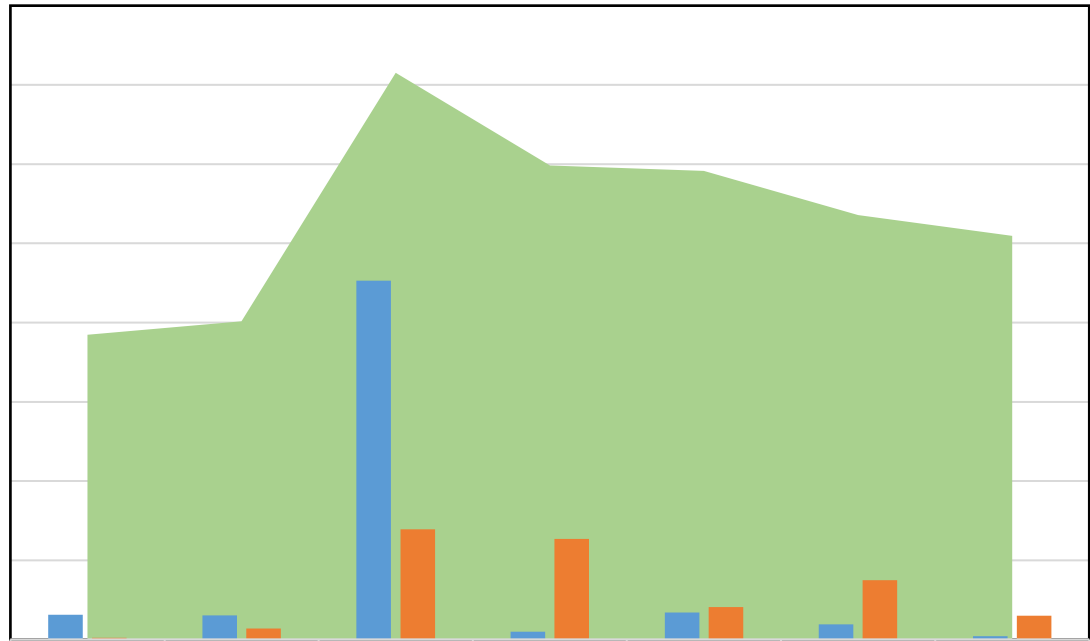
\$400,000

\$300,000

\$200,000

\$100,000

\$-



Fund Balance

\$384,832

\$401,532

\$715,232

\$598,332

\$591,432

\$535,532

\$509,632

Revenue

\$31,144

\$30,500

\$453,000

\$10,100

\$34,100

\$19,100

\$4,100

Expenditures

\$2,370

\$13,800

\$139,300

\$127,000

\$41,000

\$75,000

\$30,000

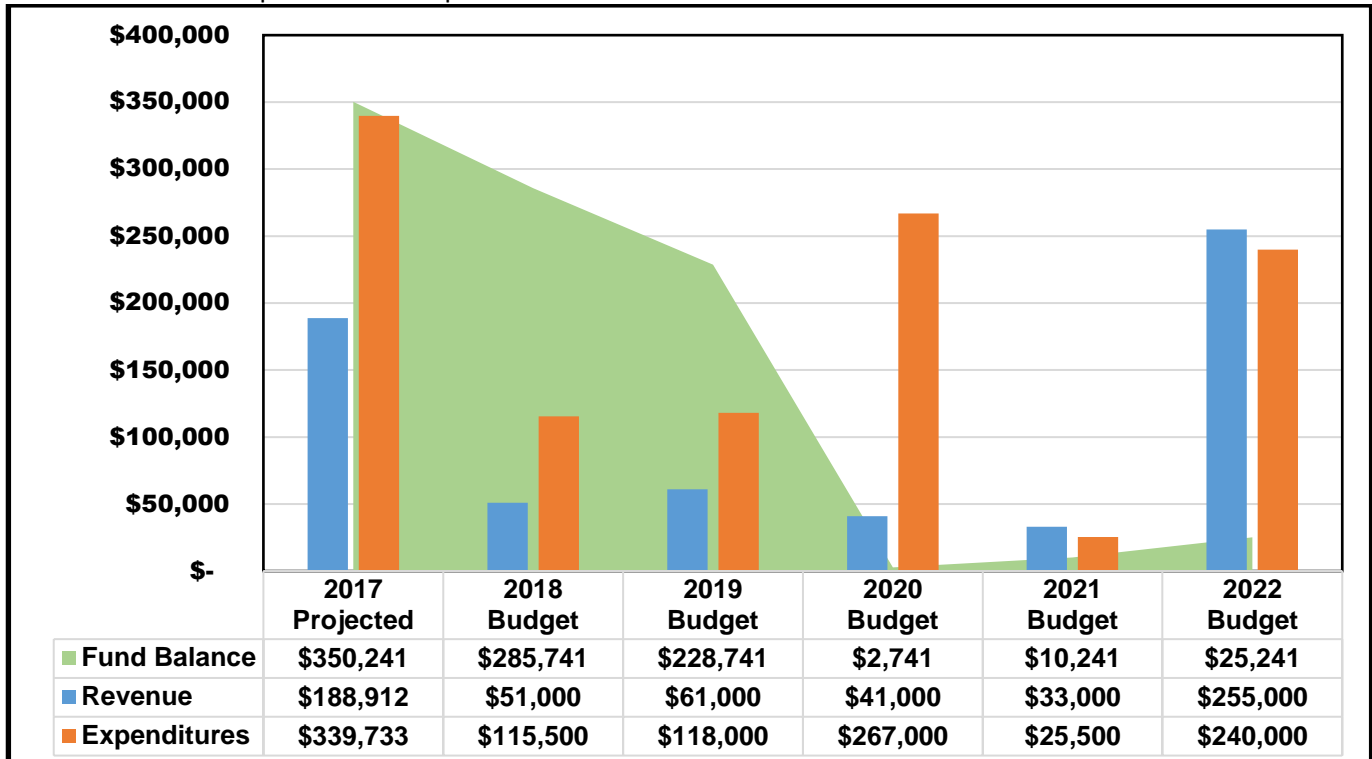
### EQUIPMENT REPLACEMENT FUND

The City created the Equipment Replacement Fund in 2007 to set aside funds on an annual basis for planned replacement of vehicles and major pieces of operating equipment. Any revenues from the sale of old equipment being replaced are also deposited into the fund. Beginning in 2015, the revenue to the fund was reduced to reflect a new City policy of borrowing for equipment costing over \$100,000 with the balance able to meet the projected smaller equipment needs for 10 years.

The projects recommended from 2018 – 2022 are as follows:

	2018	2019	2020	2021	2022
<b>Public Works</b>					
Tailgate sander - Ford F550	\$ 7,000				
Replace 2008 Ford Ranger	\$ 36,500				
Replace 2008 Ford F350 + plow		\$ 43,000			
Replace grader with used Loader			\$ 100,000		
Replace 2010 Tiger ditch rear mower			\$ 12,000		
Replace 2011 Tiger ditch boom mower			\$ 15,000		
Replace 1999 John Deere 6410 Tractor			\$ 100,000		
Replace 2011 Ford F250 + plow				\$ 25,500	
Replace 2012 New Holland skid loader and trailer					\$ 40,000
Replace 2011 Mack dump truck & plow					\$ 200,000
<b>Fire</b>					
Radio replacement		\$ 75,000			
<b>Skating rink</b>					
Zamboni replacement			\$ 40,000		

The projected balance in the fund at 12/31/2017 is \$350,241. Fire Department Equipment purchases totaling \$72,000 have been previously approved which leaves \$278,241 available for other projects. It is recommended that \$30,000 per year be levied for equipment replacement along with the issuance of 5-year equipment certificates for the replacement of a plow truck in 2022.



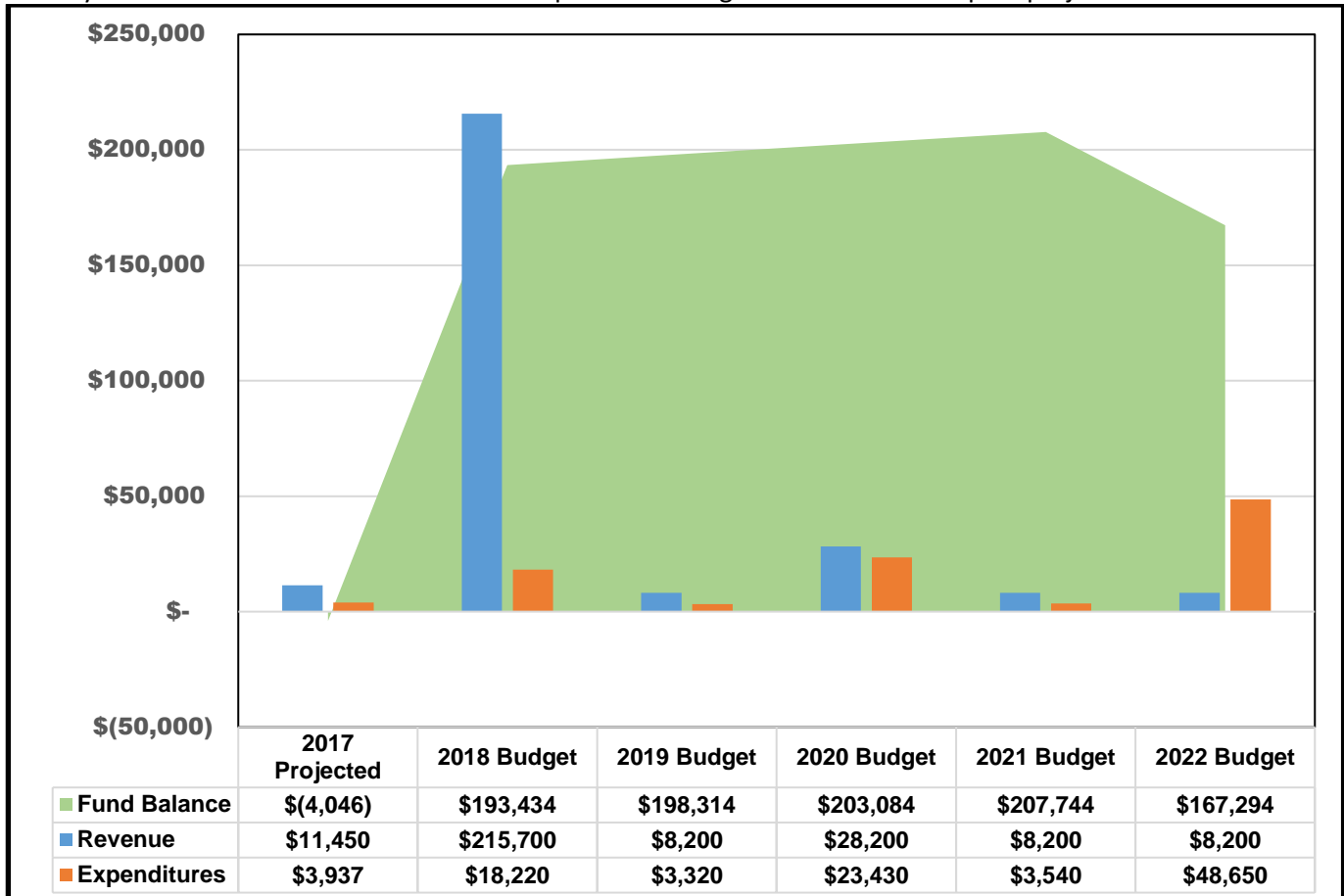
### PARK IMPROVEMENT FUND

The Parks Improvement Fund is set up to use park dedication fees as the primary funding source. Due to the lack of fees, the fund borrowed \$35,000 from the Capital Improvement Fund for the Lilleskogen Park parking lot project and those funds are being repaid as park dedication funds are collected. Revenues for advertising at the Wayne Erickson ballfield are dedicated for maintenance and improvements of the field. At 12/31/2017 the projected fund balance was a negative (\$4,046) by sub-fund: Lilleskogen – (\$15,407), Wayne Erickson - \$13,138, and undesignated \$(1,777).

The projects recommended from 2018 – 2022 are as follows:

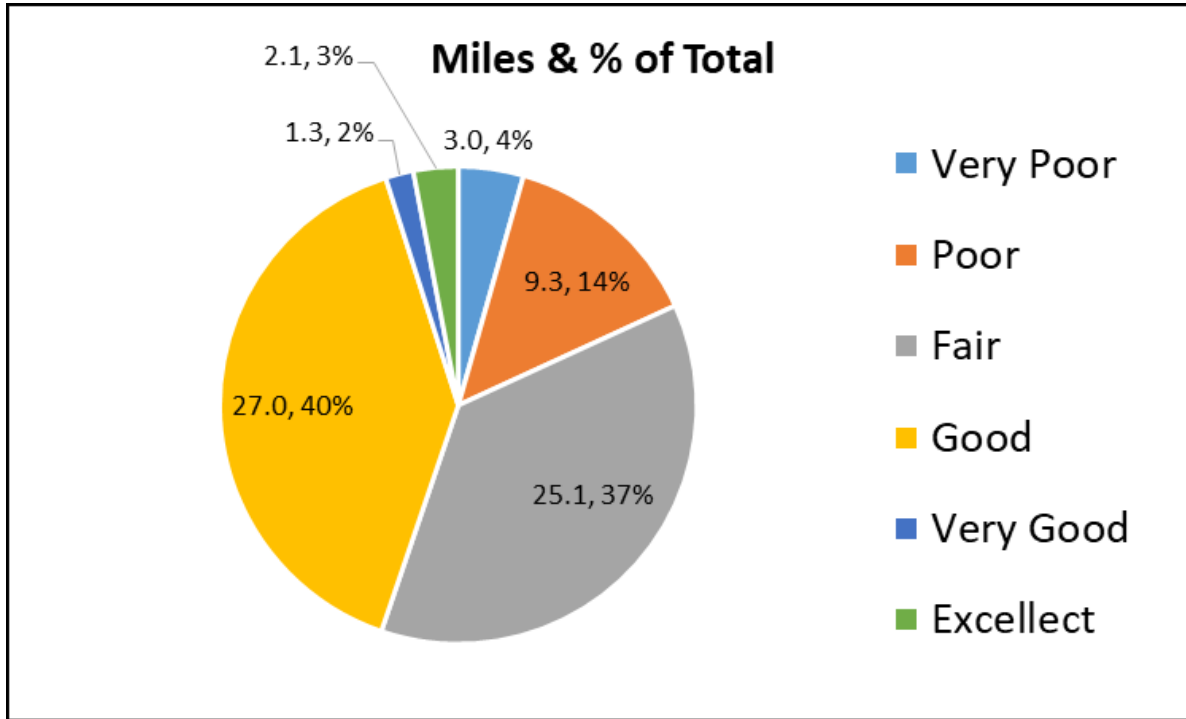
	2018	2019	2020	2021	2022
<b>Lilleskogen</b>					
Picnic shelter	\$ 15,000				
Other improvements			\$ 10,000		
<b>Wayne Erickson</b>					
Playground replacement					\$ 45,000
<b>Undesignated</b>					
Cycling & trails			\$ 10,000		
	\$ 15,000	\$ -	\$ 20,000	\$ -	\$ 45,000

The projections assume that \$6,000 will be received each year in park dedication fees and that 50% of the funding for the Lilleskogen projects come from grants or donations. The Committee has recommended that the City sell the city-owned lot on Goose Lake with the net proceeds being reserved for future park projects.



## LOCAL ROAD IMPROVEMENT FUND

In 2008 the City adopted a Pavement Management Plan to extend the life of city streets and to reduce the lifecycle costs for maintaining them in good condition. The City has endeavored to increase the budget for contractual road maintenance and repairs. In 2014 the Local Road Improvement Fund was established to address major repairs (reconstruction, mill and overlays, etc.) and is funded by the general tax levy. Regardless of these efforts the PASER rating of City streets by the City engineer indicated that over 18% of the City streets were rated very poor or poor and 37% rated fair.

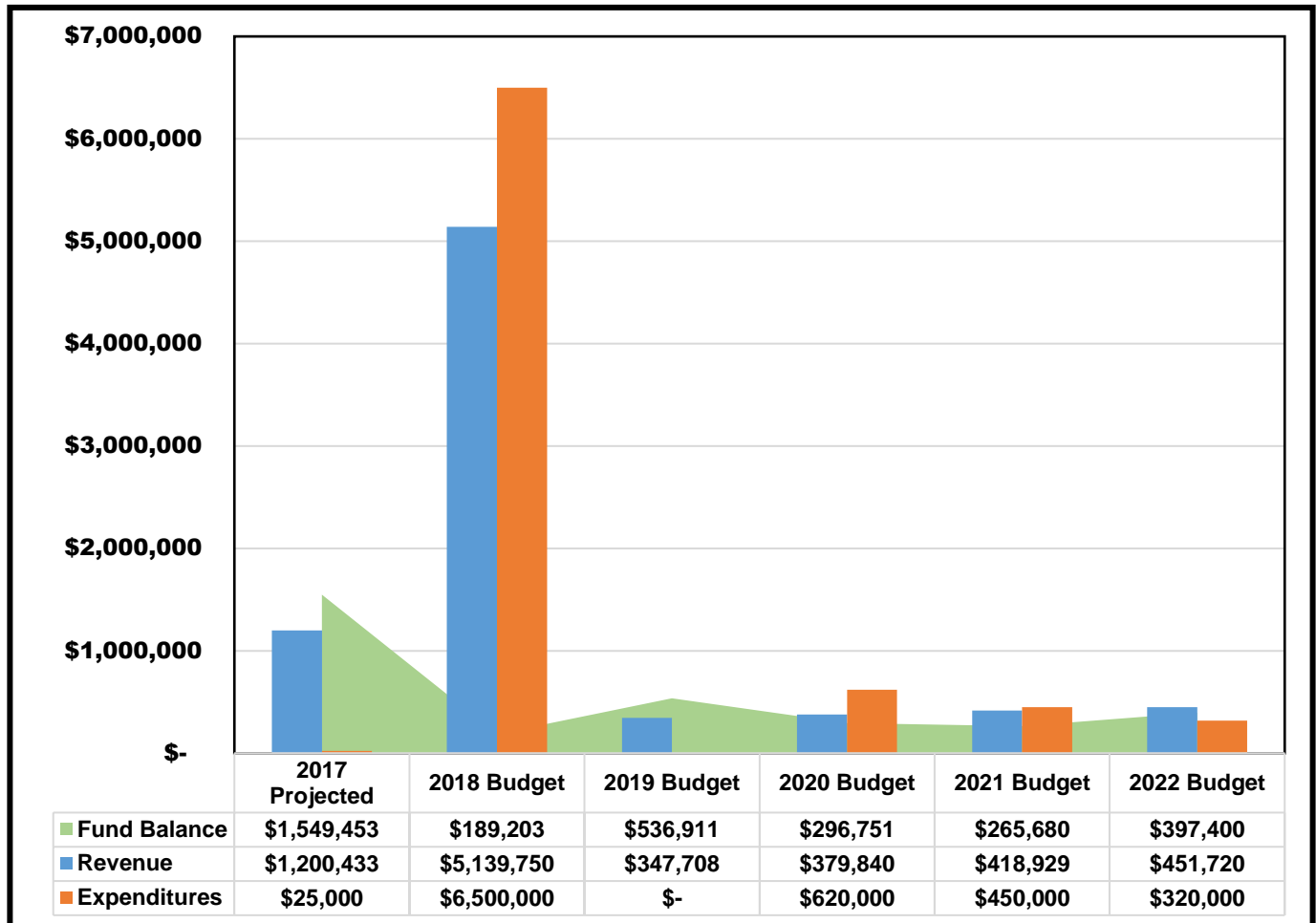


The Committee worked with Bolton & Menk to look at modifying the 2008 Pavement Management Plan to address the roads that are in the greatest need. The plan calls for the reclaiming and repaving all of the roads rated very poor or poor with ditch-to-ditch improvements in 2018 and then providing for a mill and overlay of the road surfaces that are currently rated fair in 2020, 2021, and 2022.

The 2018 improvements are to be funded primarily through the issuance of \$4,400,000 of debt. To minimize the property tax impact the plan calls for \$115,000 of the General Fund levy for street maintenance (seal coating) to be redirected to service the debt. Further, the Committee is recommending that the base levy for the Local Road Improvement Fund, which is currently \$581,000, be increased by 5% each year for the 5-year period. Below is a computation of the levy amounts for debt and the Improvement Fund.

	2018	2019	2020	2021	2022
<b>Tax levy computation</b>					
Base	\$ 581,000	\$ 610,050	\$ 640,553	\$ 672,580	\$ 706,209
Increase in base	\$ 29,050	\$ 30,503	\$ 32,028	\$ 33,629	\$ 35,310
Sealcoat funds from General Fund	\$ 115,000	\$ 115,000	\$ 115,000	\$ 115,000	\$ 115,000
Debt Service on bonds	\$ -	\$ (408,345)	\$ (408,240)	\$ (402,780)	\$ (405,300)
	\$ 725,050	\$ 347,208	\$ 379,340	\$ 418,429	\$ 451,220

Based on an estimated 12/31/2017 fund balance of \$1,477,853, a levy of \$725,050, and the issuance of the \$4,400,000 of debt, the City will be able to fund \$6,500,000 in improvements to the roads rated very poor or poor, and will have a carry-over fund balance at 12/31/2018 of \$189,203. No improvements are planned for 2019 to allow the fund balance to accumulate. For the years 2020 through 2022 the accumulated funds and levy will fund mill and overlay improvements to the roads that are currently rated fair and not included in the 2018 reclamation and paving projects. A detailed cost estimate for the 2018 improvements is provided as an exhibit to this report.



It should be noted that the program outlined above will address roughly 50% of the City's paved street over the next 5 years. With a 30+ year life-cycle for roads, the other 50% of the roads that are not included in proposed program will likely need similar improvements in the 15 years the follow 2022. Throughout the life cycles of the roads, the City will need to continue to allocate funds for preventive maintenance.

## 201 SEWER SYSTEM

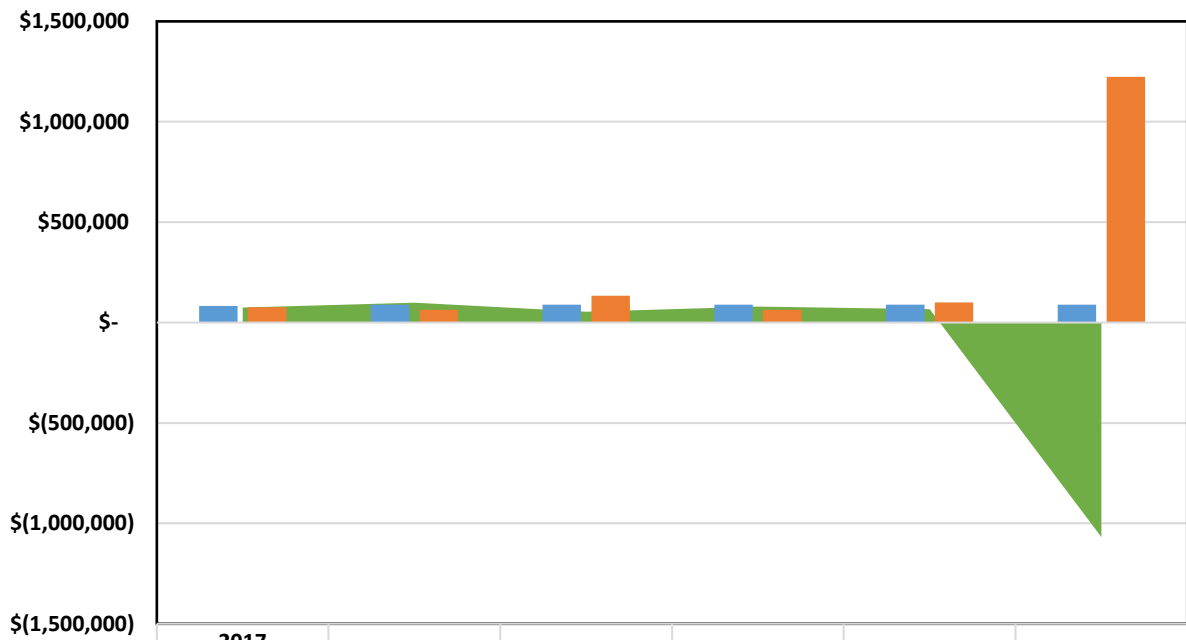
Improvements to the 201 Sewer System are intended to be funded through user fees. The projects recommended are shown below.

		2018	2019	2020	2021	2022
Anderson / Erickson						
	Drainfield					\$ 200,000
Bliss						
	Bliss Lift Station 1 - control panel		\$ 31,000			
	Bliss Lift Station 2 - control panel		\$ 31,000			
	Bliss LS 1 Pump 1					
	Bliss LS 1 Pump 2					
	Bliss LS 2 Pump 1				\$ 6,000	
	Bliss LS 2 Pump 2				\$ 6,000	
	Bliss LS 3 Pump 1				\$ 6,000	
	Bliss LS 3 Pump 2				\$ 6,000	
	Bliss LS 4 Pump 1				\$ 6,000	
	Bliss LS 4 Pump 2				\$ 6,000	
	Nitrate treatment					\$ 960,000
		\$ -	\$ 62,000	\$ -	\$ 36,000	\$ 1,160,000

- The control panel projects in 2019 are to replace the panels that were originally installed in 1986.
- The lift station pumps are a scheduled replacement at the end of the useful life for pumps that were installed in 2014.
- The Anderson Erickson drainfield improvement would be used to make improvement to the drainfield and to potentially add capacity.
- The MPCA permit for the Bliss addition requires the City to submit by September, 2019 a plan to address the high levels of nitrate at one of the test wells. It is anticipated that there will be a time limit placed on the City in the permit renewal process and the 2022 date is an approximation of when construction is anticipated.

At the end of 2017 the cash balance in the 201 Sewer Fund is projected to be \$74,510 and \$54,410 after the 2019 projects. With the current rate structure there will not be sufficient funds for the improvement to the Anderson-Erickson drainfield or for the Bliss nitrate remediation projects scheduled for 2022. There is no immediate need for the E-A drainfield improvements and the amount shown can be a placeholder for future improvements. The Bliss improvements will be required as a part of the operation permit for the Bill system that expires in February 2020. Low interest rate debt and grant assistance may be available for the nitrate remediation project; however, at current interest rates, the annual cost to service the full amount of debt for the nitrate radiation project over a 10-year period would be roughly \$72,000 / year, which would require rates to roughly double the current rates.

## 201 SEWER SYSTEM



	2017 Projected	2018 Budget	2019 Budget	2020 Budget	2021 Budget	2022 Budget
Year End Cash Balance	\$74,510	\$98,960	\$54,410	\$78,860	\$67,310	\$(1,068,240)
Revenue	\$82,900	\$88,900	\$88,900	\$88,900	\$88,900	\$88,900
Expenditures	\$76,600	\$64,450	\$133,450	\$64,450	\$100,450	\$1,224,450



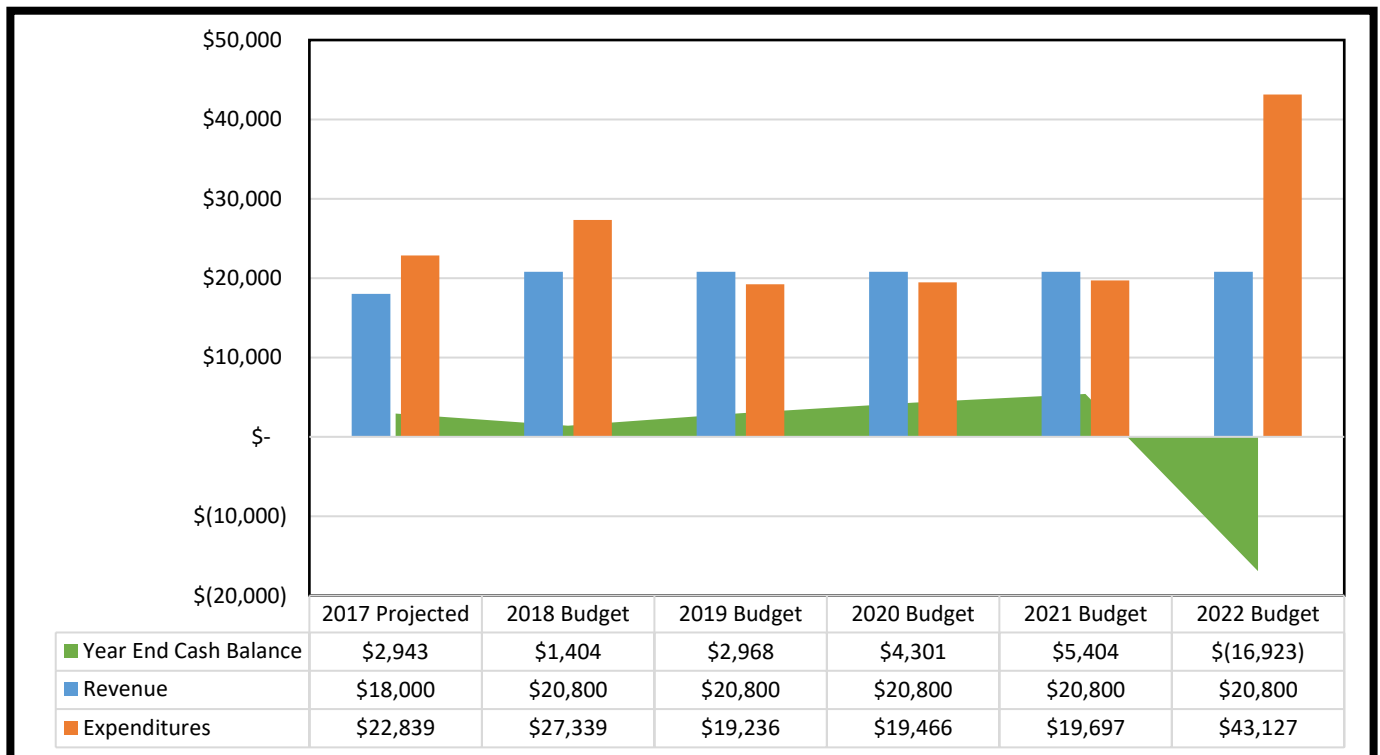
## UPTOWN SEWER SYSTEM

Improvements to the Uptown Sewer System are intended to be funded through user fees. The projects recommended are shown below.

	2018	2019	2020	2021	2022
<b>Drainfield blower</b>	\$ 3,000				
<b>Replace Uptown pump 1</b>					\$ 5,800
<b>Replace Uptown pump 2</b>					\$ 5,800
<b>Replace Drainfield pump 1</b>					\$ 5,800
<b>Replace Drainfield pump 2</b>					\$ 5,800
	<b>\$ 3,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 23,200</b>

The replacement of the pumps in 2022 is a schedule replacement at the end of the projected useful life for the pumps that were installed during the 2012 upgrades.

The projected cash balance at 12/31/2017 is \$2,782. After the drainfield blower is replaced in 2018, there will not be a sufficient cash balance. While the small negative cash balance may be acceptable in the short term, funds will need to be generated for the replacement of the lift station or drainfield pumps.



CITY OF SCANDIA, MINNESOTA  
FIVE-YEAR STREET RECONSTRUCTION PLAN  
(2018—2022)  
January 30, 2018

A. Background

In 2008, the City of Scandia prepared a Pavement Management Plan in which the paved roads within the City were evaluated, given a rating and a proposed maintenance schedule. In 2016 the ratings of the streets were updated and the street conditions were as follows:

<i>Rating</i>	<i>Condition</i>	<i>Total Miles</i>	<i>Percentage</i>
9-10	Excellent-Very Good	3.4	5%
7-8	Good	28.3	40%
5-6	Fair	23.0	37%
3-4	Poor	9.6	14%
1-2	Very Poor	2.5	4%
	Totals	66.8	

To provide guidance for pavement management and street reconstruction needs in the next five years, City of Scandia, Minnesota has determined to adopt this five-year street reconstruction plan for the years 2018 through 2022 in accordance with Minnesota Statutes, Section 475.58, subdivision 3b.

B. Five-Year Street Reconstruction Plan

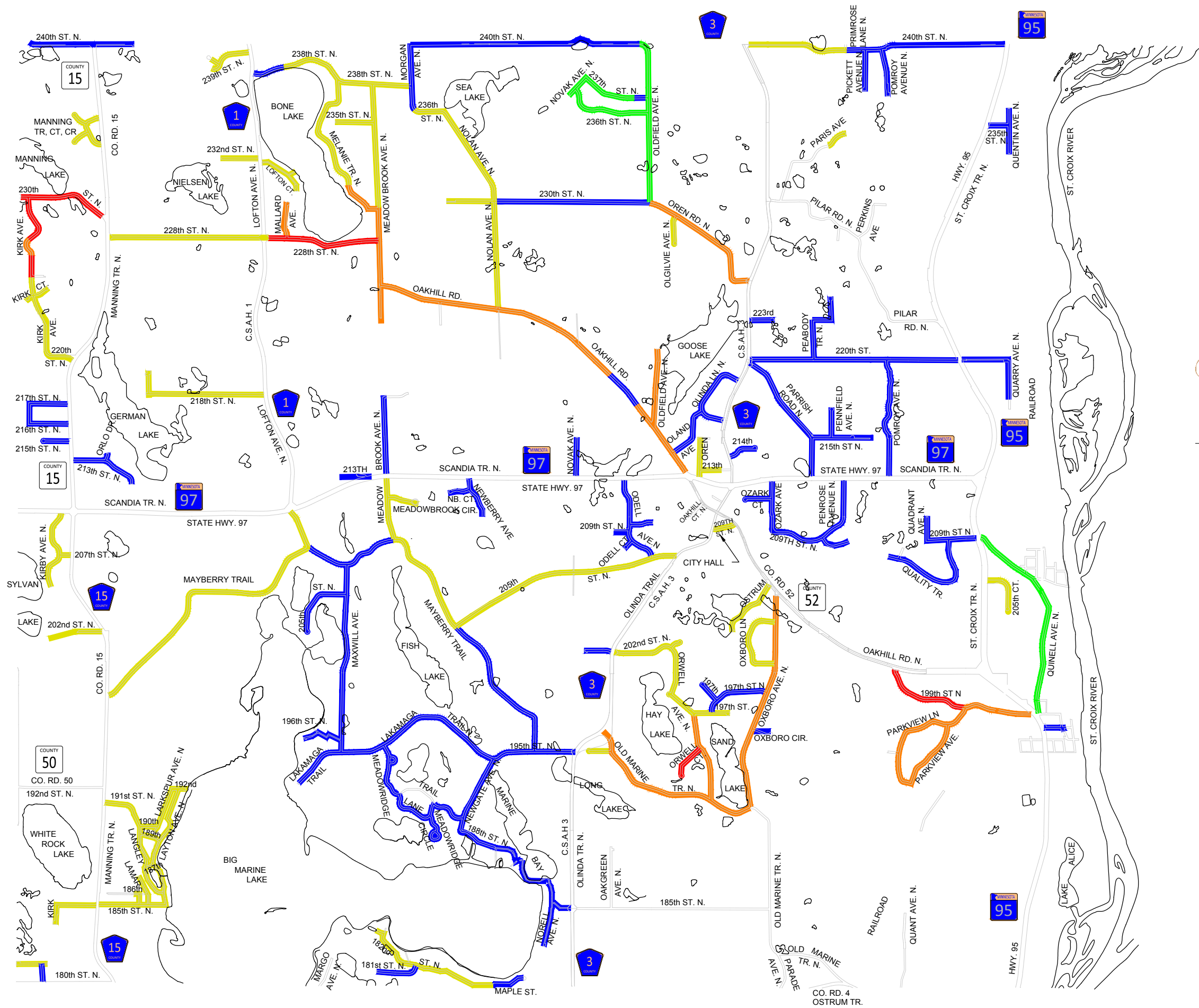
Following is a summary description of projected projects and estimated costs covering the five-year period from 2018 through 2022, and the type of reconstruction proposed.

<i>Year:</i>	<i>Proposed Street Reconstruction</i>	<i>Estimated Project Cost</i>
2018	Reconstruction (1-4 Streets)	\$6,425,650
2019	No Proposed Street Improvement Project	-
2020	Mill and Overlay (5-6 Streets)	\$620,000
2021	Mill and Overlay (5-6 Streets)	\$450,000
2022	Mill and Overlay (5-6 Streets)	\$320,000

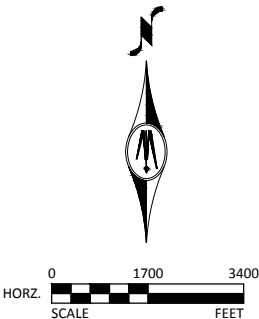
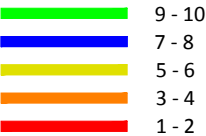
The cost estimate includes contingency, engineering, permitting and construction costs.

## C. Bonds

The City may issue general obligation bonds pursuant to the Act to finance any street reconstruction costs described in this plan. The City currently plans to issue its General Obligation Street Reconstruction Bonds, Series 2018 in the approximate maximum principal amount of \$4,500,000 to finance year 2018 reconstruction costs, provided that the City may delay reconstruction of certain portions of the 2018 Projects until subsequent years of this Plan and postpone the issuance of the bonds, or issue the bonds in more than one series, so long as the bonds so issued do not exceed the maximum amount authorized in this Plan. If the City determines to issue additional bonds for future reconstruction costs described in this plan, the City will revise this plan to identify the amount of such bonds after a public hearing in accordance with the Act.



2016 PASER PAVEMENT RATINGS



## Appendix G: Agency Review Letters

June 18, 2018

Mr. Phil Belfiori, Administrator  
Rice Creek Watershed District  
4325 Pheasant Ridge Dr. NE #611  
Blaine, MN 55449-4539

RECEIVED  
JUN 25 2018  
Rice Creek  
Watershed District

RE: Scandia Surface Water Management Plan  
Metropolitan Council Review File No. 21951-1

Dear Mr. Belfiori:

The Metropolitan Council (Council) has completed its review of the City of Scandia's draft 2018 Surface Water Management Plan (plan). The plan has been reviewed based on characteristics specific to the City:

- Most of the city is in the Carnelian-Marine St. Croix Watershed District, with smaller areas in the Comfort Lake-Forest Lake Watershed District and the Rice Creek Watershed District.
- The city has adopted the districts' watershed management plans, rules, and standards by reference, and the districts enforce surface water regulations and permitting within their respective areas of the city.
- In 2017 the city updated its Development Code, including sections relating to stormwater management, land alteration and grading, and erosion control, to be consistent with requirements of the three watershed districts.

The plan is generally consistent with Council policies and the Council's *Water Resources Policy Plan*. However, Minnesota Chapter Rules 8410 requires local plans to include:

- A local implementation program through the year the local water plan extends must describe nonstructural, programmatic, and structural solutions to problems identified in the problem section.
  - The program shall include areas and elevations for storm water storage adequate to meet performance standards or official controls established in the organization plan;
  - include a table that briefly describes each component of the implementation program and clearly details the schedule, estimated cost, and funding sources for each component including annual budget totals; and
  - include a capital improvement program that sets forth, by year, details of each contemplated capital improvement that includes the schedule, estimated cost, and funding source.

The plan includes the city's overall Capital Improvement Plan as Appendix F. This plan covers the years 2018-2022 but contains no specific surface water projects. The surface water plan is not required to be updated until 2028, and technically the CIP should extend through the same time. We realize planning this far ahead is difficult, especially for a small city, but technically this is what is required by the Rule.

The plan also includes *Table 10: Summary of Proposed Watershed Projects*, which lists possible projects to be initiated by the watershed districts. Alternatively, this table could be updated to include dates or schedules, estimated costs, and funding sources. Including local projects, even if there is no immediate funding available for them, may make the activities more likely to qualify for possible grant funding.

Thank you for this opportunity to review this plan. If you have any questions please contact Joe Mulcahy, at 651-602-1104.

Sincerely,

A handwritten signature in black ink, appearing to be 'SP', written over the word 'Sincerely,'.

Sam Paske

Assistant General Manager, MCES, Environmental Quality Assurance Department

cc: Timothy J. Olson, PE, Bolton & Menk Inc.  
Neil Soltis, City Administrator, City of Scandia  
Harry Melander, Metropolitan Council District 12  
Corrin Wendell, Metropolitan Council Sector Representative  
Raya Esmaeili, Metropolitan Council Referrals Coordinator  
Joe Mulcahy, Water Resources



June 18, 2018

Mr. Jim Shaver, Administrator  
Carnelian - Marine - St. Croix Watershed District  
P.O. Box 188  
Scandia, MN 55073

RE: Scandia Surface Water Management Plan  
Metropolitan Council Review File No. 21951-1

Dear Mr. Shaver:

The Metropolitan Council (Council) has completed its review of the City of Scandia's draft 2018 Surface Water Management Plan (plan). The plan has been reviewed based on characteristics specific to the City:

- Most of the city is in the Carnelian-Marine St. Croix Watershed District, with smaller areas in the Comfort Lake-Forest Lake Watershed District and the Rice Creek Watershed District.
- The city has adopted the districts' watershed management plans, rules, and standards by reference, and the districts enforce surface water regulations and permitting within their respective areas of the city.
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The plan is generally consistent with Council policies and the Council's *Water Resources Policy Plan*. However, Minnesota Chapter Rules 8410 requires local plans to include:

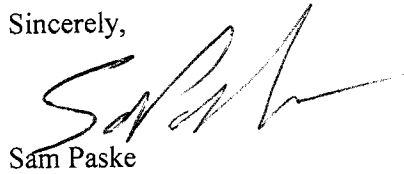
- A local implementation program through the year the local water plan extends must describe nonstructural, programmatic, and structural solutions to problems identified in the problem section.
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Sincerely,



Sam Paske

Assistant General Manager, MCES, Environmental Quality Assurance Department

cc: Timothy J. Olson, PE, Bolton & Menk Inc.  
Neil Soltis, City Administrator, City of Scandia  
Harry Melander, Metropolitan Council District 12  
Corrin Wendell, Metropolitan Council Sector Representative  
Raya Esmaeili, Metropolitan Council Referrals Coordinator  
Joe Mulcahy, Water Resources

June 18, 2018

Mike Kinney, Administrator  
Comfort Lake Forest Lake Watershed District  
44 Lake Street South, Suite A  
Forest Lake, MN 55025

RE: Scandia Surface Water Management Plan  
Metropolitan Council Review File No. 21951-1

Dear Mr. Kinney:

The Metropolitan Council (Council) has completed its review of the City of Scandia's draft 2018 Surface Water Management Plan (plan). The plan has been reviewed based on characteristics specific to the City:

- Most of the city is in the Carnelian-Marine St. Croix Watershed District, with smaller areas in the Comfort Lake-Forest Lake Watershed District and the Rice Creek Watershed District.
- The city has adopted the districts' watershed management plans, rules, and standards by reference, and the districts enforce surface water regulations and permitting within their respective areas of the city.
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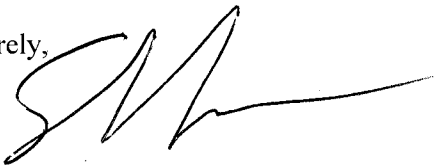
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Thank you for this opportunity to review this plan. If you have any questions please contact Joe Mulcahy, at 651-602-1104.

Sincerely,

A handwritten signature in black ink, appearing to be 'SP', with a long horizontal stroke extending to the right.

Sam Paske

Assistant General Manager, MCES, Environmental Quality Assurance Department

cc: Timothy J. Olson, PE, Bolton & Menk Inc.  
Neil Soltis, City Administrator, City of Scandia  
Harry Melander, Metropolitan Council District 12  
Corrin Wendell, Metropolitan Council Sector Representative  
Raya Esmaeili, Metropolitan Council Referrals Coordinator  
Joe Mulcahy, Water Resources



**Department of Public  
Health and Environment**

**Lowell Johnson**  
Director

**David Brummel**  
Deputy Director

September 6, 2018

Mr. Timothy Olson  
Bolton & Menk, Inc.  
2035 County Road D East  
Maplewood, MN 55109

Re: City of Scandia Local Water Management Plan comments

Mr. Olson:

Washington County is submitting comments in response to the City of Scandia Draft Local Water Management Plan (LWMP). The county commends the City of Scandia for developing a planning framework to provide direction for managing water resources.

The county reviewed the LWMP for consistency with the Washington County Groundwater Plan 2014 – 2024, per Minnesota State Statute 103b.235 subdivision 3. The county's comments are attached. Thank you for the opportunity to review the LWMP. Please contact Jessica Collin-Pilarski at 651-430-6703 or via email at [jessica.collin-pilarski@co.washington.mn.us](mailto:jessica.collin-pilarski@co.washington.mn.us) if you have questions regarding the comments.

Respectfully,

A handwritten signature in black ink that reads "Jessica L. Collin-Pilarski".

Jessica L. Collin-Pilarski, Senior Planner  
Washington County Department of Public Health and Environment

Government Center • 14949 62nd Street North — P.O. Box 6, Stillwater, Minnesota 55082-0006  
Phone: 651-430-6655 • Fax: 651-430-6730 • TTY: 651-430-6246

[www.co.washington.mn.us](http://www.co.washington.mn.us)

Equal Employment Opportunity / Affirmative Action



**General Comments:**

Minnesota State Statute 103b.235 subdivision 3 states that Local Water Management Plans, identified here as the City of Scandia Local Water Management Plan (LWMP), must be submitted to a county for review if the county has a state approved and locally adopted groundwater plan. The county's most recent groundwater plan was adopted on September 23, 2014.

This plan addresses preservation and protection of groundwater *and* surface water. Minnesota State Statute 103b.235 defines these plans as "Local Water Management Plans," therefore the department recommends the city remove the word "Surface" from the name of the plan and title it "Local Water Management Plan." The rest of the document already refers to this plan as the "Local Water Management Plan." Additionally, the first sentence of the executive summary states this plan is to "...guide the City in conserving, protecting and managing its surface water resources." Since this plan addresses groundwater as well we suggest either removing the reference to "surface" and just leaving it as water resources or adding groundwater.

The county would like to point out that many of the city's goals, policies and strategies related to groundwater compliment the groundwater plans policies and strategies. As the city moves forward with implementing these policies, the county requests they look to the county for partnership and collaboration where appropriate.

**Additional Comments:**Page 15 second paragraph

Please delete the statement about "The County's priority groundwater issues in cities like Scandia include proper Subsurface Sewage Treatment System installation and maintenance and sealing of residential wells." While parts of this statement are true it is very limiting. The county groundwater plan covers many additional groundwater issues that should be a priority to Scandia such as mining, nutrients, pesticides, and others. This is already explained in more detail under Section H. An alternative statement could be "The County's groundwater plan addresses many groundwater issues that are a priority for the City of Scandia." Or something similar.

**Section H. Groundwater Planning:**Page 19

Please change the last sentence from "seven major issues" to "eleven major issues."

Page 20

The bulleted list of issues from the county groundwater plan is incorrect. Please replace as follows:

- Groundwater Supply
- Groundwater and Surface Water Interaction
- Source Water and Wellhead Protection
- Existing Contaminants: VOCs and PFCs
- Nutrients, Pesticides and Road Salt

- Emerging Contaminants
- Septic Systems
- Land Spreading for Beneficial Use
- Hazardous Waste
- Mining
- Landfills

Page 21 first sentence of number 4.

Please change the “2003 Washington County Groundwater Plan” to the “2014 Washington County Groundwater Plan.”

Page 21 number 5.

The “North & East *Area* Groundwater Management Area Plan” needs to be changed to the “North and East *Metro* Groundwater Management Area Plan.” This occurs in two locations here.

## **Section V:**

Page 24 first bullet

Please add the Washington Conservation District (WCD) and Washington County as potential partners.

Page 25 third bullet

Please add “adopted county development codes” to this list.

Page 25 sixth bullet

Please add the WCD as a partner.

Page 27, Goal 6, first bullet

Please add the WCD as a partner.





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44 Lake Street South Suite A, Forest Lake, MN 55025

Phone 651.395.5850 Fax 651.395.5851 [www.clflwd.org](http://www.clflwd.org)

July 27, 2018

Mr. Timothy Olson  
Bolton & Menk, Inc.  
2035 County Road D East  
Maplewood, MN 55109

RE: City of Scandia SWMP Comments

Dear Mr. Olson,

The Comfort Lake-Forest Lake Watershed District (CLFLWD) has completed its review of the City of Scandia's Surface Water Management Plan (SWMP), dated March 2018, for compliance with the current CLFLWD Watershed Management Plan as well as Minnesota Statutes 103B.235 and Minnesota Rules 8410. Comments received from the Metropolitan Council on June 18, 2018 have been taken into consideration. We find the plan to be largely compliant and provides a good level of detail regarding the City's management of water resources, however CLFLWD requests the revisions on the following pages before staff can recommend approval by the Board of Managers.

The CLFLWD appreciates the opportunity to comment on the City's plan. We look forward to reviewing a revised draft for consideration by the CLFLWD Board of Managers. If you have any questions please contact me at (651)-395-5856 or [emily.heinz@clflwd.org](mailto:emily.heinz@clflwd.org).

Sincerely,

Emily Heinz  
Watershed Technician

Cc: Neil Soltis – City of Scandia  
Jim Shaver – Carnelian-Marine-St. Croix Watershed District  
Phil Belfiori – Rice Creek Watershed District  
Judy Sventek – Metropolitan Council  
Sam Paske – Metropolitan Council  
Jessica Collin-Pilarski – Washington County

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Board of Managers

Jackie A. Anderson—President      Jon W. Spence—Vice President  
Wayne S. Moe—Secretary      Stephen W. Schmaltz—Treasurer      Jackie M. McNamara—Assistant Treasurer

## Comment Matrix

Comment #	Page #	Draft Plan Text	Suggested Revision (shown in <u>red and underline</u> )	CLFLWD Comment
1	17	Comfort Lake-Forest Lake Watershed District, Watershed Management Plan, 2015	Comfort Lake-Forest Lake Watershed District, Watershed Management Plan, <u>2018</u>	CLFLWD last updated its WMP 2018
2	17	The Comfort Lake-Forest Lake Watershed District's (CLFLWD) most recent revisions to the watershed management plan were adopted in 2015.	The Comfort Lake-Forest Lake Watershed District's (CLFLWD) most recent revisions to the watershed management plan were adopted in <u>2018</u> .	CLFLWD last updated its WMP 2018
3	18	CLFLWD's plan notes that the District has established an Urban Stormwater Remediation Cost-Share program that could be used as a source of funding that the City of Scandia could use to provide water quality enhancements as part of municipal projects, such as future road projects.	CLFLWD's plan notes that the District has established an Urban Stormwater Remediation Cost-Share program that could be used as a source of funding that the City of Scandia could use to provide water quality enhancements as part of municipal projects, such as future road projects <u>that go above and beyond minimum stormwater requirements and are not used for future credits.</u>	CLFLWD does not generally offer cost-share funding to projects that are <i>required</i> to implement BMPs under the District's permitting program. This program is intended for projects that go above and beyond the minimum requirements.
4	22	3. Proposed MOU with CLFLWD The City will develop a proposed Memorandum of Understanding with the Comfort Lake-Forest Lake Watershed District that will address the organizations' mutual roles and process for addressing development reviews and other joint activities, particularly in shoreland and floodplain areas. <b>A copy of the proposed MOU will be included in the Attachments and will be considered with</b>	[None]	CLFLWD supports this. There doesn't appear to be a copy of the proposed MOU in the appendices, specifically Appendix E.

		<b>approval of this plan.</b>		
5	26	(Fourth bullet under Policies and Strategies) ...The City requests that the Watershed District continue to implement its storm water management and erosion control ordinance in the Bone Lake watershed area. ...	[None]	The CLFLWD will continue to implement its stormwater management and erosion control ordinance in the Bone Lake watershed area and all other areas within CLFLWD jurisdiction.
6	27	(Third bullet under Goal 5) ... The City will require that owners/developers complete a functions and values assessment and implement appropriate buffer requirements and other best management practices. ...	[None]	Will there be a specific trigger for when the City requires an owner/developer to complete the functions and values assessment, or will this apply to all new development/redevelopment activity?
7	33-34	[See extended text below]	[Suggested revisions shown in redline in extended text below]	CLFLWD adopted a minor plan amendment in January 2018 which partially updated the referenced sections including: removing AIS-related items from the projects category and into a new program – 3011 AIS Prevention & Management. Redlines are offered to more closely align this section with the latest amended version of the CLFLWD WMP.
8	Appendix F	Capital Improvement Plan		Capital Improvement Plan should have a clear and detailed schedule with estimated costs and potential funding sources.

## **Extended Text**

### **Comment #7**

#### **2. Comfort Lake-Forest Lake Watershed District Implementation Plan**

The District's Management Plan includes three categories of implementation activities: Administration, Programs and Projects. Administration activities are carried out by the District. Programs include development of District rules and permitting activities, education and outreach, and aquatic invasive species prevention and management. As noted above, the City concurs with and adopts the District's Water Management Plan, standards and rules. The CLFLWD Districts will continue to enforce surface water regulations and permitting within the City, within its geographic area.

The District advocates for intergovernmental coordination to accomplish the implementation efforts. The District Plan requests that Scandia complete a Memorandum of Understanding

(MOU) with the CLFLWD detailing the cooperative process that will be used for coordination between the District plan activities (including regulation and enforcement when needed) and the City's land use and permitting responsibilities, to help to minimize the permit approval timeline and minimize duplication of efforts. The District believes that a commitment to cooperation will be particularly valuable to coordinate reviews and permitting in shoreland and floodplain areas.

- Scandia will complete the requested MOU with the District to implement intergovernmental coordination as required.

Bone Lake is a resource of significant concern to the Watershed District. The District has completed a TMDL study for Bone Lake, and identified an implementation plan and projects to address the lake impairment. The City will support the implementation plan by implementing its Shoreland and Floodplain ordinances. The Watershed District will continue to implement its storm water management and erosion control ordinance in the Bone Lake watershed area.

The City supports the District's monitoring and assessment efforts on local lakes, streams and wetlands, and the District's Non-Point Source Pollution Abatement Grant Programs, ~~and~~ education and outreach efforts, and aquatic invasive species prevention and management efforts.

The District identified some specific projects that it will implement to address water quality issues in Scandia lakes in its plan. The projects will be funded through the District's annual levy and supported through grants. The projects include the following:

### 3. Bone Lake

- Bone Lake Inlet and Outlet Fish Barriers. Bone Lake has an overabundance of rough fish, which disturb the lake bottom and can cause an increase in the internal load of phosphorus in the lake. The District will install a barrier to manage the movement of rough fish into Bone Lake at the inlet to the lake from Moody Lake. The project will be funded through grants and District funds.
- Bone Lake Infiltration Basin Planning and Design. The project will include design of an infiltration basin to provide volume reduction and water quality improvements through a subwatershed located east of the creek and near Oakhill Road North. Project planning and design will be funded by the District.
- Bone Lake Infiltration Basin Implementation. The project would implement the Infiltration Basin Design identified above. The facility will require private landowner participation to identify its location.
- Bone Lake Shoreland Survey. The District will complete a shoreline survey to identify areas for improvements such as shoreline buffers and lakescaping.
- ~~Curley Leaf Pondweed Management. The District is proposing to implement activities to manage curley leaf pondweed (an invasive species) as allowed by the DNR. The growth and decomposition of curley leaf pondweed results in an increase in the phosphorus load in the lake and affects water quality.~~
- Alum Treatment. The District may conduct an alum treatment or other in- lake treatment to reduce the internal phosphorus load in Bone Lake.
- ~~Macrophytes (lake plants) and Invasive Species Survey. The District may complete a survey of macrophytes and invasive species in Bone Lake. The survey would be completed every five years. The survey would track the species in the lake and results of management efforts.~~
- ~~Rough Fish Management. The District may complete harvests of carp to decrease the population to a level that does not impact lake water quality.~~

- Bone Lake Diagnostic Study Implementation: The CLFLWD will implement the phosphorus reduction activities as identified in the Bone Lake Diagnostic Study. The Bone Lake Diagnostic Study included targeting tributary monitoring and watershed modeling to identify additional sources of watershed phosphorus loads to Bone Lake and target phosphorus reduction activities in the watershed.
- ~~The District will complete a phosphorus source assessment to evaluate the source of elevated phosphorus load in the wetland and drainage area between Moody Lake and Bone Lake~~
- The District is proposing to complete a variety of feasibility studies and designs for wetland restorations in the Bone Lake watershed to reduce phosphorus and improve wetland function.
- The District completed a rural subwatershed assessment to identify agricultural sources of phosphorus loading to Bone Lake and prioritize agricultural best management practices to reduce phosphorus and other pollutant loading.

#### 4. Other Lakes and Streams

- The CLFLWD will conduct lake water quality studies and develop management plans for Sea Lake, Nielsen Lake and Clear Lake, and will complete a stream assessment of the Bone-Birch-School-Little Comfort lake Tributary, located in Scandia. In 2016 the District completed the following surveys on Sea Lake: fish community, aquatic plant point-intercept, and sediment characteristics.



June 28, 2018

Mr. Timothy Olson  
Bolton & Menk, Inc.  
2035 County Road D East  
Maplewood, MN 55109

**RE: City of Scandia SWMP Comments**

Dear Mr. Olson,

The Rice Creek Watershed District (RCWD) has completed a formal review of the City of Scandia's Surface Water Management Plan (SWMP), dated March 2018, for compliance with the current RCWD Watershed Management Plan as well as Minnesota Statutes 103B.235 and Minnesota Rules 8410. Comments received from the Metropolitan Council on June 25, 2018 have been taken into consideration. The plan is largely compliant and provides an excellent level of detail regarding the City's management of water resources, however RCWD requests the following additions before staff can recommend approval by the Board of Managers.

1. Section VI Table 10 (page 35) and Appendix F CIP:
  - a. The City's implementation plan must be through the year the local water plan extends and describe nonstructural, programmatic, and structural solutions to the problems identified in Section IV. Table 10 should have a clear schedule, estimated costs, and funding sources for each item, including annual budget totals. The schedule should include each year covered by the plan: 2018-2028. Appendix F should also cover the years 2018-2028 and include specific water projects.
  - b. The Metropolitan Council indicated the need to identify areas and elevations for stormwater storage, however referencing RCWD's hydraulic and hydrologic model and Watershed Management Plan is satisfactory to address this requirement.

The provided comments below offer grammatical and formatting suggestions for the SWMP:

1. Section III A. and III F (pages 2 & 16): Though RCWD is commencing the 2010 Watershed Management Plan revision process, the plan will be updated by 2020. RCWD suggests revising the 2018/2019 references to 2020.
2. Section III Table 3 Impaired Waters, second row (page 7): Big Marine is misspelled and should be corrected.
3. Section III, paragraph underneath Table 4 (page 9): The City could remove the last sentence. The local water management plan schedule is now on the comprehensive plan schedule.
4. Section III D. 1, third paragraph (page 10): "Clayey" is missing a "y" and should be corrected.
5. Section III E.2, underneath Table 7 (page 12): "That by privately-owned" should be corrected to "that are privately-owned."
6. Section III G.5, end of section (page 19): "Ordinances" is misspelled and should be corrected.



7. Section III H.2, second paragraph, second sentence (page 20): This sentence appears to be unfinished. Recommend revising this sentence for clarity.
8. Section III H.5, first sentence (page 21): "Was established" is not needed and can be removed.
9. Section IV A.9, last sentence (page 24): "Groundwater" is misspelled and should be corrected.
10. Section VI A, first sentence (page 29): An extra "f" is present that can be removed.
11. Appendix A Table of Contents and the legend of Figure SW-14: "Sensitivity" is misspelled and should be corrected.
12. Appendix A: Two figures are labeled as Figure SW-13. Recommend revising figure numbering.

The RCWD appreciates the opportunity to comment on the City's plan. We look forward to reviewing a revised draft for consideration by the RCWD Board of Managers. If you have any questions please contact me at (763) 398-3078 or [lsampedro@ricecreek.org](mailto:lsampedro@ricecreek.org).

Sincerely,

A handwritten signature in black ink that reads "Lauren Sampedro". The signature is written in a cursive, flowing style.

Lauren Sampedro  
District Technician

Cc: Neil Soltis-City of Scandia  
Mike Kinney-Comfort Lake-Forest Lake Watershed District  
Jim Shaver-Carnelian-Marine-St. Croix Watershed District  
Judy Sventek-Metropolitan Council  
Sam Paske-Metropolitan Council  
Jessica Collin-Pilarski-Washington County



## Carnelian-Marine-St. Croix Watershed District

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Scandia Plaza II \* 21150 Ozark Avenue \* P.O. Box 188 \* Scandia, MN 55073 \* Tel 651.433.2150

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December 18, 2018

Scandia City Council  
14727 209<sup>th</sup> Street  
Scandia, MN 55073

re: Comments on Scandia Local Water Management Plan (LWMP)

Dear Council Members:

The Carnelian-Marine-St. Croix Watershed District respectfully requests that your approval to submit the 2018 Scandia Local Water Management Plan to the Metropolitan Council be subject to include the attached list of proposed revisions.

Most of the changes are minor and may have already been made. The balance of the recommendations are proposed to further improve the working relationship and cooperation between our local governments to protect and improve the areas water resources.

Thank you for your consideration of this request and we look forward to working with the City in 2019 and beyond.

Sincerely,

Jim Shaver  
Administrator

Enc. (Attachment)

cc (via email):

Board of Managers  
Carl Almer  
Susannah Torseth

Carnelian-Marine-St. Croix WD  
Emmons & Olivier Resources  
Galowitz and Associates

**Carnelian-Marine-St. Croix Watershed District comments on Local Water Management Plan**

Comment	Page #	Section	Sub Section	Paragraph	Draft Text	Suggested Text	Comment
1	1	I. Executive Summary		2	SWMP	LWMP	Make Consistent throughout
2	2	II. Local Water Management Plan Purpose		1	Carnelian Marine St. Croix	Carnelian-Marine-St. Croix	Make Consistent throughout
3	3	III. Land and Water Resource Inventory	B. Land Use	1	SW05 identifies Land Use	SW-05 identifies Future Land Use	
4	3	same	B.	Bullet(s)			% do not match table 1
5	3	Table 1	Line 3		rural	Rural residential	
6	4	III. Land and Water Resource Inventory	C. Water resources	1.Public waters Inventory			Add lake names to figure noted SW-06
7	6	III. Land and Water Resource Inventory	C. Water resources	5 Water Quality Monitoring	Reported periodically	Reported annually	
8	6	III. Land and Water Resource Inventory	C. Water resources	5 Water Quality Monitoring	Released in 2015	Released in 2018	Make consistent throughout
9	7	III. Land and Water Resource Inventory	Table 3	Line 2	Big Mrine	Big Marine	
10	8	III. Land and Water Resource Inventory	a.)Carnelian-Marine-St. Croix TMDL	2	Indicated a declining trend	Indicated an impairment in water quality	No trend analysis in TMDL
11	9		7,Watershed Boundaries	2 <sup>nd</sup> to last line	Based resent	Based on recent	
12	10	Geology and Topography		1st	Figure SW-09	Figure SW-12	
13	10	Geology and Topography	2. Sensitivity to Groundwater		Figure SW12	Figure SW-14	
14	15		F. Existing Grooundwater planning and Regulatory Frameworks	4	Implementation of local water management plans	Implementation of Comprehensive Watershed Management Plans	
15	17	G. Surface Water Planning	2. Carnelian-Marine-St. Croix (CMSCWD) Wetlands Management Plan	3	Figure SW-06 identifies the locations and classifications of wetlands within CMSCWD		SW-06 Does not include the detail as noted. Warrants an additional figure

**Carnelian-Marine-St. Croix Watershed District comments on Local Water Management Plan**

Comment	Page #	Section	Sub Section	Paragraph	Draft Text	Suggested Text	Comment
16	22	I. Water Related Agreements	2.Proposed MOUs and agreements with CMSCWD		...and other joint activities		An additional MOU is warranted for implementation of District Rule 8, which exceeds WCA requirements. See 8th Whereas of Resolution 2012-08-001 in Appendix E.
17	26	Goal 2	Policies and Strategies	3 <sup>rd</sup> bullet	<p>The District indicated</p> <p>that it will bear the costs for design and installation of the projects.</p>	<p>The District indicated that it will bear the costs for design and installation of water quality projects while additional stormwater infrastructure will be considered on a case by case basis</p>	
18	29	VI. Implementation Plan	A. Actions to address		Support the f specific	Support the specific	
19	31	VI. Implementation Plan	A.2 Medium Priority actions..		The District indicated that it will bear the cost of design and installation of projects	The District indicated that it will bear the cost of design and installation of projects on a case by case basis.	
20	32	VI. Implementation Plan	C.1 Carnelian-Marine-St. Croix Watershed District Implementation Plan	4 <sup>th</sup> bullet	The District anticipates	The District has completed	

**Carnelian-Marine-St. Croix Watershed District comments on Local Water Management Plan**

Comment	Page #	Section	Sub Section	Paragraph	Draft Text	Suggested Text	Comment
21	32	VI. Implementation Plan	C.1 Carnelian-Marine-St. Croix Watershed District Implementation Plan	7 <sup>th</sup> bullet	Mintenance	Maintenance	
22	32	VI. Implementation Plan	C.1 Carnelian-Marine-St. Croix Watershed District Implementation Plan	Additional bullet			Add projects as : 1.Bliss addition Stormwater Feasibility Study and Retrofit Water Quality project 2. Gilbertsons Creek Restoration Project 3. Goose Lake Iron Enhance Sand Filter project 4 Goose Lake Landing BMPs
23	35	VII. Amendment Proceedures					Should also note that LWMP will be amended, as necessary, in response to Watershed District Rule revisions
24	7			3 <sup>rd</sup> para		Add Sand Lake	