

## CHAPTER FIVE

**OPEN SPACE PLAN**

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**INTRODUCTION**

The 2004 New Scandia Township Community Survey provided the following definition; *“Open Space has significant natural features rather than recreation potential.”* For the purpose of this plan, the definition of open space is expanded and understood to mean *“a portion of a site which is permanently set aside for public or private use and will not be developed. The space...may be reserved to protect or buffer natural areas.”*<sup>1</sup>

Almost half of respondents to the 2004 Community Survey listed natural areas and open space as most important to their own quality of life in the Township. Residents value New Scandia’s lakes, wetlands, woodlands, and agriculture areas. Yet, as New Scandia Township grows, open space diminishes in quantity and quality.

The Open Space Plan provides an inventory and analysis of natural resources and discusses why open space is important and how it is threatened. This chapter recognizes other plans that have identified significant open space and guides the community in protecting and enhancing the natural resources of New Scandia Township.

**INVENTORY AND ANALYSIS**

This section provides an inventory and analysis of the existing landforms, vegetation, water features, natural communities, animals and ecological importance in New Scandia Township. This in turn provides the basis for the goals and strategies of the Open Space Plan.

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<sup>1</sup> [www.epa.gov/watertrain/protection/glossary.html](http://www.epa.gov/watertrain/protection/glossary.html)

## MAJOR GEOLOGIC LANDFORMS

There are three major types of landform in New Scandia Township: Grantsburg Sublobe Till Plain, St. Croix River Terraces and the St. Croix Moraine Complex.

The northwest part of the Township is located in the Grantsburg Sublobe Till Plain. This area is characterized by nearly level to gently rolling plains. It was formed with material carried into the area by the Grantsburg glacial ice sublobe. When the glacier melted, it left behind a vast plain of finely ground deposits. The soils that developed from these deposits are loamy and poorly drained. As a result, shallow wetlands and lakes are prevalent in this area.

The St. Croix River Terraces are located at the eastern boundary of New Scandia Township. Large glacial lakes formed north of the Township as the Superior lobe and Grantsburg sublobe melted. When these lakes drained down the St. Croix Valley, the resulting rivers cut broad terraces into the sand and gravel deposited by the Superior lobe. Then the ancient St. Croix River eroded the valley more severely, leaving a deep river valley with a series of river terraces and numerous bedrock cliffs and bluffs.

Most of New Scandia Township is in the Saint Croix Moraine Complex. This is a broad area of gently rolling hills that were formed by the sand and gravel deposits left by the Superior glacier lobe nearly 20,000 years ago. Between 16,000 and 13,000 years ago, this area was part of a vast glacial lake.

Figure 5-1: General Landforms, shows the landforms of New Scandia Township as reflected in the topography. The beige color represents relatively level areas of relief west and north of Big Marine Lake and again in a narrow band just east of State Highway 95 before the slope drops toward the St. Croix River. Light green represents rolling to undulating topography, primarily located in the western half of William O'Brien State Park. Areas of highly variable relief, which is the majority of landform in the Township as shown, are represented by the medium green color. Rolling to steep topography is generally located in and around the Falls Creek corridor. Generally steep areas are located in dark brown. Slopes greater than 18% (typically considered non-buildable) are denoted by a hatch pattern. Located in the Township's eastern boundary, these steep slopes define the St. Croix River bluff.

GENERAL LANDFORMS MAP HERE



PRESETTLEMENT VEGETATION MAP HERE



## **PRESETTLEMENT VEGETATION**

Presettlement vegetation related strongly to the existing landforms and soils of the area (see Figure 5-2: Presettlement Vegetation). The following description was recorded by Dr. Douglas Houghton, a member of Henry Schoolcraft's 1832 expedition along the St. Croix River (Mason 1958):

The river for a distance of 25 or 30 miles above the lake (near Stillwater) has a more desolate appearance. On either side are low ground subject to be overflowed in the fall and spring and at all times marshy. These are covered with a dense growth of underbrush and some large trees of elm, ash, and soft maple [silver maple], back from these the bluffs rise to a great height.

The species described above occurred in a narrow band adjacent to the St. Croix River. As the terraces stepped up and away from the river itself, these floodplain forests transformed into lowland hardwood forests, tamarack swamps and hardwood swamps on poorly drained level ground. On higher, better-drained land, oak forests and maple-basswood forests were found. Some river terraces included scattered stands of white pine. There may not have been much upland prairie at the time due to the many lakes, wetlands and poorly drained soils in the area.

## **LAKES, STREAMS, WETLANDS AND THE ST. CROIX RIVER**

Lakes, streams, and wetlands cover much of New Scandia Township and help define the Township's landscape (see Figure 5-3: Topography and Watersheds and Figure 5-4: Hydrology). These water resources, including the St. Croix River, are a primary reason why many people are attracted to the area. Many of the Township's residents live near Big Marine Lake and the smaller lakes throughout the Township. Many out-of-town visitors come to the Township to enjoy the recreation opportunities these lakes and the St. Croix River have to offer.

The wetlands also have a significant impact on New Scandia Township. They provide habitat for many plant and animal species. In addition, they provide important hydrological functions such as filtering sediments and providing storm water retention. These wetlands also limit where and how development can occur.

The St. Croix River, designated by Congress as part of the National Wild & Scenic Rivers Program in the United States in 1968, is located on the eastern edge of New Scandia Township. Known for its extensive biological diversity, the Riverway is an important route for migrating birds. During

spring and fall migrations, millions of birds pass along the St. Croix River Valley, which connects the Mississippi flyway with the western Great Lakes basin and much of central Canada. Many of these migrating birds depend upon the contiguous forested corridor that the Riverway protects. There are several trout streams in the northeastern part of the Township that drain into the St. Croix. They are located in and around Wind in the Pines Park and the Falls Creek SNA, and again near the Log House Boat Landing near Copas. There are at least 94 species of fish, 238 species of birds, as many as five species of turtles and 40 species of fresh water mussels that live in or near the St. Croix River.

Figure 5-4: Hydrology depicts the major watersheds within the St. Croix River Basin in New Scandia Township: the Comfort Lake-Forest Lake Watershed in the northwest corner of the Township, the Marine-On-St. Croix Watershed near the St. Croix River, the Carnelian-Marine Watershed around Big Marine Lake and the Rice Creek Watershed in the southwest corner of the Township. The Minnesota Department of Natural Resources has identified the watersheds that flank Big Marine Lake and the St. Croix River, respectively, as “threatened”.

## **NATURAL COMMUNITIES**

The term ‘natural communities’ is defined as “groups of native plants and native animals that interact with each other and with the surrounding nonliving environment, generally in ways not greatly altered by humans or by introduced plants or animals” by the Minnesota Department of Natural Resources. Some of the natural communities once found in the Township have since been eradicated or altered. Even so, New Scandia Township still has some significant natural communities remaining (see Figure 5-5: Native Plant Communities). A brief summary of the types of natural communities that survive are listed below:

**Deciduous Forests.** Deciduous forests are upland communities with stands of deciduous (broad-leaved) trees such as oak, aspen, basswood, maple, and birch. These forests are in dry to mesic habitats (refers to habitats with plentiful rainfall and well-drained soils) and they consist mostly of Northern Red Oak, Northern Pin Oak, White Oak, and Bur Oak. They occasionally contain Wild Black Cherry, Aspen, Basswood, Green Ash, and Paper Birch. Deciduous forests provide habitat for rare plant species including Stemless Tick-Trefoil, Goldies Fern, and Ginseng. They also provide habitat for rare animal species like Red-Shouldered Hawks, Fox Snakes, Bull Snakes, and Milk Snakes. Threats to the existing oak forests in the area include invasion of nonnative plants, the spread of oak wilt, and native community fragmentation by development.

TOPOGRAPHY/ WATERSHEDS



## HYDROLOGY



**Mixed Coniferous-Deciduous Forests.** Includes White Pine-Hardwood forests that occur on well-drained upland soil types. This natural community's structure is defined as a continuous canopy of forest trees with at least thirty percent cover in White Pine. Common tree species include Red Oak, Red Maple, Big-Toothed Aspen, Basswood, Bur Oak and Northern Pin Oak, along with the White Pine. Ginseng is found here in addition to rare animal species of Osprey and Bald Eagle. Falls Creek SNA is a good example of a White Pine-Hardwood Forest.

**Floodplain Forests.** Located on islands and floodplains along the St. Croix River, common tree species include Silver Maple, Green Ash, Box Elder, Black Willow, Slippery Elm and Cottonwood. The rare Buttonbush and Walter's Barnyard Grass is found here. Floodplain forests provide habitat for rare animal species, including the Red-Shouldered Hawk, the Louisiana Waterthrush, Snapping Turtle and the Wood Turtle. Threats to this habitat include the alteration of natural flood cycles by dams, shoreline stabilization for water navigation and waterfront development. McLeod's Slough would be one representative example of a floodplain forest. William O'Brien State Park contains another.

**Forested Wetlands.** Two types of forested wetland communities exist in New Scandia Township: Conifer Swamps and Hardwood Swamps. Conifer Swamps are found on organic soils in low wet areas and along slow moving streams. They consist mostly of Tamarack or Tamarack-mixed with Paper Birch and Black Ash. Conifer swamps provide habitat for rare plant species including Waterwillow and Club-Spur Orchid. They also provide habitats for rare animals like Blanding's Turtles and Snapping Turtles.

Hardwood swamps are found on organic soil in low wet areas at the edge of wetlands. They consist mostly of Black Ash, Red Maple, Yellow Birch, and American Elm –trees with shallow root systems that can survive saturated soil conditions. Hardwood Swamps provide habitat for rare plants like Water Willow and Bog Bluegrass. They also provide habitat for rare animals like Red-Shouldered Hawks and Louisiana Waterthrushes. Threats to existing Conifer Swamps and Hardwood Swamps include alteration of natural drainage systems, invasion of nonnative species, sediments, nutrient runoff, and, in the case of the American Elm, disease.

**Shrub Wetlands.** Shrub wetlands are shallow wetlands dominated by tall shrubs. Generally, shrub wetlands are too wet to support trees and they do not have deep enough water to support the vegetation found in marshes. Most shrub wetlands in the region have shrubs that are six to ten feet tall. The most common shrubs include Speckled Alder, Slender Willow, Red-Osier Dogwood, and Poison Sumac. Saplings and a few mature trees of

Tamarack, Paper Birch, Quaking Aspen, and Black Ash are sometimes present. Rare animal species that may inhabit shrub wetlands include Woodland and Blanding's turtles. Threats to remaining shrub wetlands include fluctuations in water level caused by drainage systems and roads, increases of sedimentation and nutrients from adjacent land uses, and invasion of Buckthorn and Purple Loosestrife.

**Open Wetlands.** Open Wetlands consist of Wet Meadows, Fens, and Emergent Marshes. These communities consist mostly of sedges and grasses and are found in relatively flat areas that are poorly drained. They differ from each other in that wet meadows occur on peat or muck that is generally less than two feet deep, rich fens occur on peat that is usually more than two feet deep, and poor fens have a layer of sphagnum moss across the top of the peat.

Wet Meadows and Fens were historically present throughout much of the region. However, several of these areas were drained and converted to other uses. Many of the remaining Wet Meadows and Fens are threatened by drainage systems and roads, increase in sediments and nutrients from adjacent land uses, and invasion by Cattails or Purple Loosestrife. Wet Meadows and Fens provide habitat for rare plant species such as Twisted Yellow-Eyed Grass and Marginated Rush. They also provide habitat for rare animal species including American Bitterns, Sandhill Cranes, and Blanding's Turtles.

Emergent Marshes and Cattail Marshes occur in deeper water than Wet Meadows and Fens. These areas often have standing water in them throughout the growing season. Cattails are present in both Emergent Marshes and Cattail Marshes. However, Emergent Marshes contain more diverse plant species, whereas Cattail Marshes are dominated by cattails.

Cattail Marshes are more common today than they were historically. Dikes and impoundments created many Cattail Marshes; they have a low diversity of wetland plant species. Emergent Marshes and Cattail Marshes provide habitat for rare plant species such as Waterwillow and Walter's Barnyard Grass. They also provide habitat for rare animals including American Bitterns, Common Moorhens, Sandhill Cranes, Snapping Turtles, and Blanding's Turtles.

**Bedrock and Beach Communities.** Bedrock and Beach Communities occur on cliffs, bare rock, lake and river beaches that support sparsely vegetated natural communities. Lush plant life tends not to flourish here due to extreme environmental conditions. Within New Scandia Township,

examples of two different Bedrock and Beach Communities occur: the Dry Cliff and the River Beach.

Dry Cliff Communities are small herbaceous plants that grow on exposed bedrock on steep or vertical slopes. Common plants include Harebell and Columbine. Rare plants include the Cliff Goldenrod. These environments are home to many rodents, bats and reptiles. Rare species include the Peregrine Falcon. Development, road construction and rock climbing are common threats to these habitats.

The River Beach supports short-lived perennial and annual plants that grow on exposed river beaches. These locations typically shift as a result of sedimentation and erosion, resulting in an ever-changing shoreline. Common plants include Silver Maple, Blue Vervain and Swamp Milkweed. Rare plants include Walter's Barnyard Grass. Animals typically found near these communities include the Great Blue Heron and the Belted Kingfisher. Rare animals include the Northern Cricket Frog. Disturbance from boat landings and docks, alteration of water level cycles caused by water control structures and stabilization of river beaches threaten the River Beach Community.

**Aquatic Communities.** Lake Bed Communities are found in shallow-water lakes. These communities are different from wetland habitats in that water is continuously present in Lake Bed Communities. Water is not always present throughout the year in wetlands. Lake beds usually have a cover of floating-leaved plants (Waterlily), submergent plants (Pondweed), and free-floating plants (Duckweed). Dredging, filling, nutrients, sediments, and invasion have altered many lake beds by weeds. Aquatic communities provide important habitat for a variety of plant and animal species.

**Animals of the St. Croix River Valley.** Along with some of the rare species mentioned above, this area supports Gray Wolf, Black Bear, White-Tailed Deer, Red and Gray Fox, Coyote, Beaver, Otter, Muskrat, Badger, Fisher, Raccoon, Striped Skunk, Squirrels and many small mammals, due to the diversity of Riverway habitat.



NATIVE PLANT COMMUNITIES



**Ecological Importance.** Figure 5-6: Ecological Importance illustrates those areas of New Scandia Township that offer moderate, high and outstanding ecological significance as determined by the Minnesota Department of Natural Resources, which draws from a number of sources, including the Metropolitan Council. Ecological values are offered as comparison to make land-use decisions. Areas of outstanding ecological significance are generally based on the presence of native vegetation. Represented in dark green, they include much of the land adjacent to the St. Croix River, the western half of William O'Brien State Park, a large area northwest of Big Marine Lake and the respective shorelines of Big Marine, Fish, Hay and Sand Lakes. Areas of high ecological significance (represented in medium green) include the eastern half of William O'Brien State Park and the extended shorelines of Fish, Long, Hay, Sand, Goose, White Rock, German, Nielson, Sea and Bone Lakes, respectively. Additional areas of high importance include floodplains, major stream corridor buffers, the area just south of the New Scandia Community Center, south of Bone Lake and east of Sea Lake. Significant areas also exist in several locations between the western boundary of the Township and CSAH 15/Manning Avenue. Moderate ecological significance, depicted in light green, occurs east of the Soo Railroad Line and State Highway 95 and north of William O'Brien State Park, east of Goose Lake just south of 220<sup>th</sup> Street North, east of Big Marine Lake and west of Bone and German Lakes, respectively.

**Future of Natural Communities.** Only a few fragmented areas of natural communities survive in New Scandia Township. Unless measures are taken to protect these areas, many of them may be completely lost or severely degraded. Housing developments, road construction, alteration of drainage systems, chemical runoff, sedimentation, and succession due to the lack of fire all threaten the area's remaining natural communities. Wooded upland communities are particularly threatened because they are more easily developed than wet areas.

## **EXISTING PUBLIC OPEN SPACE**

Public open space in and around New Scandia Township exists in a variety of forms. Most of the Township's open space involves outlots that consist of wetlands. These wetlands have little potential for developed recreation uses, yet still play an important role in New Scandia Township's Open Space System.

The Hardwood Creek Wildlife Management Area is located near the Township in the southeast part of Forest Lake, consisting of a large wetland complex. In New Scandia Township, there are several areas of significant native habitats, which include a wildlife management area and a scientific



ECOLOGICAL IMPORTANCE



Natural area. They are open to the public for fishing, hunting and other related outdoor uses.



*Falls Creek Scientific and Natural Area*

**Falls Creek Scientific and Natural Area (SNA).** Located three miles north of Copas on State Highway 95, this 136-acre parcel is classified as landscape type Deciduous Woods on St. Croix Moraines and Outwash Plains. Thought by the Minnesota Department of Natural Resources to be one of the most diverse natural areas remaining in Washington County, this site shows the largest displacement of any known Paleozoic rocks in Minnesota. This SNA is unique for its stand of virgin hardwood and white pine forest. Rare plant species of Louisiana Water Thrush and Kitten-Tails occur here.

**Rutstrum Wildlife Management Area (WMA).** Also known as **McLeod's Slough**, this site is located about one mile upstream from the Otisville carry-in access. Accessible only by the St. Croix River, this 24-acre parcel consists of about 83% open water and 17% flood plain forest with mixed emergent marsh and river beach. Boundary posting is infrequent. Donated in the late 1950's by conservationist Calvin Rutstrum, this site offers wildlife viewing.

Other public open space and natural areas are scattered throughout New Scandia Township. Much of this open space is tax-forfeit land covered by wetlands. Some of this open space involves small parcels of land that are difficult to access and some involves large parcels of land that the Minnesota Department of Natural Resources owns and manages.

### **IMPORTANCE OF OPEN SPACE**

There are many reasons why natural areas and open space preservation is important to New Scandia Township:

1. **Quality of Life.** Natural areas and open space (along with rivers and lakes) ranked among the highest importance for Township residents' quality of life in the 2004 New Scandia Township Community Survey. If these natural areas are destroyed, then the quality of life in New Scandia Township will suffer for these and future residents.
2. **Protection of Plants and Animals.** Open space provides habitat for plants and animals (including rare species) and thereby helps preserve biological diversity.
3. **Recreation Opportunities.** Open space provides opportunities for nature-related recreation activities like nature observation and hunting.

4. **Reduce Effects of Pollution.** Open space (natural areas in particular) help protect the quantity and quality of water in the area. Natural areas also help remove carbon dioxide and pollutants from the air.
5. **Economics.** “The Economic Value of Open Space”, published by the Wilder Foundation for the nonprofit Embrace Open Space, supports the idea that open space adjacent to residential areas often increases property and tax values. It may be that higher-density developments with shared open space are more valuable than subdivisions with large lots.

### THREATS TO OPEN SPACE

Open space (especially natural areas) have been degraded and/or destroyed. A description of major threats to the remaining open space in New Scandia Township follows:

1. **New Development.** New Scandia Township is under tremendous development pressure. New housing and businesses are built every year. While this growth benefits New Scandia Township in many ways, it can also adversely affect existing open space- unless it is carefully planned. Wooded uplands are particularly threatened because development can occur in these areas more easily than in low-lying, wet areas.
2. **Road Construction.** Additional roads will be constructed as New Scandia Township continues to develop. Roads can divide and fragment existing natural areas. They can also alter drainage patterns and obstruct wildlife corridors. Trails, if designed improperly, can also adversely affect natural areas.
3. **Alteration of Existing Drainage Patterns.** Building development, road construction and agricultural tiling can affect drainage patterns and thereby increase or decrease water levels in natural areas. This, in turn, can affect the existing vegetation and wildlife in the area.
4. **Invasion of Non-Native Species.** Non-native plant species like Purple Loosestrife and Eurasian Milfoil can invade natural areas and crowd out native plants. Once these nonnative plants take over, they decrease the biological diversity of the area.
5. **Erosion and Sedimentation.** Agriculture and development can contribute to soil erosion and sedimentation. Misuse of all-terrain vehicles, mountain bikes and other off-road vehicles are of major

concern with regard to erosion damage in ecologically sensitive areas. Steep slopes and the banks of creeks and lakes are particularly prone to erosion if they are disturbed. As more erosion occurs, lakes and wetlands begin to fill with sediments that can adversely affect water quality and habitat.

6. **Chemical Runoff.** Many farmers and homeowners apply chemical fertilizers, pesticides and insecticides to their land. Runoff from these chemicals can have a negative affect on water quality, vegetation and wildlife.
7. **Succession Due to Lack of Fire.** Fire can help maintain natural habitats. Historically, fires kept prairies free of trees and invasive plants. Because of the lack of periodic fires, many prairie areas that once existed in New Scandia Township have undergone succession to become woodlands. While woodlands are also important natural areas, it is worthwhile to maintain some prairie areas for ecological diversity.
8. **Lack of Understanding.** People who do not understand how their own actions affect the ecosystem threaten natural areas. For example, someone who does not clean off his or her boat before putting it in the water could be introducing Eurasian Milfoil to a lake. Or, someone that takes his or her horse off an equestrian trail could be promoting soil erosion. Promoting public awareness is an important part of protecting open space and the natural environment.

## **VISIONING SESSION: OPEN SPACE ISSUES, OPPORTUNITIES and RECOMMENDATIONS**

The following issues, opportunities and recommendations specific to open space in New Scandia County were developed over a series of meetings and workshops with the Park and Recreation Committee that included a Visioning Session with members of the School District and Town Board in December of 2004:

### **ISSUES:**

1. Development pressure.
2. Deterioration of water quality.
3. Loss of wildlife habitat.

4. Transformation of agricultural lands.
5. Increasing traffic.
6. Conflicts between motorized use & non-motorized use.
7. Restoration of pre-settlement vegetation.

**OPPORTUNITIES:**

1. Preserve rural character.
2. Maintain “natural beauty” of area.
3. Emphasize significance of Lower St. Croix River.
4. Promote coordination between local, regional and state agencies.
5. Explore alternative funding sources for open space development.
6. Protect watershed(s).
7. Protect trout streams.
8. Maintain areas of significant ecological importance.
9. Encourage/ maintain access to water resources.
10. Development strategies for purchase and donation.
11. Ensure open space is permanently preserved.

**RECOMMENDATIONS:**

1. Locate trails along ecologically-valued areas.
2. Develop conservation easements.
3. Designate some lakes as strictly non-motorized use.
4. Maintain minimum buffer around natural areas if development occurs.
5. Protect stream corridors; link to promote preservation of open space.
6. Develop conservation policies relative to Wind in the Pines Park.
7. Promote public awareness for value of open space.

**IN SUPPORT OF OPEN SPACE**

New Scandia Township’s natural areas and open space are recognized for their significance outside the Township. Two independent studies are referenced here: The Green Corridor Project and the Carnelian-Marine Watershed District Natural Resource Inventory and Management Plan.

**GREEN CORRIDOR OPPORTUNITY AREAS**

The Green Corridors Project (GCP) is an independent collaborative of eight local public and private organizations whose goal is “to help Chisago and Washington County residents keep the beautiful countryside, farmland, and special natural areas that make them great places to live.” In June of 1999, the GCP published **Creating Green Corridors in Chisago and**

**Washington Counties**, which delineated land in New Scandia Township as Green Corridors.. These lands were identified as having high natural resource conservation values. Landowners would potentially be eligible for incentive-based land tools when considering the future of their property.

The Green Corridors Project is made up of the following groups: 1000 Friends of Minnesota, Chisago County, Land Stewardship Project, Minnesota Farmers Union, Minnesota Land Trust, Rural Community Initiative, The Trust for Public Land and Washington County.

For more information regarding the Green Corridors Project, please contact 1000 Friends of Minnesota at (651) 312-1000 or [www.1000fom.org](http://www.1000fom.org).

### **CARNELIAN-MARINE WATERSHED DISTRICT NATURAL RESOURCE INVENTORY AND MANAGEMENT PLAN**

Generated for the Carnelian-Marine Watershed District (CMWD) by Emmons & Oliver Resources, this report was submitted in October of 2003 to understand the watershed's natural resources and make recommendations toward the development of a management plan. Approximately one-third of the Township's land area is in the CMWD (see Figure 5-4: Hydrology). Specific natural resource and policy recommendations from this report are included in the following Goals and Strategies section, and given credit as such.

## **GOALS AND STRATEGIES**

The following goals and strategies express the community's vision for open space in New Scandia Township. The goals are broad, general statements that the Township will strive to attain. The strategies are specific, action-oriented statements that provide the framework for a wide range of open space decisions that the Township will make through the year 2025. New Scandia Township should periodically review and update the goals and strategies expressed in this plan. Goals and strategies identified for the Township are as follows:

**Goal 1: Identify significant open space in New Scandia Township.** To accomplish this goal, the Township establishes the following Strategies:

1. Work with the Minnesota Department of Natural Resources, Washington Conservation District, watershed districts, environmental organizations, and others to identify significant open space.

2. Develop an evaluation system that ranks the value of open space based on issues such as biological diversity, size, and location.
3. Inform developers and landowners of the location and value of open space in New Scandia Township.

**Goal 2: Preserve and enhance significant open space.** To accomplish this goal, the Township establishes the following strategies:

1. Use native plant materials to restore disturbed open space and to provide landscaping throughout the park and trail systems
2. Develop plans to promote reforestation, prairie management, wetland restoration and preservation, wildlife management, and other natural resource management goals.
  - a. Generous buffers should be established and maintained around all wetlands.
  - b. Encourage development on land that is already cleared. If necessary to build on woodlands, minimize size of building footprints and length of driveways.
  - c. Encourage new trails/roads in old path alignments. Undisturbed natural areas should be avoided.
  - d. Utilize prescribed burns or mowing in Oak Savannahs/ woodlands to encourage native prairie re-establishment.
  - e. Encourage and maintain generous riparian buffers of native vegetation.
  - f. Landowner's should implement erosion control practices, like silt fences and riparian buffers.
3. Develop written recommendations for lake aeration, erosion control, nutrient loading, riparian vegetation, exotic species control, waterfowl habitat, and other water resource management goals.
  - a. Landowners to monitor oak wilt.
  - b. Implement an aggressive buckthorn removal program.
4. Partner with environmental organizations and other government agencies to preserve and enhance significant open space.

5. Identify green corridors to facilitate wildlife corridors and preserve the rural character of the community.
6. Identify lands that are adjacent to New Scandia Township's lakes and wetlands -not already in private or public ownership- for potential designation as significant open space.
7. Encourage the use of incentive-based tools such as conservation easements, purchased development rights, transferred development rights and acquisition to conserve significant open space.
8. Implement German Lake Management Plan as per CMWD recommendations. Because of its high ecological value, the area around German Lake requires maintenance of wetland buffers and minimal disturbance in the adjacent woodlands.
9. Implement Silver Creek Corridor Plan, as per CMWD recommendations.
10. Work with Washington County Parks to ensure adequate protection for Big Marine Park Reserve, as per CMWD recommendations.
11. Complete a Comprehensive Wetland Management Plan, as per CMWD recommendations.
12. Develop a Formalized Greenway Corridors Plan, as per CMWD recommendations.
13. Establish a Natural Resource Monitoring Program, as per CMWD recommendations.

**Goal 3: Promote an understanding of the value of open space.** To accomplish this goal, the Township establishes the following strategies:

1. Develop a Landowner Outreach and Stewardship Program, as per CMWD recommendations.
2. Work with the school districts, the Minnesota Department of Natural Resources, environmental organizations, and others to promote opportunities to learn about open space in New Scandia Township.

3. Provide interpretive signs and displays throughout parks, trails, and open space in New Scandia Township.
4. Post information on the Township website that inform residents about the value of open space and natural areas in New Scandia Township. Link the Township's website to other websites that provide pertinent information.
5. Prepare articles for the Township newsletter that inform residents about the value of open space and natural areas in New Scandia Township.

## OPEN SPACE PLAN

### CONCEPTUAL OPEN SPACE CORRIDOR PLAN

The objective of the Open Space Plan is to develop green corridors that preserve and enhance significant open space (see Figure 5-7: Open Space Plan). These green corridors would link fragmented open space and promote trail and wildlife corridors, respectively, while preserving the rural character of the community. New Scandia Township should use this plan as a general guide to work with the public to promote green corridors and ensure that they are preserved or enhanced as development occurs. *These proposed corridors do not necessarily reflect public acquisition of land;* the vast majority of this land would likely remain private.

### LAND PROTECTION TOOLS

There are a variety of tools that government and landowners can use to protect open space and natural areas. Following is a brief description of commonly used land protection tools that allow landowners to protect open space while retaining title to their property.

1. **Conservation Easements.** Conservation easements are established to protect significant land from inappropriate development. Most conservation easements are permanent so all future owners of the land are bound to the original agreement. Here is an example of how a conservation easement might be used. Say a landowner has 80 acres of land - 20 acres of which are cropland and 60 acres of which are native woodland. The landowner could either sell or donate a conservation easement that would restrict development in the wooded area. The landowner would still own the wooded area and could use it for approved uses like hunting and hiking, but the land would be permanently protected from inappropriate development or

uses. The conservation easement would not open the wooded area for public use. The landowner, as per Township zoning ordinances and subdivision regulations, could still develop the remaining 20 acres of cropland. Conservation easements can either be donated or purchased through a purchase of development rights (PDR) program.

2. **Conservation Reserve Enhancement Program (CREP)/Reinvest In Minnesota (RIM) Reserve Program.** These programs offer incentives for farmers to retire erodible farmland from agricultural production to establish permanent forest cover or grass cover on the same land. Incentives include up to fifty-percent cost-sharing and rental payments for land that meets eligibility requirements. Agreements range in duration from ten to thirty years. Like other programs, funding is limited. Contact the local Natural Resource Conservation Service for more information.
3. **Transfer of Development Rights.** A transfer of development rights (TDR) program allows the Township (or some other unit of government) to establish preservation areas in which landowners receive credits for not developing their land. In return, landowners can apply their credits to allow them to develop at a higher density in other approved areas of the Township. If landowners do not have other land that they can develop in the Township, they can sell their credits to a developer who would be able to use the credits.
4. **Land Retirement Programs.** Land retirement programs provide financial incentives for landowners to retire farmland or set aside natural, undeveloped land. Federal and state governments sponsor most of these programs, so their funding varies yearly. Highly erodible farmland and land that provides critical habitat for wildlife are most likely to receive funding through land retirement programs.
5. **Property Tax Relief Programs.** Property tax relief programs reduce, defer, or eliminate taxes on significant agricultural lands, forests, wetlands, and other lands that protect significant natural areas. The landowner is required to maintain the land in the condition stated in the agreement for the duration of the agreement.
6. **Restoration Cost-Share Programs.** Restoration cost-share programs compensate landowners for some of the costs involved in restoring and protecting natural areas on their land.

7. **Forest Legacy Program.** Private forestlands may be eligible for voluntary conservation easements through purchase via federal grants available through the USDA Forest Service Program. Currently under consideration, some areas of New Scandia Township may be eligible in the proposed “Lower St. Croix River Candidate Forest Legacy Area.”

Landowners can also transfer title to their land to a conservation organization or unit of government. Commonly used transfer tools include:

1. **Donations.** There are many ways that a landowner can donate land. Landowners can donate unrestricted or restricted title to their land. If they donate restricted title to their land, then the receiver of the land must use the land according to the stated restrictions. For example, if a landowner donates land with a restricted title to New Scandia Township, the landowner may require that the Township leave the land in an undeveloped state or that the Township develop the land into a passive nature park. Landowners can also donate land through their will. Conversely, if landowners want to claim a tax deduction during their lifetime, they can donate land through what is known as reservation of life estate. This allows the landowner the right to live out their life on the donated property.
2. **Land Acquisition.** Landowners who are interested in protecting their land can sell their land to conservation organizations or units of government, who in turn will protect the land from inappropriate development. For example, a landowner may want to sell their land for inclusion in the state, county, or Township park system.
3. **Land Exchange.** A land exchange is a creative way for a landowner to receive title to another piece of property in exchange for title to their land. For example, a landowner in a rural, natural area may exchange their land for land within a developed area of the Township.

There are additional ways in which landowners may influence the future use of their property. These land protection tools include:

1. **Deed Restrictions.** A property owner can define limits regarding allowable uses and development of a piece of property through a deed restriction. This is typically used when the landowner wants to exert future influence on a property or benefit adjacent lands to which the landowner intends to retain title. Mutual covenants are a type of deed restriction that involves multiple landowners for

combined properties. These, too, have a term limit of thirty years. Tax benefits are not associated with these conservation tools.

2. **DNR Forest Stewardship.** Stewardship plans may be developed for private property with the technical assistance of DNR foresters with the purpose of maintaining the land's sustainability while meeting the individual landowner's goals. This program is strictly voluntary.
3. **DNR Neighborhood Wilds.** This program focuses on grass-roots efforts to improve wildlife habitat and restore ecosystems on a neighborhood level.

Most landowners interested in protecting open space do so for philanthropic reasons, not for financial gain. Nevertheless, many landowners find that there are tax advantages related to land protection options. Some landowners are able to claim charitable contribution deductions on their income tax. By protecting the land, many landowners find that their property tax is reduced. Keep in mind that tax laws are always changing. It is important for landowners to consult with lawyers and accountants, respectively, to determine the financial consequences of land protection options.

### **ENVIRONMENTAL LEARNING OPPORTUNITIES**

Environmental learning opportunities present fun and meaningful recreation activities for many people and organizations including schools, scouts, and nature clubs. In addition, environmental education programs help residents and others understand the importance of protecting open space. When people have a better understanding of natural systems and open space, they are more likely to become better stewards of the land.

A description of environmental education opportunities in New Scandia Township follows:

1. New Scandia Township's parks and trails should include interpretive signs that help people understand the natural systems in the area. Signage could inform people about environmental practices such as hikers staying on the trails and boaters cleaning their boats of all weeds before entering the water.
2. Proposed acquisition of the parcel just east of the police and fire departments on State Highway 97 could serve as an environmental learning site. Habitat restoration projects and self-guided nature paths could be developed. The Township could explore ways to

provide interpretive features and/or demonstration plots at this proposed park in the future.

3. Several existing environmental education programs can benefit New Scandia Township. For instance, the Minnesota MinnAqua Program offers residents an opportunity to learn about fishing and caring for our water resources. The Minnesota School Forest Program provides communities with resources for developing an outdoor classroom. Furthermore, New Scandia Township's schools can offer and participate in environmental programs. The Minnesota Department of Natural Resources can provide additional information about these and other environmental education programs.
4. Work with Girl Scouts of America to preserve and restore the natural communities of Lake Lakamaga CMWD-RIMP.

## CONCLUSION

Many residents live in New Scandia Township because they enjoy living in a place rich in natural areas and open space that contribute to the Township's rural character. Development pressure will threaten these areas as New Scandia Township continues to grow. Keeping future generations in mind, the Township should work with developers and landowners toward the protection and preservation of open space.

OPEN SPACE PLAN