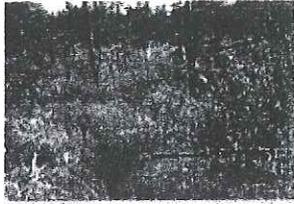


APPENDIX

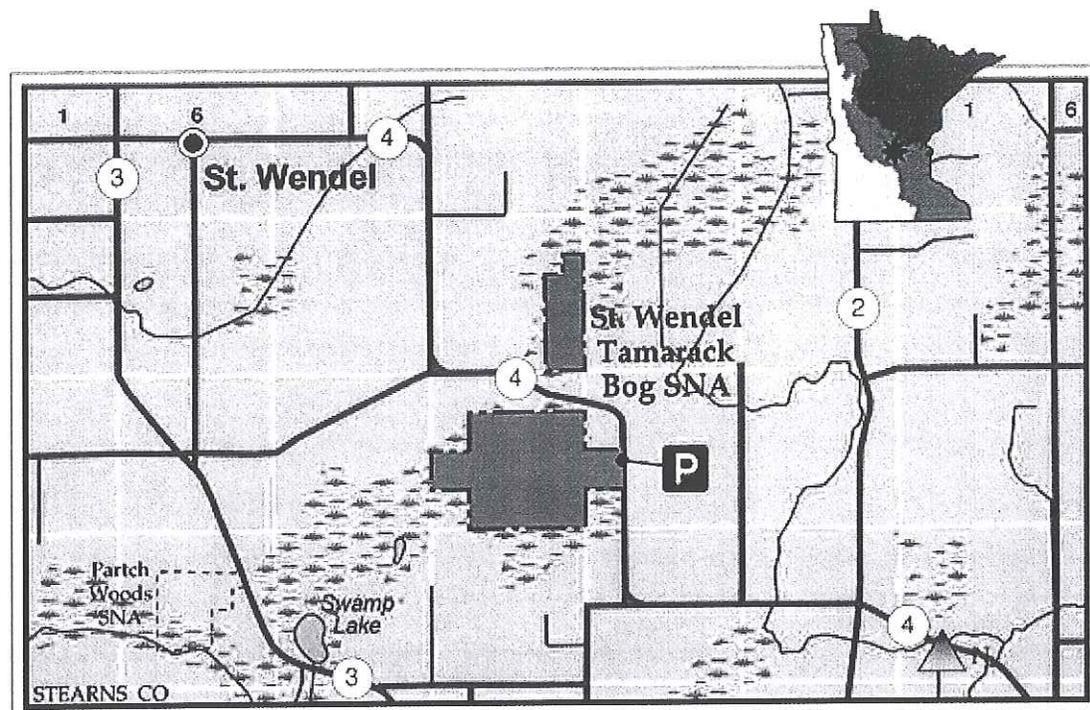
APPENDIX

Attachment 1**St. Wendel Tamarack Bog SNA****170 Acres****Located** 10 miles NW of St. Cloud on Co Rd 4. Park on the shoulder of the road.**Stearns County** Twp 125N Rng 29W
Sec 9 & 16**Type: Deciduous Woods****ECS Subsection: Hardwood Hills****Description:**

St. Wendel Tamarack Bog SNA is one of the top two sites for Significant Biological Diversity in Stearns County (Minnesota County Biological Survey, 1999). The site is a large wetland complex, which encompasses one of the largest remaining blocks of native vegetation in the county. This SNA supports the best and largest example of Minerotrophic Tamarack Swamp in central Minnesota. In addition to the extensive tamarack stands, the project area also contains: rare Mixed Hardwood Seepage Swamp, and unique Calcareous Seepage Fen which supports a population of the State Threatened *Carex sterilis* (sterile sedge). Significant acreage of Rich Fen, Wet Meadow, Mixed Hardwood Swamp, and Shrub Swamp also occur. Two shallow lakes, each named "Swamp Lake", with rich aquatic vegetation complete the natural mosaic of the large wetland complex.

The Hardwood Hills ECS Subsection defines the transition zone between the forests to the northeast and the prairies to the southwest in this part of the state.

Plant List



Attachment 2

Avon Hills Forest SNA

354 Acres

Located *N Unit* - Located from Avon, W on Co Rd 54, N on Tower Rd 2 mile, W on gravel road .6 mi. Park along road.

S Unit - Located from Avon, S on Co Rd. 9 1.5 mi, S. on Kalla Lake Rd 1 mi, E on Schuman Lake Rd. .5 mi. Park in the old field beyond the SNA sign north of Schuman Lake Road. Do not park along the road.



© MN DNR

Stearns County Twp 124N Rng 30W
Sec 14

Type: Deciduous Woods

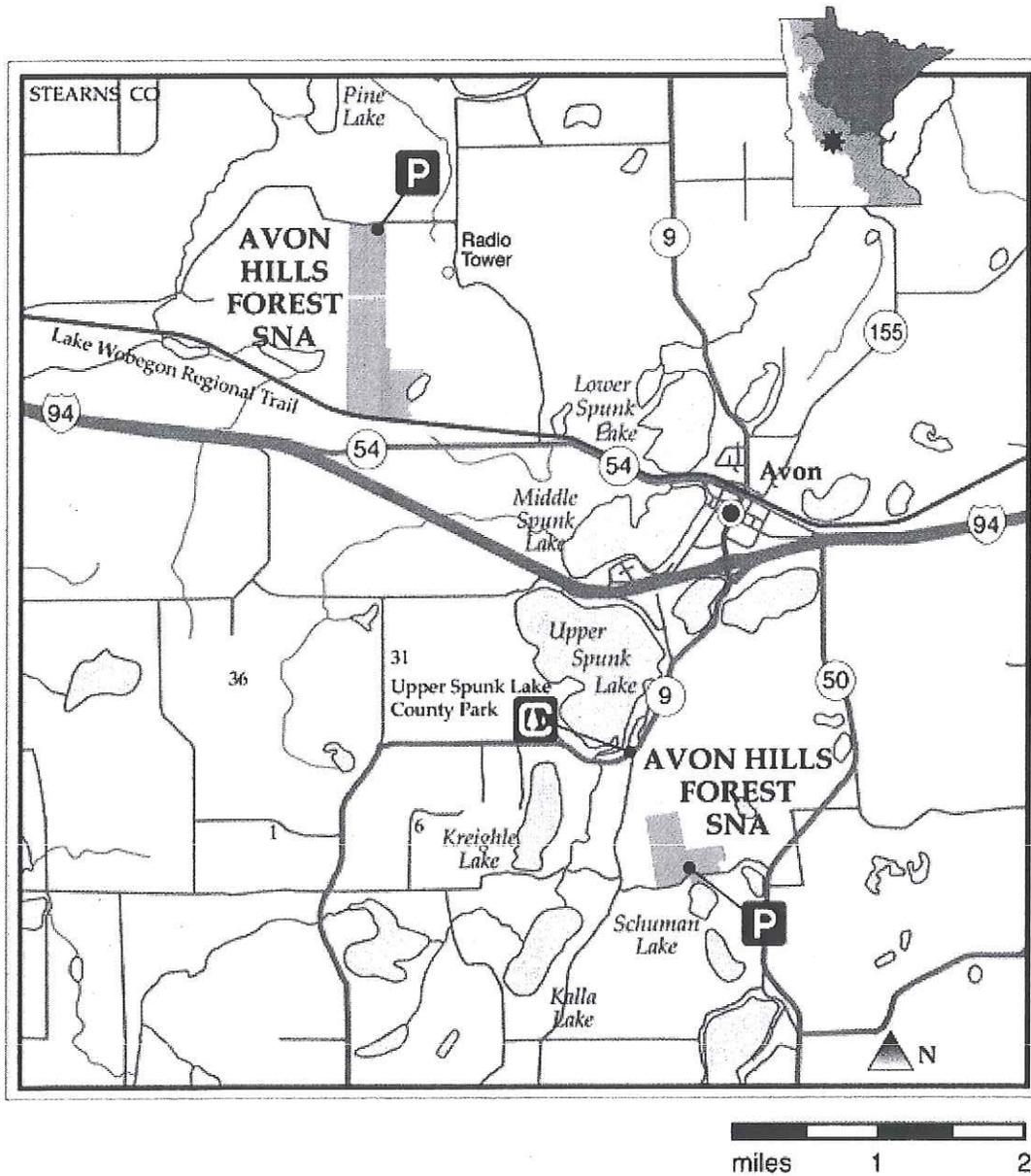
ECS Subsection: Hardwood Hills

Description:

Avon Hills Forest SNA is situated on the rolling hills of the St. Croix Moraine, deposited by the glaciers 10,000 years ago, and dotted with wet depressions, pot holes and lakes. The SNA contains large tracts of oak forest, forested swamp, marsh, and sedge meadow native plant communities. Two species of rare birds that only inhabit large forests occur here: cerulean warblers and red-shouldered hawks. The natural plant communities together with the hills, lakes, and streams, combine to create the lovely scenery and diverse wildlife habitat for which the area is known.

Bird List [PDF](#)

Plant List



Attachment 4

December 6, 2009

Scott J. Hylla
12385 County Road 5
Holdingford, MN 56340
(320)363-8138

Mr. John Haffley
U.S. Fish & Wildlife
22274 615 Avenue
Litchfield, MN 55355

John,

I wanted to provide you with an update regarding the Shepards Lake Restoration Project. Since our meeting in late October, I've had an opportunity to discuss the restoration project with each of the affected landowners and we have formed the Shepards Lake Association.

The landowner response to the restoration of Shepards Lake to a "3 foot depth", capable of supporting significant waterfowl habitat, has been positive thus far. One landowner has expressed reservations, particularly due to the proposed CAPX2020 HVTL project, which is projected to be constructed through Shepards Lake. The landowner's concerns are valid, since the proposed CAPX2020 project defies the notion of conservation in a lake restoration effort. As such, the effort to restore Shepards Lake should be noted in the Office of Energy Security's, Environmental Impact Study pertaining to the CAPX2020 Fargo to St. Cloud Route.

Overall, I'm optimistic of our chances to restore Shepards Lake and would like to continue restoration dialogue with the U.S. fish and Wildlife.

Please let me know if there is anything else I can do to make the Shepards Lake Restoration effort a reality.

Have a great Holiday season.

Sincerely,

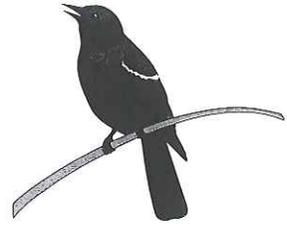
Scott J. Hylla

Attachment 5



United States Department of the Interior Fish and Wildlife Service

Wetland Management District
22274 615 Avenue
Litchfield, Minnesota 55355
(320-693-2849)



February 4, 2010

Dave Ebaugh
12992 380th Street
Avon, MN 56310

Mr. Ebaugh;

John Haffley of our staff has informed me of your interest in having our agency investigate the feasibility of restoring shallow water to the "Shepard Lake" basin which is currently drained by Stearns County Ditch # 18.

After reviewing John's preliminary survey data as well as various maps and aerial photographs, it appears likely that shallow water can be restored to the basin without affecting adjacent croplands or infrastructure. We are eager to work with you and conduct additional on-the-ground investigations this spring.

It appears that County Ditch #18 was established in the early 1900's and its point of beginning is a short distance north of the basin. With cooperation from local government units and abiding by State drainage statutes, our office has successfully restored similar large wetlands areas that were drained by county ditches. If Shepard Lake's surrounding landowners are agreeable to a restoration plan then it's likely that the local Ditch Authority would authorize the installation of a water control structure in the ditch at the basin's outlet

We note that the basin is listed in the State's "Protected Waters Inventory" (#73-75P) and, therefore, a restoration undertaking would require permitting by the Department of Natural Resources (DNR). Because restoring Shepard Lake would have far reaching benefits to the environment (including water quality improvement, groundwater recharge, floodwater retention, wildlife habitat enhancement, etc.) it is highly likely that the DNR would issue the necessary permit.

In reviewing the township plat, it appears that at least eight landowners could be directly affected by this restoration plan and this, we foresee, could be the biggest obstacle. We may rely on you to garner their support for the project proposal and to gain their permission for us to do on-the-ground elevation surveys on their properties this spring. We would be very willing to meet with them individually to discuss the project proposal and lay out a couple of programs that can provide monetary incentives for restoring the lake.

Thanks for your interest in restoring Shepard Lake; we are eager to continue working with you and the other landowners in this regard. Please contact John at your convenience so we can coordinate our future plans and efforts.

[signed]
Steve Erickson
Private Lands Biologist

Attachment 3

NATIONAL WETLANDS INVENTORY BROCKWAY TOWNSHIP STEARNS COUNTY, MINNESOTA

WETLAND LEGEND	
CIRC39	TYPE 1
	TYPE 2
	TYPE 3
	TYPE 4
	TYPE 5
	TYPE 6
	TYPE 7
	90

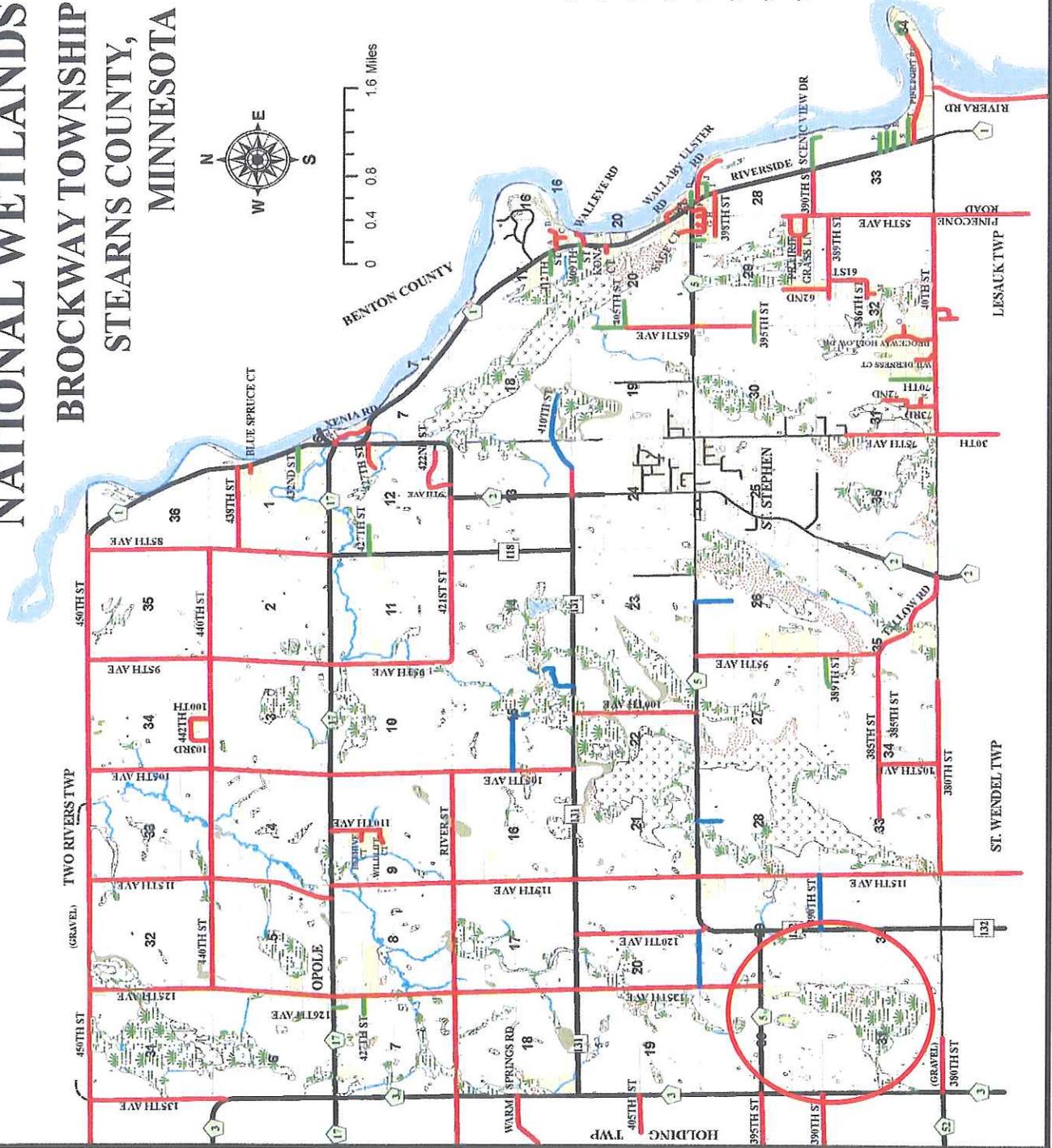
 COUNTY STATE AID ROAD
 COUNTY ROAD

- TYPE 1 - SEASONALLY FLOODED BASINS OR FLOODPLAIN
- TYPE 2 - INLAND FRESH MEADOWS
- TYPE 3 - INLAND SHALLOW FRESH MARSHES
- TYPE 4 - INLAND DEEP FRESH MARSHES
- TYPE 5 - INLAND OPEN FRESH WATER WETLANDS
- TYPE 6 - SHRUB SWAMPS
- TYPE 7 - FORESTED SWAMPS
- TYPE 8 - BOGS



Duffy Engineering & Associates, Inc.
 Highway 75 South
 Ste. 204, Box 4584
 Taylor, MN 55056-2124
 Fax: (507) 251-1254

JANUARY 28, 2005



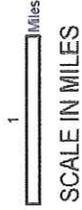
BROCKWAY TOWNSHIP - Future Land Use

Legend

-  Waterway
-  parcels
-  Advanced Sewage Treatment Overlay Dis
-  Open Space / Recreation
-  Rural Town
-  Neighborhood Residential
-  Rural Preservation / Agricultural
-  sections

SHORELINE DISTRICT BUFFER AREAS

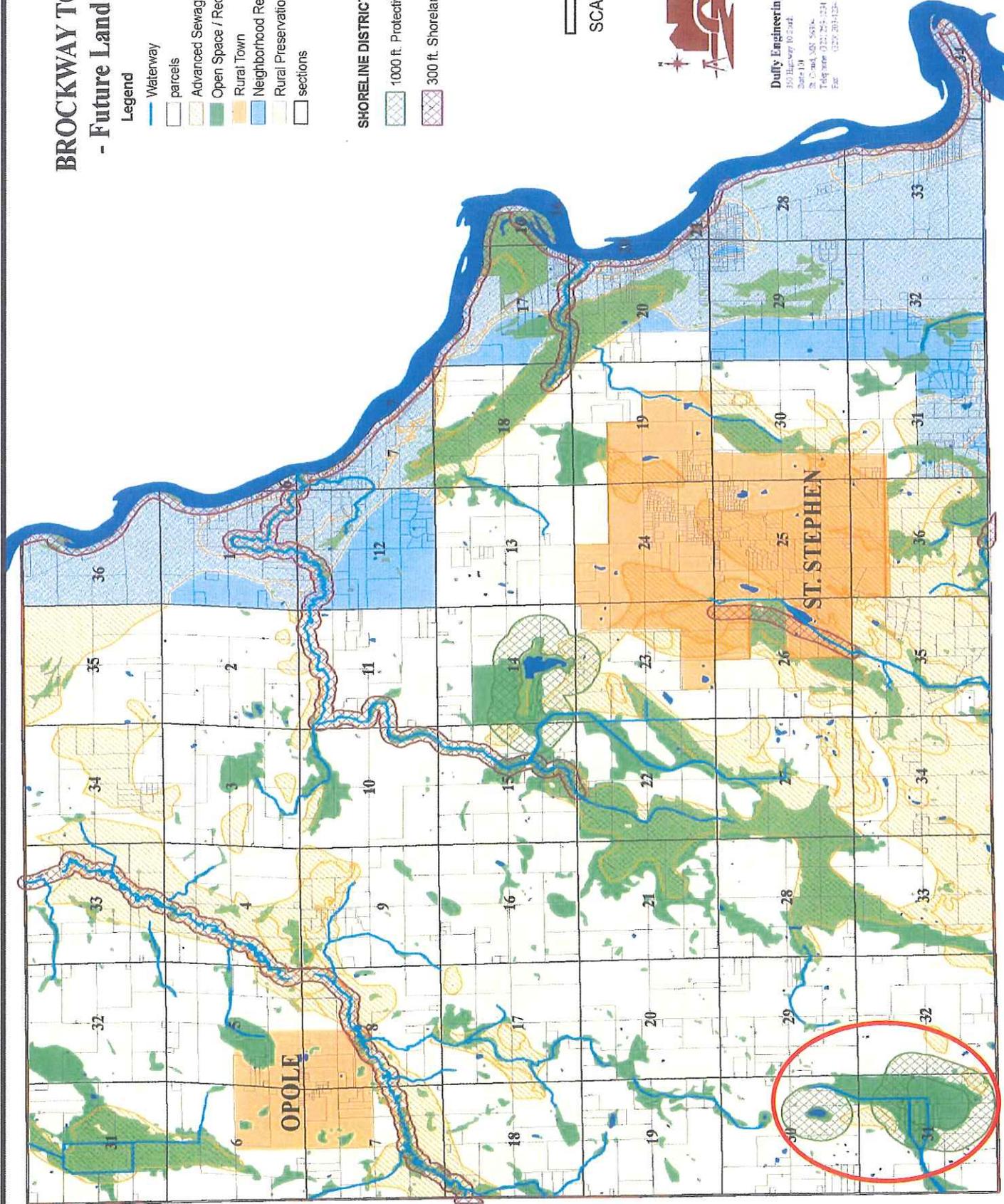
-  1000 ft. Protective Waters
-  300 ft. Shoreland District



SCALE IN MILES

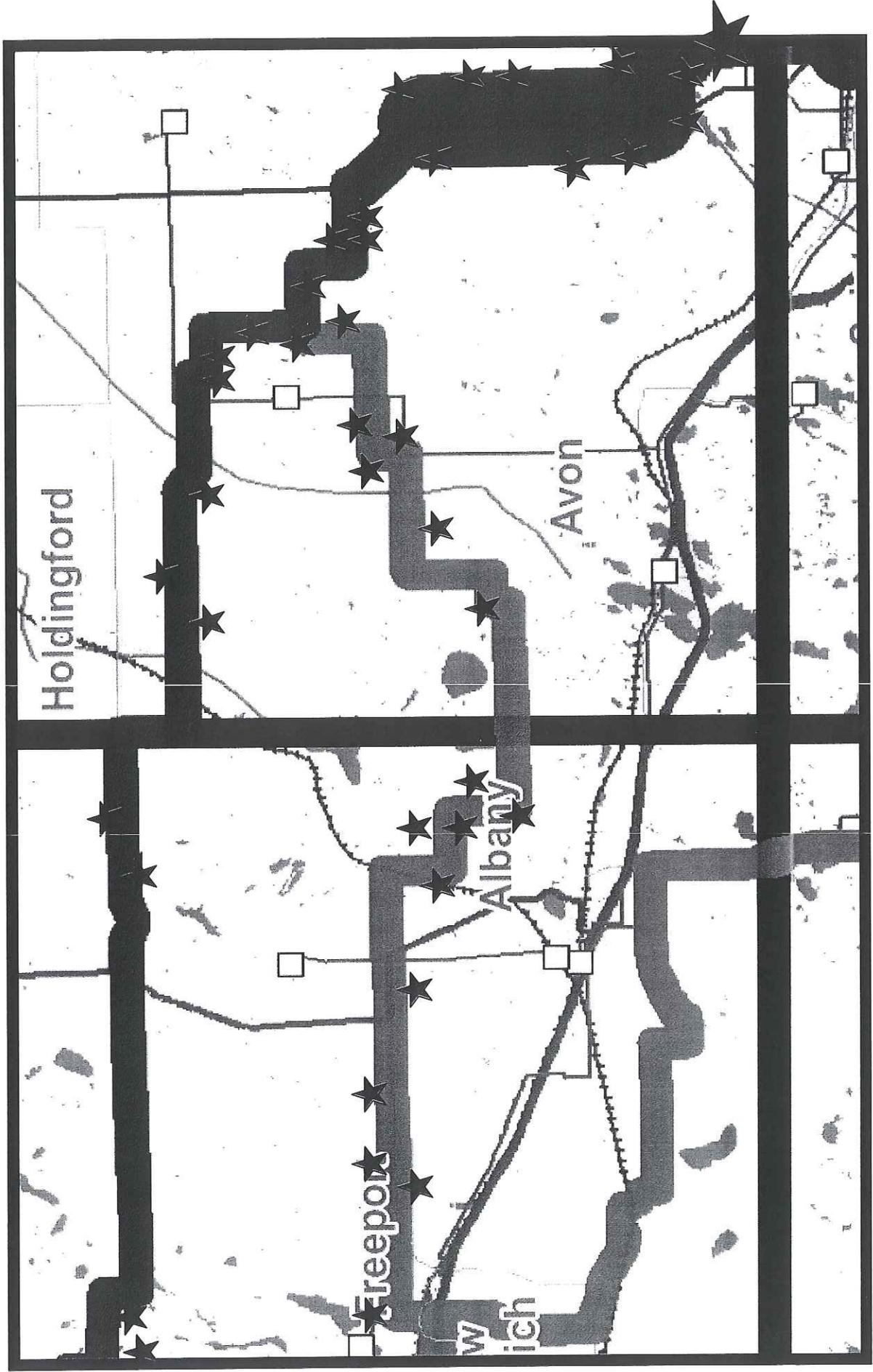


Duffy Engineering & Associates, Inc.
 150 Highway 107-244
 Suite 110
 St. Cloud, MN 56304
 Telephone (320) 263-1314
 Fax (320) 201-1250



Attachment 7

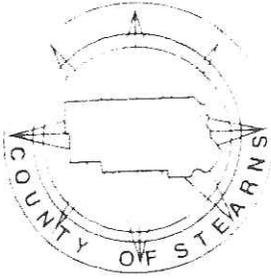
North Routes Historic Properties – Century Farms



Fargo to St. Cloud 345 kV Transmission Line Project October 1, 2009 - Century Farm Landowners Associated with the Proposed Routes

Name	Location	Notes
MORREIM, DAVID ST CLOUD MN	ST CLOUD MN	Sesquiscentennial Farm
GROETSCH, ANTHONY G. & M.A. ALBANY MN	ALBANY MN	Century Farm (SHS)
JOE SCHIFFLER FAMILY TRUST ALBANY MN	ALBANY MN	Century Farm (SHS)
KOEHN, RICHARD & DIANE ALBANY MN	ALBANY MN	Century Farm (SHS)
STICH, WAYNE A. & JOAN I. ALBANY MN	ALBANY MN	Century Farm (SHS)
WITTKOP, ROBERT & SUZANNE ALBANY MN	ALBANY MN	Century Farm (SHS)
BIENIEK, JOHN V JR & PHYLLIS AVON MN	AVON MN	Century Farm (SHS)
PIERSKALLA, RITA M. AVON MN	AVON MN	Century Farm (SHS)
SKUDLAREK, THOMAS J. & MARY C. AVON MN	AVON MN	Century Farm (SHS)
ADRIAN TRUST, JOSEPH M. FREEPORT MN	FREEPORT MN	Century Farm (SHS)
BOECKER, DAVID B. & ELLEN FREEPORT MN	FREEPORT MN	Century Farm (SHS)
HOESCHEN, WALTER J. & ALICE M. FREEPORT MN	FREEPORT MN	Century Farm (SHS)
GEISE, SYLVESTER FREEPORT MN	FREEPORT MN	Century farm (SHS)
EBNET, JOEL B. & KATHLEEN L. HOLDINGFORD MN	HOLDINGFORD MN	Century Farm (SHS)
SKROCH, JAMES HOLDINGFORD MN	HOLDINGFORD MN	Century Farm (SHS)
HEIM TRUST, KATHLEEN A. SARTELL MN	SARTELL MN	Century Farm (SHS)
SCHEFERS, ROBERT L. & DORIS V. SARTELL MN	SARTELL MN	Century Farm (SHS)
FIEDLER, R. L. & M. A. TRUSTEES ST JOSEPH MN	ST JOSEPH MN	Century Farm (SHS)
LODERMEIER, PAUL G. & RITA E. ST JOSEPH MN	ST JOSEPH MN	Century Farm (SHS)
STOCK, GILBERT J. ST JOSEPH MN	ST JOSEPH MN	Century Farm (SHS)
FERCHE FAMILY LMTD PARTNERSHIP ST STEPHEN MN	ST STEPHEN MN	Century Farm (SHS)
GREBINOSKI, ANNETTE A., REV TRUST HOLDINGFORD MN	HOLDINGFORD MN	Century Farm (SHS)
HYLLA, SCOTT J. & JENNIFER HOLDINGFORD MN	HOLDINGFORD MN	Century Farm (SHS)
GONDRINGER, LEROY & MARION J. ALBANY MN	ALBANY MN	Century Farm
KLUG, RICHARD P. & LOIS M. ALBANY MN	ALBANY MN	Century Farm
LUETHMERS, KENNETH A. & K P ALBANY MN	ALBANY MN	Century Farm
HULS, HOWARD & JEANNE M. AVON MN	AVON MN	Century Farm
RUDNICKI, ERNEST & ANN AVON MN	AVON MN	Century Farm
SCHWALBE DAIRY AVON MN	AVON MN	Century Farm
HERKENHOFF, BERNARD & DIANE FREEPORT MN	FREEPORT MN	Century Farm
WILWERDING FAMILY LLP FREEPORT MN	FREEPORT MN	Century Farm
KANTOR, EDWARD S. & DOLORES M. HOLDINGFORD MN	HOLDINGFORD MN	Century Farm
LODERMEIER TRUST, RAYMOND P. ST CLOUD MN	ST CLOUD MN	Century Farm
HULS, JOSEPH M. & DELPHINE G. ST JOSEPH MN	ST JOSEPH MN	Century Farm
LEGATT, DENNIS J. & LOIS J. ST JOSEPH MN	ST JOSEPH MN	Century Farm
LEGATT, VICTOR & MARY J. ST JOSEPH MN	ST JOSEPH MN	Century Farm
SKAJ, PETER G. & GALE A. ST JOSEPH MN	ST JOSEPH MN	Century Farm
SKROCH, JAMIE & JENNY ST JOSEPH MN	ST JOSEPH MN	Century Farm
STOCK, STEVEN ST JOSEPH MN	ST JOSEPH MN	Century Farm
STOMMES FAMILY TRUST	ST JOSEPH MN	Century Farm
WARNERT, LEROY & LOIS Z. ST JOSEPH MN	ST JOSEPH MN	Century Farm

COUNTY OF STEARNS



Office of the County Administrator

Administration Center Rm 121 • 705 Courthouse Square • St. Cloud, MN 56303
320-656-3601 • Fax 320-656-6393 • www.co.stearns.mn.us

November 4, 2009

Mr. David Birkholz, Project Manager
Energy Facility Permitting
Minnesota Department of Commerce
85 7th Place East, Suite 500
St. Paul, MN 55104-2198

Re: CapX2020 Routing Moorhead to St. Cloud

Dear Mr. Birkholz:

On behalf of the Stearns County Board of Commissioners, we wish to express our preferences regarding the routing of the proposed CapX2020 power line project (Moorhead-St. Cloud) through Stearns County.

Our County Board is very interested in seeing that the preferred route be located as close to the current I-94 freeway corridor as possible. While we recognize that Mn/DOT has good reason to be reluctant to approve encroachments along this right-of-way (as exhibited in the attached correspondence), the alternative routes suggested present many problems for individual homeowners and businesses. We are particularly concerned about alternate routes outside of the I-94 corridor near Avon, Minnesota.

Based on our long and contentious history related to power line routing, Stearns County is especially sensitive to citizen reaction to proposed projects of this nature. We believe that Mn/DOT officials should be as accommodating as possible in enabling a power line route that least affects these individual homes and businesses. We encourage Mn/DOT to consider rate waivers, if necessary, to achieve this objective as it relates to right-of-way along I-94.

Stearns County recognizes the need for this project to be completed in an expeditious manner. We wholeheartedly support it. However, we are very hopeful that the existing right-of-way along I-94 be used as the preferred route in all but the most unusual situations.

Sincerely,

Leigh Lenzmeier, Chair
Stearns County Board of Commissioners

JJ GMR:mst

Attachment

cc: Michael A. Barnes, Minnesota Department of Transportation
Darren Lamm, CapX 2020 Siting and Permitting Coordinator

Stearns County Comprehensive Plan

Chapter 3. Land Use Plan

Introduction

The Land Use Plan is the central element of this Comprehensive Plan, and has received by far the greatest level of public interest and comment. The use of land and the pattern of development affect everything from the location and expansion of roads and central utilities to the state of animal agriculture, the provision of emergency services, the protection of natural resources, and the intangible qualities that constitute “rural character.”

The Land Use Plan is intended to provide the framework that will guide County policies, priorities and investments. The plan will not only guide future land use change, but will also help shape the County’s actions in the areas of transportation, agricultural and natural resource protection, economic development and intergovernmental relations. This last item is particularly important in coordinating the land use policies of the County’s townships and cities.

The Land Use Plan employs a two-part approach. First, it defines broad “policy areas” within the County, which share different growth pressures, resource and settlement patterns, and goals for development and protection. Second, it designates all land within Stearns County outside the incorporated cities in specific land use categories, as expressed on the Future Land Use Plan map (Figure 3.4). The policy areas represent a long-range pattern, while the land use categories are more likely to change during the time period covered by this plan and require periodic updating.

The Land Use Plan is organized into the following sections:

- Existing Land Use and Land Use Trends
- Issues and Challenges
- Goals and Objectives
- Policy Areas and Related Policies
- Land Use Categories and Related Policies
- Understanding and Using the Future Land Use Map
- Resource-Related Policies
- Development Suitability and Regulatory Flexibility
- Staging of Development

Existing Land Use and Land Use Trends

Figure 3.1 depicts the current pattern of land use within the County, as of 2007. The map was created through analysis and interpretation of property tax codes, which do not always correspond directly to typical residential, commercial or agricultural land use categories.

Therefore, the map will inevitably include some inconsistencies or inaccuracies.

The land use categories shown on the map are:

- Agriculture and woodlands (these are often combined on single properties)
- Recreational – includes public parks and protected open space, including state and federal lands
- Very Large Lot Residential – 10 to 40 acres (some of these parcels are used in part for agriculture or other uses)
- Large Lot Residential – 2 to 9.9 acres
- Residential – less than 2 acres
- Commercial – includes some agriculturally-oriented commercial uses, lake resorts, and some mining operations (also shown as resource extraction)
- Industrial
- Institutional – includes the St. Johns University campus and several youth camps
- Utilities/Transportation – includes road rights-of-way, rail yards, power generation facilities and similar uses
- Resource Extraction – symbols on the map indicate locations of permitted mining operations (all may not be currently active)

Land use trends within the County generally involve increased pressure for development, varying by location and development type. Figure 3.2 shows locations of new residential development between 2000 and 2005. The map shows a general pattern of new development centered within and close to cities, in shoreland areas, and on larger tracts of land in the eastern half of the County. (Chapter 2, Demographic Background, discusses trends in population and housing by sub-area of the County.) The cities that experienced the highest levels of residential growth since 2000 are St. Joseph, Waite Park, St. Augusta, Sartell, Cold Spring, Albany, Sauk Centre, Paynesville and Melrose. Some of this growth was due to annexation. Townships with the highest levels of growth are generally located along the County's southern boundary: Eden Lake, Munson, Fair Haven, Maine Prairie and Lynden; followed by the northern townships of Avon, Holding, St. Wendel, Colledgeville and Farming.

Issues and Challenges

The following issues were identified at numerous meetings of the Citizen Advisory Committee, public open houses and meetings with city and township officials. Many of these issues are inherent to the process of urban growth and the interface between rural and urban land. Many were raised in the County's 1998 Comprehensive Plan and will likely remain significant in future planning efforts.

Stearns County Comprehensive Plan

FIGURE 3.1 – EXISTING LAND USE

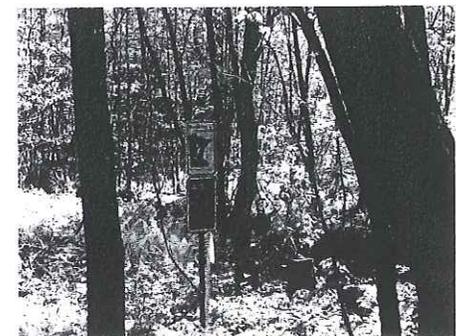
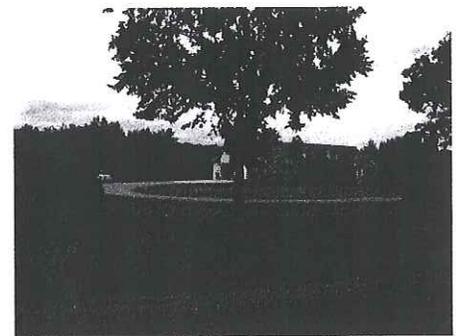
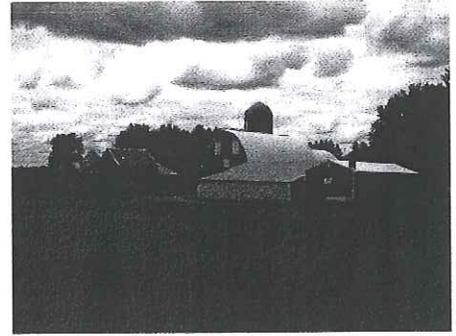
Stearns County Comprehensive Plan

Agricultural Protection. As in the previous 1998 Comprehensive Plan, the long-term protection and viability of agriculture remains in question. Agriculture is an important part of the County's economy, as discussed in Chapter 7, as well as its rural character, but it is highly vulnerable to conflicts with non-agricultural uses. Even agricultural zoning of one housing unit per 40 acres has not prevented the development of 40-acre or larger residential parcels, making it more difficult to assemble and efficiently cultivate farmland. Agricultural activities with a more intense character, such as animal feedlot operations, are particularly sensitive to the proximity of housing, and are most susceptible to such land use conflicts.

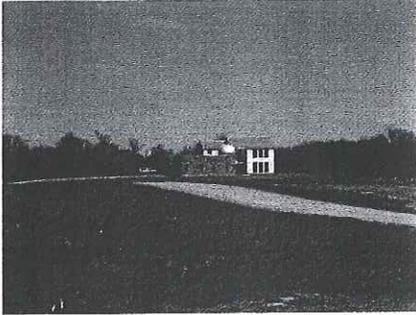
Capturing Development Potential. Many farmers and landowners desire to capture some of the value inherent in their land through development. Many township boards also see advantages in development of land with poorer soils or more rugged topography as a way to diversify their tax base. However, even limited development can produce the conflicts with agricultural and other uses mentioned above. Scattered rural residential development, even at low overall densities, can have major impacts on the viability of animal agriculture, the transportation system, and the quality and connectivity of sensitive natural resources. New residents of rural areas may also have different and often conflicting expectations regarding township and county services.

- **Transfer of Development Rights (TDRs).** Beginning with the first county zoning ordinance in 2000, Stearns County has explored the transfer of development rights as a means of allowing landowners to capture some development potential while allowing the development to occur in more suitable locations. However, a lack of standards as to where development rights could be transferred from and to – the “sending” and “receiving” areas – led to problems and the eventual suspension of the program. For example, rights were transferred away from areas close to cities, which were then annexed and zoned for higher densities, giving the landowners an additional development bonus. The program will need to be reconfigured to function fairly and effectively.

Natural Resource Protection. Much more information is available regarding the County's natural resources in 2007 than in the late 1990s, and much of it can now be mapped with a higher degree of accuracy using Geographic Information Systems (GIS) technology. Significant native plant communities, areas with susceptibility to nitrate pollution of groundwater, water quality in lakes, and geographically defined areas such as the Avon Hills have all been analyzed and mapped. With this increased knowledge has come an increased interest in protecting and managing significant resources,



but also an increase in potential conflicts between the goals of protection and development.



Urban Expansion and Intergovernmental Coordination. Many cities within Stearns County, especially in the eastern areas, have adopted comprehensive plan that show substantial urban expansion into the surrounding townships. Some cities and townships have negotiated orderly annexation agreements that match or partially match these urban growth boundaries. The County's role is ambiguous, since Minnesota counties have no defined statutory role in the annexation process beyond the ability to comment. However, the County is still responsible for crafting a countywide land use plan that takes both city and township needs into account.

Another issue that comes up in urban expansion areas is that of "premature subdivision" – subdivision into large lots with on-site septic systems. This pattern can make future extension of city sewer and water lines infeasible, since cities cannot assess these large parcels enough to cover the utility investment. Thus, urban expansion may be halted or diverted. Plans for re-subdivision or "ghost platting" of large parcels have rarely been realized.



Property Rights. There is a strong interest in preservation of the values of the rural landscape. However, a conflicting interest revolves around allowing retiring farmers to capture an adequate return on the value of their land for development. For many, there is a perceived unfairness in allowing some parcels to be sold for higher rates due to development potential, while other parcels are restricted to their agricultural value. Ultimately, this issue is a function of the strength of the respective land markets (agriculture vs. residential), desired economic returns, private property rights and public policy. This issue was identified in the 1998 Comprehensive Plan, and continues to pervade many discussions related to land use and growth management.

Land Use Decision-Making Authority. Many differences of opinion emerge between property owners and various levels of local government. Many township residents and officials believe that they have a higher level of knowledge and sensitivity to local conditions and should therefore have more authority to make land use decisions. There is also widespread interest in streamlining overlapping and duplicative regulations and development review processes among different state agencies and local governments.

Goals and Objectives

The following goals and objectives are general statements of intent that focus on the land use issues identified through the planning process. Goals are broadly worded, while objectives define major themes under each goal. The policies and action items listed later in

Stearns County Comprehensive Plan

this chapter are related to the goals and objectives, but are more specific and detailed. Many of the goals and objectives are the same or similar to those of the 1998 plan, but have been updated to address progress toward the goals and improved understanding of the relationship of land use and natural resources.

Agriculture

Goal 1. Sustain agriculture as a desirable land use for the long term.

- Objective 1. Nurture and preserve a sound agricultural economy.
- Objective 2. Preserve highly valued farmland for agricultural pursuits.
- Objective 3. Develop management methods for accommodating different types of agricultural activity.

Goal 2. Minimize land use conflict between agriculture and other land uses.

- Objective 1. Maintain suitable boundaries for urban, rural residential and agricultural areas.
- Objective 2. Provide standards to protect new and existing land uses from incompatible land uses.

Growth and Development

Goal 3. Manage the impacts of growth and development on the County's rural character

- Objective 1. Discourage incompatible land uses through effective land use controls.
- Objective 2. Identify appropriate areas for commercial, industrial, and non-farm rural residential developments.
- Objective 3. Deter premature development in rural areas and in urban expansion areas around cities.

Goal 4. Sustain the current livability and diversity of Stearns County.

- Objective 1. Recognize and respond to the differences in community needs and character, development patterns, and natural resources in different regions of the County.
- Objective 2. Preserve and protect significant, unique or sensitive natural and scenic resources.

Land Use Plan

Objective 3. Respect and preserve architectural, archeological, and cultural history.

Objective 4. Encourage a diversity of housing opportunities meeting the needs of both the cities and the townships.

Goal 5. Use existing infrastructure and resources efficiently.

Objective 1. Coordinate infrastructure expansion with development; and encourage development where the infrastructure is adequate to serve that growth.

Objective 2. Provide public services and infrastructure that can be sustained over time.

Objective 3. Support the provision of joint services among jurisdictions.

Objective 4. Continue to educate people about the real cost of development.

Goal 6. Provide a variety of residential opportunities.

Objective 1. Provide a diversity of housing prices and styles, meeting the needs of residents of different ages, incomes and lifestyles.

Objective 2. Work with the cities to provide a variety of higher-density housing types.

Objective 3. Identify appropriate locations for seasonal homes in settings that afford a variety of natural amenities.

Objective 4. Create sufficient housing opportunities near job centers.

Natural Resources Protection

Goal 7. Identify and preserve important natural systems and sensitive natural resources.

Objective 1. Evaluate land use changes based on how they respond to existing natural systems and their potential impacts on natural resources.

Objective 2. Develop and employ land use regulations and other techniques for natural resource protection, including transfer of development rights or density, best management practices, and public acquisition.

Objective 3. Recognize the relationship between land use and water quality, and continue to support water

Stearns County Comprehensive Plan

quality improvements through land use plans and regulations.

Goal 8. Explore the development of a comprehensive land value assessment policy and tax assessment guidelines that would encourage preservation of open space parcels, including both agricultural and forested areas.

- Objective 1. Evaluate the current tax assessment policies of Stearns County in conjunction with statewide requirements, in order to evaluate the effects of assessment policies on protected open space, whether protected by easement or by zoning and land use policies.

Policy Areas and Related Policies

A policy area is defined as **a general area within Stearns County with distinctive characteristics, where specific policies will be applied, in addition to the land use policies that apply across the entire county.** Policy areas are intended to recognize the diversity of environments and growth pressures across Stearns County – or, as many citizens have stated, “One size doesn’t fit all.” Figure 3.3 shows the generalized location of each policy area.

While the land use categories of the Future Land Use Plan are intended to apply county-wide, they may be interpreted differently in different policy areas. For example, policies for the River Corridor Policy Areas encourage the use of community water and wastewater treatment systems to protect groundwater. Policies for the Southwest Policy Area would allow more flexibility in introducing limited commercial and industrial uses into agricultural areas.

Policy Area: The Metropolitan Area: The multi-county St. Cloud Metropolitan area will continue to attract a substantial portion of the region’s jobs and population growth. It will also be the location for most major transportation projects, as planned and programmed by the St. Cloud Area Planning Organization (APO). This policy area generally encompasses the boundaries established by the 2000 St. Cloud Area Joint Planning District plan, with some adjustments to the “ultimate service area” for wastewater treatment.

Policies:

1. Support and update the policies of the Joint Planning District plan regarding regional coordination of services.
2. Support extension of coordinated, centralized wastewater treatment to the ultimate service area.
3. Protect the ultimate service area from premature subdivision by limiting large-lot residential development.

4. Support transit improvements, including the Northstar Commuter Rail extension.

Policy Areas: River Corridor, North and South:

The **North River Corridor** is the Mississippi Corridor through Brockway Township and St. Stephen. It is facing pressure for residential development, driven by its scenic and natural qualities and proximity to the Metro area. Soils are highly susceptible to nitrate pollution.

The **South River Corridor** includes the Mississippi and Clearwater River corridors in Lynden, Fair Haven and Maine Prairie townships and the cities of Kimball and St. Augusta, bordering Wright and Sherburne counties. It is the location not only of residential expansion but of new business parks along the I-94 corridor. Development pressure from both Clearwater and St. Cloud affect this area, as well as development pressure from northern Wright County along the Trunk Highway 15 corridor. Soils are also highly susceptible to nitrate pollution.

Policies:

1. Encourage conservation design to preserve natural and scenic values. (See discussion beginning on page 3-22.)
2. Recognize that soil conditions may limit development potential or require additional focus on water and wastewater treatment.
3. Encourage community systems for water/wastewater treatment as a means of protecting groundwater.
4. Focus on those road improvements needed to keep pace with development.
5. Emphasize staging of development to avoid a leapfrog pattern.

Policy Area: I-94 Corridor: Extends west from St. Joseph to the County's western boundary, including a series of cities with diverse and growing economies – St. Joseph, Avon, Albany, Freeport, Melrose and Sauk Centre. The limited access nature of the interstate means that development is concentrated at city interchanges. The interstate runs south of the cities, and in many cases development is now extending southward around the interchanges. Collectively, the cities provide a broad range of housing, employment, commercial and recreational facilities for the corridor's population. There is increasing interest in transit improvements to link the cities and connect them to the St. Cloud metro area.

Policies:

1. Focus development in and around the corridor cities, including reasonable urban expansion areas that take advantage of existing highway interchanges but do not overburden them.

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2. Discourage non-agricultural development between cities to preserve the area's rural character.
3. Emphasize and support the shared role of corridor cities in meeting commercial, employment, recreational and housing needs.
4. Emphasize I-94 as a transit corridor and work to provide enhanced transit service.

Policy Area: Minnesota Highway 23 Corridor: Extends southwest through Rockville, Cold Spring, Richmond, and other cities to Paynesville. This corridor shows strong industrial/commercial growth as well as lake-related recreational and residential development pressure. Four-lane widening of MN 23 has improved access, but increases the risk of linear strip development that can eventually cause traffic congestion. Several cities, including Richmond and Cold Spring have completed or are planning for wastewater treatment plant expansions and significant urban expansion.

Policies:

1. Focus development in and adjacent to cities, not between them. Specifically, the extension of a strip commercial development pattern along MN 23 should be avoided.
2. Emphasize staging of development outward from the cities, avoiding a discontinuous and inefficient 'leapfrog' pattern.
3. Work with cities and townships to improve coordination of infrastructure improvements and access management.
4. Plan for the MN 23 bypass in Paynesville City/Township, which is likely to stimulate commercial and residential development north of current city boundaries.

Policy Area: Lakes Natural/Recreational Area: Encompasses the Sauk River Chain of Lakes south of MN Highway 23. This area includes some of the most intensive residential and recreational shoreland development in the county, with impacts on water quality and natural resources. City expansion along the MN 23 corridor may also create land use conflicts.

Policies:

1. Work to limit the impacts of additional shoreland development by clustering housing away from shorelines, using a conservation design approach.
2. Encourage shoreland protection and restoration methods such as vegetative buffers.
3. Continue to address wastewater treatment and water quality problems through the Water Plan, the Sauk River Watershed District, lake associations and other partnerships.

Policy Area: Southwest Area: Encompasses the Bonanza Valley area (including the Minnesota Highway 55 corridor around Belgrade and Brooten) which has seen population and employment declines in recent decades. This area is crossed by the only transcontinental rail line in the county, representing a potential resource for economic development.

Policies:

1. Provide opportunities for economic development that will support a stable population and keep cities, townships and local school districts viable.
2. Allow the greatest degree of flexibility in this area in considering land use changes to commercial/industrial use, provided that impacts on roads and infrastructure are minimized.
3. Economic development outside cities should be designed to require minimal infrastructure improvements (for example, large private wastewater treatment systems should be discouraged).

Policy Area: Avon Hills Natural Resource Area: Includes large parts of Avon and Colledgeville townships and St. John's University-owned property in St. Joseph and St. Wendel townships. This area has been the focus of ongoing conservation and education efforts. It includes the largest concentration in the county of steep slopes, wooded areas, erodible soils, wetland complexes and high-quality native plant communities. A defined portion of this policy area is also considered a separate land use category, as described in the following section. However, the following policies and priorities should apply within the larger area:

Policies:

1. Encourage open space protection through techniques such as conservation easements, parkland acquisition, and limited residential development emphasizing conservation design.
2. Carefully site houses and structures to protect rural roads and scenic views and make protection of these resources a priority in any road improvement project.
3. Continue to work with area residents and townships, including those townships adjacent to the policy area, to develop appropriate strategies for resource protection in each township.

Policy Area: Agricultural and Limited Growth Area: The largest policy area, including all land not included in other policy areas. Agriculture remains the predominant and priority land use throughout this area, with additional complementary development where infrastructure can support it. Most small cities in this area will continue to grow within their current boundaries but will require little land for expansion.

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Policies:

1. Emphasize the importance of animal agriculture to the County economy by treating it as a priority land use in this area (compared with residential or other nonagricultural development).
2. Allow complementary agriculture-related commercial or industrial uses in limited quantities. These uses are most appropriate where served by major highways, including Minnesota Highways 4, 55, 15, and US Highway 71.
3. Allow additional flexibility in residential development through the use of a “conservation overlay” approach (discussed on page 3-22 and in Chapter 10, Implementation Plan).

Land Use Categories and Related Policies

The table below describes each of the land use categories shown in Figure 3.4, Future Land Use Plan, the density ranges and the policies associated with each category. As discussed in the following section, the land use categories are broader and more general than current zoning districts. Each category may correspond to more than one zoning district, as noted in the table, or may not “match” any of the existing districts.

Table 3.1. Land Use Categories, Future Land Use Plan

Land Use Categories, Description and Intent	Density / Zoning Correspondence	Assumptions and Policies
Agriculture		
<p>Primary land use: agriculture, including animal agriculture, crop production and any specialized agricultural enterprise, in combination with limited ag-related businesses, recreational, institutional, open space uses. Agricultural uses will take precedence over competing uses.</p>	<p>1 unit per 40 to 160 acres</p> <p><i>Aligns with existing Ag zoning - A-40, A-80, A-160</i></p>	<p>Modest amount of new non-farm development anticipated.</p> <p>Some additional flexibility for residential development may be provided under “conservation overlay” option in suitable locations (see pg. 16)</p> <p>Require homes on large parcels to meet siting standards to minimize impacts on agriculture.</p> <p>TDR sending area (A-40)</p>
Limited Residential		
<p>This category identifies areas of large estate-type lots in limited locations in rural areas. Areas shown on map represent existing development or were identified by townships as less suitable for agriculture.</p>	<p>1 unit per 5 - 10 acres</p> <p><i>Aligns with existing R-5 and R-10 districts</i></p>	<p>These areas are not anticipated to be annexed or otherwise increase in density.</p> <p>Conservation design encouraged.</p> <p>TDR receiving area</p>
Moderate Residential		
<p>This category identifies areas in proximity to cities or townships that are already partially developed or otherwise suitable for rural, unsewered residential development.</p>	<p>1 unit per 3 - 5 acres</p> <p><i>Similar to existing R-5 district</i></p>	<p>These areas are not anticipated to be annexed during the time frame of this plan, but future density increases may occur.</p> <p>TDR receiving area</p>
Urban Expansion		
<p>Areas anticipated to be annexed and provided with municipal services during the time frame of this plan. Also includes areas under Orderly Annexation Agreements. Variety of land uses to be determined through joint city-township planning. Residential uses remain restricted until annexation occurs. Limited commercial/industrial uses may be considered.</p>	<p>1 unit per 40 or more until annexed</p> <p><i>Consider potential future zoning district or A-40 option</i></p>	<p>Protect from premature subdivision until area can be developed at urban densities.</p> <p>Provide incentives for joint planning boards, OAAs</p> <p>TDR receiving area only with city Memorandum of Understanding recognizing designation in case of rezoning</p>
Townsite Mixed Use		
<p>Identifies rural townships that already include some variety of residential or commercial uses. Townships are appropriate locations for nonagricultural development within many townships.</p>	<p>1 unit per acre or more; depends on soil conditions and resources</p> <p><i>Aligns with existing Rural Townsite zoning district</i></p>	<p>Encourage compatible new development where infrastructure can support it.</p> <p>Encourage conservation design on larger tracts.</p> <p>Encourage community water or wastewater systems where needed.</p> <p>TDR receiving area</p>

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Land Use Categories, Description and Intent	Density / Zoning Correspondence	Assumptions and Policies
Avon Hills Conservation Area		
<p>This category recognizes the Avon Hills area as a priority area for natural resource protection, as well as its high amenity value for very low-density residential use.</p>	<p>Densities vary depending on resource characteristics and development approach.</p> <p><i>Pilot area for potential future zoning district or overlay district</i></p>	<p>Agricultural uses are less widespread compared to forestry and resource conservation, but are also compatible with limited development.</p> <p>Conservation design would be required for densities above the base density of 1 per 40.</p> <p>Additional performance standards relate to specific resources.</p> <p>TDR sending and receiving area</p>
Shoreland / Concentrated Residential		
<p>Recognizes existing largely developed shorelands areas, including resorts and other recreational uses and “concentrated” residential areas.</p> <p>Limited areas for new development, in response to some townships’ preferences.</p>	<p>1 unit per 1 to 5 acres, varying by lake class and level of existing development</p> <p><i>Aligns in some locations with existing R-1, R-5, Shoreland Overlay</i></p>	<p>Encourage conservation design that keeps lakeshore in naturally vegetated state. Consider elements of Alternative Shoreland Standards to protect water quality.</p> <p>TDR sending or receiving in appropriate locations</p>
Commercial		
<p>Primarily low intensity service and retail that does not demand a high level of wastewater treatment, sited where the transportation system has adequate capacity. Generally applies to existing developed areas</p>	<p>n/a</p> <p><i>Similar to Commercial/Rec. district</i></p>	<p>Improved buffering, performance standards</p>
Industrial		
<p>Medium intensity employment that does not demand a high level of wastewater treatment or water supply, in locations with adequate transportation capacity. Generally applies to existing developed areas.</p>	<p>n/a</p> <p><i>Similar to Limited and General Industrial districts</i></p>	<p>Improved buffering, performance standards</p>
Public/Semi-Public		
<p>Includes county parks and state/federal wildlife areas, college campus, and similar large institutions. (Note that not all these land uses are “permanent”)</p>	<p>n/a</p> <p><i>Similar to Educational/Ecclesiastical District (campus); others zoned A-40</i></p>	<p>Encourage buffering of open space areas such as wildlife management areas. No development except institutional or recreational / open space uses (category may be changed if ownership or use change in future).</p>

Land Use Categories, Description and Intent	Density / Zoning Correspondence	Assumptions and Policies
Natural Resources Overlay		
<p>Overlay category indicates that specific natural resources are likely to affect development patterns.</p> <p>Note that land use plan map is a general guide and does not indicate all natural resources - Resource Suitability Model and other sources may be used.</p>	<p>Densities and other characteristics may be affected by resource protection standards</p> <p><i>Aligns in shoreland locations with Shoreland Overlay District</i></p>	<p>Performance standards are geared to specific resource characteristics and the maintenance of natural systems</p>

Understanding and Using the Future Land Use Map.

The Future Land Use map presents a geographic representation of a preferred future land use scenario: how development, preservation, and public realm investment should play out over the next ten to twenty years. Being able to see a picture of the end result is helpful in directing the myriad large and small decisions and investments over this time period. The map does not identify the implementation process or interim results, but it does show the end point, sometimes called the ‘desired future condition,’ of the next twenty years of development activity and land use decisions.

The map is not the land use plan – it needs to be used in conjunction with the written content of the plan, which provides additional direction on staging of growth, on priorities within land use categories, and on implementation preferences.

Map components

The map shows the County broken into a series of land use categories, representing different mixes of land uses, and a generalized overlay showing combined natural resources. Other characteristics of the landscape, such as specific natural features, existing development, and infrastructure are not shown on this map. Land use areas are fairly general and not intended to be as detailed as a zoning map; map users should think of the map as showing land uses from an aerial perspective of 30,000 feet.

Land use categories are different than zoning districts: they need to be thought of as a mix of land uses rather than a strict listing of allowed and conditional uses. Land use categories (including the overlay categories) identify:

Not a Zoning Map

Land Use Map - a 20-year distant snapshot of the community’s preferred future mix of land uses. The map shows what the community *prefers* - the map guides land use decisions for the next 20 years.

Zoning Map - a regulatory map for the immediate future. The map shows what the community has already decided to *allow* tomorrow.

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- The primary and secondary or related land uses that could be found within the category;
- The approximate or typical density and intensity of land uses;
- Additional considerations such as natural resource and economic resource standards or design considerations that may apply to particular land uses in that district

The natural resource overlay category is shown in Figure 3.5. The overlay is a composite of a variety of sensitive resources that can affect land use. It is not a separate land use, but indicates that the underlying land uses need some special consideration for development or preservation.

Using the future land use map

The land use map, in conjunction with the Plan's land use goals, objectives and policies, provides direction to landowners, developers, government staff and elected officials as they make land use decisions. Decisions regarding development, investment, preservation, infrastructure and regulation should ideally move the community toward the 'desired future condition' shown on the land use map, and should not conflict with or preclude the desired future condition.

Limitations of the future land use map

The land use map is a critical component of the Comprehensive Plan, but several limitations must be kept in mind:

- Many existing land uses will not appear on the map, but that does not mean they are prohibited. Long range land use maps are necessarily more general than specific area plans, master plans for specific parcels, or regulatory maps such as zoning. The user must keep in mind that the land use map identifies the preferred mix of land uses, not the allowed mix of land uses.
- Two areas with the same land use designation will not necessarily look the same or have the identical mix of land uses. Other factors such as natural resources, public infrastructure, economic development potential or community character all affect development patterns, but may not appear on the land use map.

Resource-Related Policies

The land use pattern portrayed on the draft Comprehensive Plan Land Use map shows the primary preferred land uses for every area of the County (outside the cities). However, the land use map cannot reflect *development suitability*. Individual sites within a given land use category will inevitably vary in their suitability to support the preferred land use. Site-specific characteristics that will affect suitability include:

- Soil characteristics
- Drainage characteristics
- Topography
- Presence of land uses or features that are incompatible with development

For instance, the agricultural land use category identifies a preferred density of one unit per forty acres or greater. Both higher and lower densities may be justified based on the suitability of a given area for development. Poor soils and the lack of economically viable agriculture or other resource-based industry may justify a development density that is higher than the land use category minimum (see discussion below under “Regulatory Flexibility”). However, potential conflicts regarding animal agriculture or manure management operations could require lower densities.

Other factors will affect development suitability and the development pattern on a particular site. These include:

1. Nitrate Risk – high nitrate nitrogen levels in public drinking water supplies pose a public health risk, and may require different infrastructure or limit the density, design and location of development. For example:

- Additional water supply treatment
- Additional wastewater and stormwater treatment
- Lower development densities
- Clustering of allowed housing or other uses in the most developable areas

2. Natural System Functions – natural infrastructure systems, just like built infrastructure systems, allow for the continuance, sustainability, and growth of the community. Examples of natural systems include:

- Groundwater recharge and infiltration areas, critical watershed areas
- Vegetated buffers on surface water bodies and steep slopes
- Habitat areas, native plant communities
- Wooded areas
- Soils that allow for wastewater and stormwater management

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Protecting natural system functions will affect development density and location. Examples include:

- Requiring shoreline vegetative buffers to protect water quality
- Using upland soils around lakes for stormwater infiltration
- Clustering of allowed housing or other uses away from sensitive areas
- Transfer of development rights out of sensitive areas

3. Community Character – certain characteristics of the landscape contribute significantly to the character of the community. Such characteristics include:

- Open space along rural highways, with only agricultural land uses, farmsteads and wooded areas
- Buildings that are screened by trees or other vegetation or otherwise designed to blend into the landscape
- Native vegetation and tree cover along shoreland areas
- Clearly defined urban “edges” around cities or developed areas

These characteristics will affect where development occurs and the form that it takes. Policies might encourage or require:

- Locating buildings away from ridgelines or scenic rural highways
- Maintaining tree cover on a significant portion of a development parcel (also protecting a natural resource)
- Creating or maintaining protected open space next to urban edges
- Limiting signage or display of equipment

4. Economic Resources – natural resources that have economic value also sustain the community. Land use patterns and development activities must acknowledge the risk to preferred economic resources in the County. Economic resources include:

- Prime and important farmland soils
- Aggregate resources
- Working forests
- Recreational assets supporting tourism, including lakes, rivers, trail systems, resorts, etc.
- Protected natural areas supporting hunting and fishing, including Wildlife Management Areas and other state/federal preserves

Existing comprehensive plan policies, such as separation of new residences from feedlots, give clear preference to agricultural land uses in large areas of the County, and participants in the current planning process have expressed strong support for these policies.

Policies protecting other economic resources might include:

- Requiring mining of aggregate resources prior to redevelopment for other uses
- Maintaining adequate separation between economic resource areas and potentially conflicting uses such as housing
- Transferring density away from highly productive soils in agricultural areas

Development Suitability and Regulatory Flexibility

The land use pattern portrayed on the Future Land Use map shows the primary preferred land use for every area of the County (outside the cities) and provides a target range of housing density. However, the land use patterns on the land use map show only the “big picture” for preferred land uses. The land use map does not reflect development suitability. Individual sites within a given land use district will vary in their suitability to support the preferred land use, and the appropriate development density may also differ from the targeted density (to be either more or less dense than the target range).

When applying the future land use map in development review or administering land use regulations, Stearns County may allow flexibility in the density or type of development within certain land use districts and policy areas:

1. The Avon Hills Conservation Area designation on the future land use map is designed to provide some additional development potential if significant resources are protected through the development process. It is important to recognize that agriculture is not the primary use in this area, although it continues to be a significant and diverse land use. The heavily wooded, hilly character of the area and its numerous lakes and wetlands makes it exceptionally attractive as a residential environment. The land use category provides for an increase in density from the ‘base’ of 1 unit per 40 acres, provided that conservation design methods are used to identify and protect significant resources. Options for implementing this policy are discussed in Chapter 10, Implementation.

The Avon Hills area policy will likely be implemented through creation of a new primary or overlay zoning district. The boundaries of this district will be established through a separate public process. This zoning process should be considered as a pilot project, since the approach may be usable in other areas of the County, provided that the resources in those areas have been studied and evaluated in a similar manner. If a general “resource protection overlay district” is created, it could be applied in the future in a variety of locations.

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2. Conservation Design Overlay Policy. In agriculturally-designated areas where specific criteria are met, the County may allow reasonable increases in residential density that exceed the density range noted in the Comprehensive Plan agricultural land use category (one home per 40 acres or more). (This approach may be implemented through a rezoning to a “Conservation Design Overlay” zoning district or a Conditional Use permit process within the A-40 district.) The overlay concept is intended for use only in areas where the County determines that the additional residential density will not adversely affect the viability of agricultural uses. Options for implementing this policy are discussed in Chapter 10, Implementation.

3. Transfer of Development Rights: Residential and Shoreland Districts Policy. In the Limited Residential and Moderate Residential land use districts, the County may allow residential density to exceed the Comprehensive Plan target densities, provided the following conditions are met:

- The Resource Suitability Model identifies sufficient suitable area for each home site.
- Conservation design standards are used in the platting and development process, as described above.
- The additional density is transferred via the TDR program from a designated sending area.
- In nitrate risk areas additional steps are taken to limit risk, as described above.
- The proposal is reviewed and approved by the Township Board and City Council where appropriate.

Maximum densities would need to be established that are consistent with the density ranges in the Future Land Use Plan. (A more detailed discussion of the potential redesign of the TDR Program is included in Chapter 10, Implementation.) Shoreland areas (the land use district shown in Figure 3.4, not the Shoreland Overlay zoning district) may be appropriate as sending or receiving areas for TDRs, depending on the existing density of development, lake water quality issues, development suitability, as identified by the Resource Suitability Model and other factors. This determination will require more detailed site analysis.

4. Southwest Policy Area. In this policy area, the County will encourage land uses that provide employment opportunities or enhance agricultural production and diversity, provided the following conditions are met:

- The existing road system is adequate to handle increased traffic, including truck traffic.
- The project will not require large-scale water supply or wastewater treatment systems.

- The project will not detract from or inhibit economic development activities in the area's cities.
- The proposal is reviewed and approved by the Township Board.
- The proposal will not interfere with the use of adjoining properties.

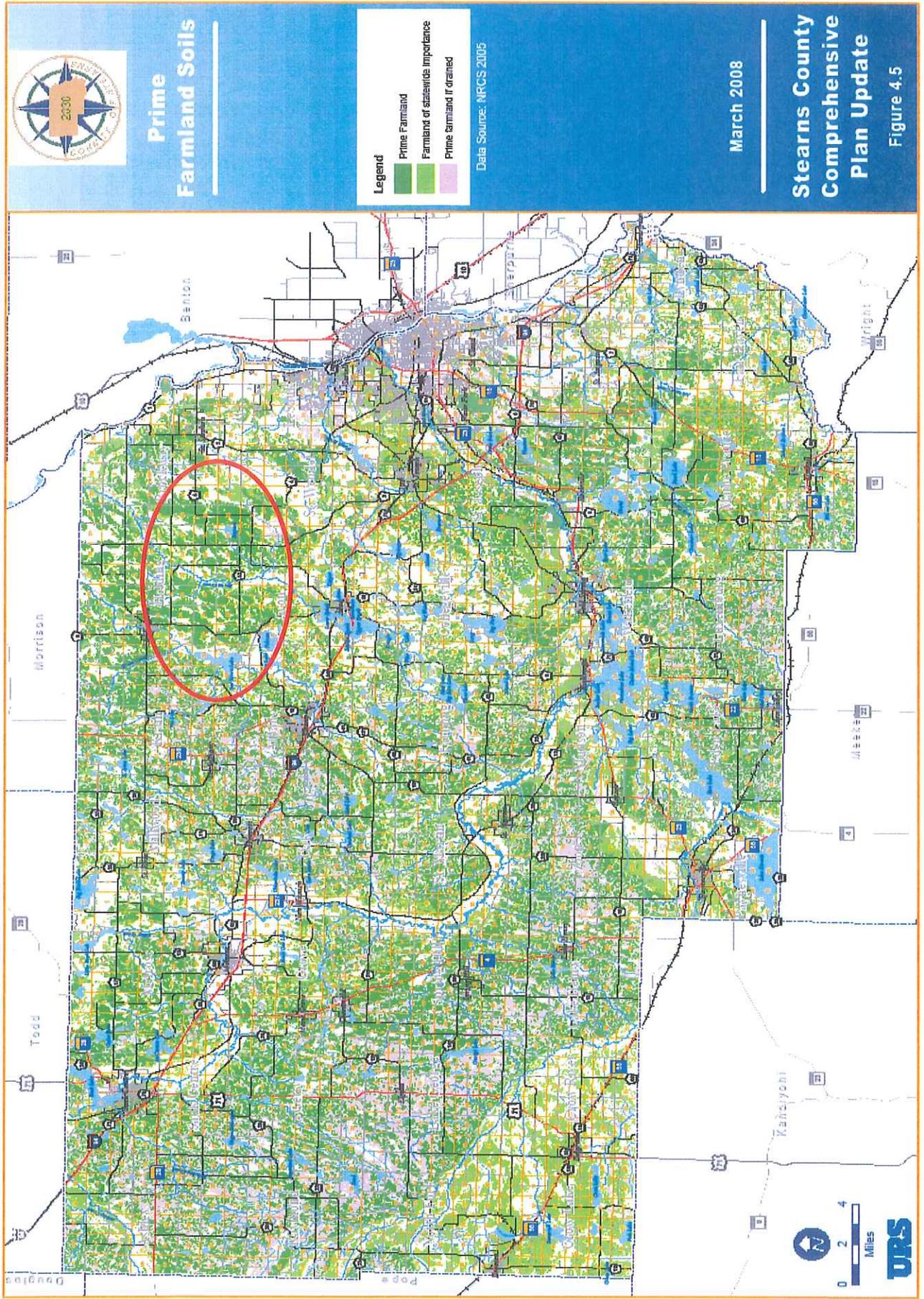
Staging of Development

The land use pattern portrayed on the Future Land Use map shows the primary preferred land use within the time frame of the Comprehensive Plan, through approximately the year 2030. Stearns County recognizes that this future land use pattern assumes a continually growing development market, and that the actual development market will likely differ from what was assumed in the comprehensive planning process.

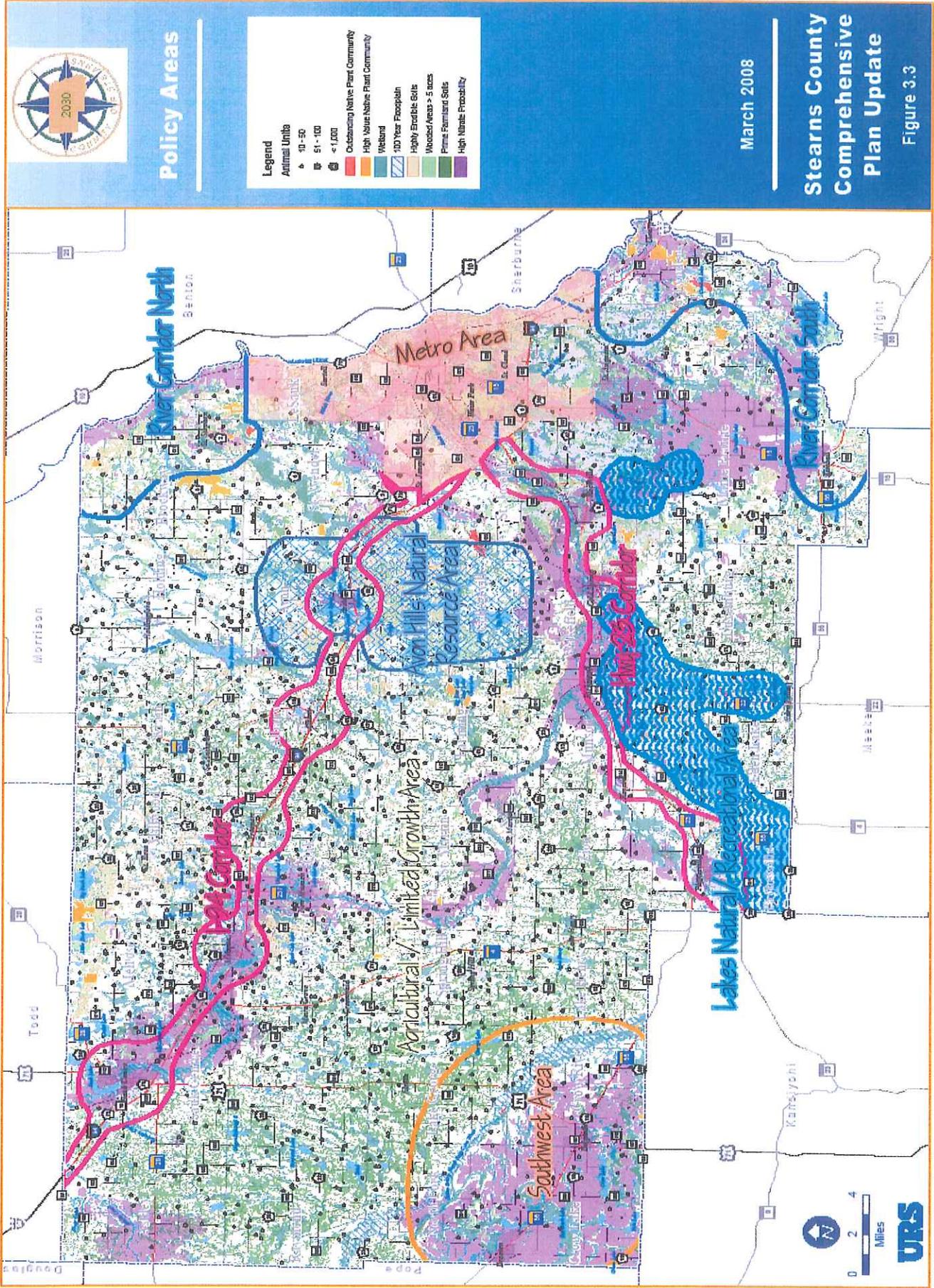
1. Staging Policy. The County will endeavor to efficiently stage development over the next 20 years both within the designated land use districts, and when considering Comprehensive Plan amendments. The following criteria will guide implementation of the County's staging policy:

- Development within land use districts should be logically connected to existing development; zoning districts shall be identified to prevent leapfrog or isolated development within contiguous land use districts.
- Areas with existing infrastructure shall be given development priority over areas without infrastructure, including roads, water, wastewater, schools and emergency services.
- Areas without existing infrastructure, but which are scheduled for improvement under State, County or City plans or projects, shall be given development priority over areas for which there are no pending improvements.
- Comprehensive Plan Land Use Map amendments that expand or change land use districts shall include a finding:
 - that insufficient land is available in areas that the Comprehensive Plan has already designated for that land use to respond to market demand;
 - that the expansion is consistent with city, County, and State infrastructure expansion plans, and with township staging plans where available; and
 - that the resources in the area proposed for change have been adequately assessed, or will be assessed prior to any development proposal.

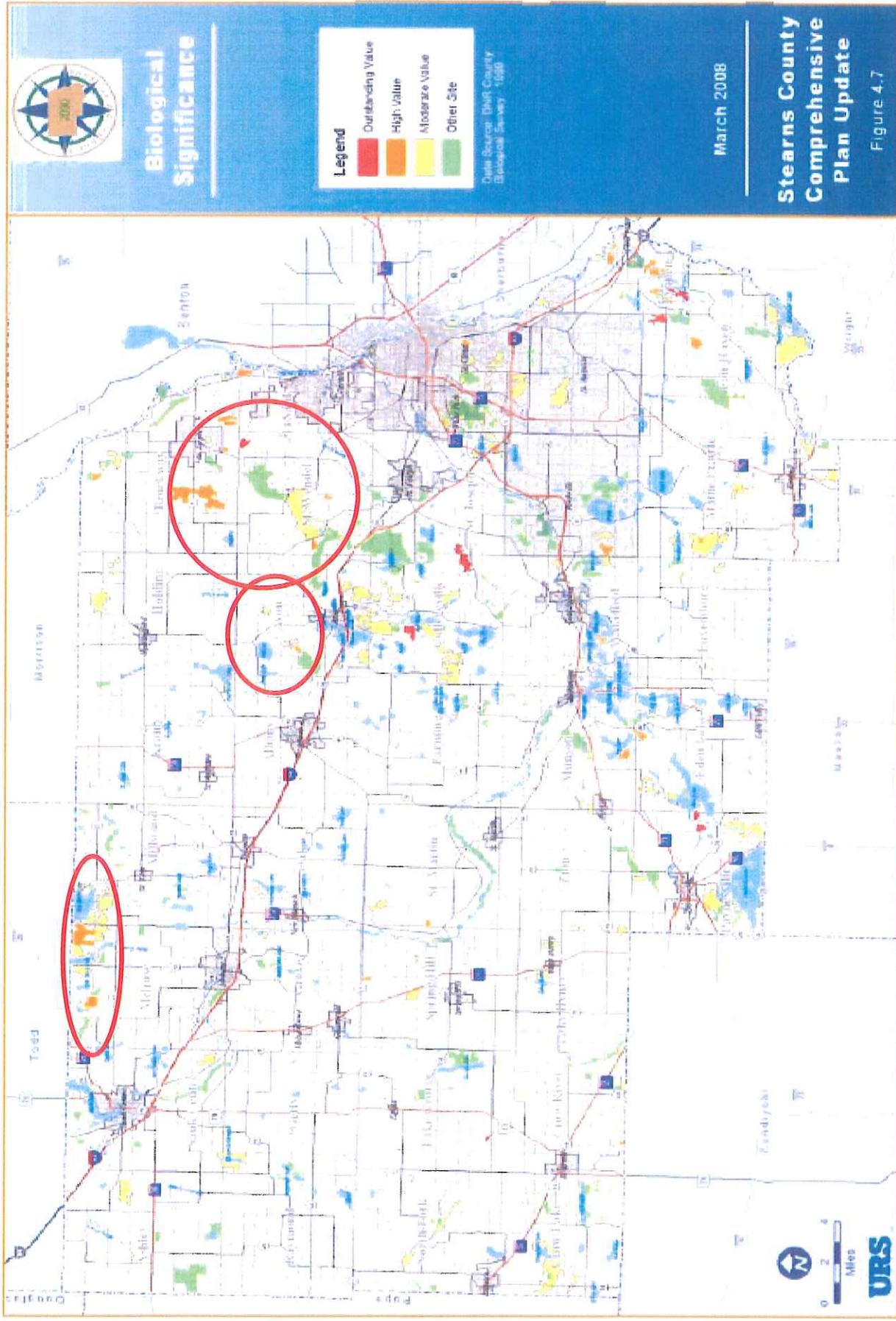
Attachment 10



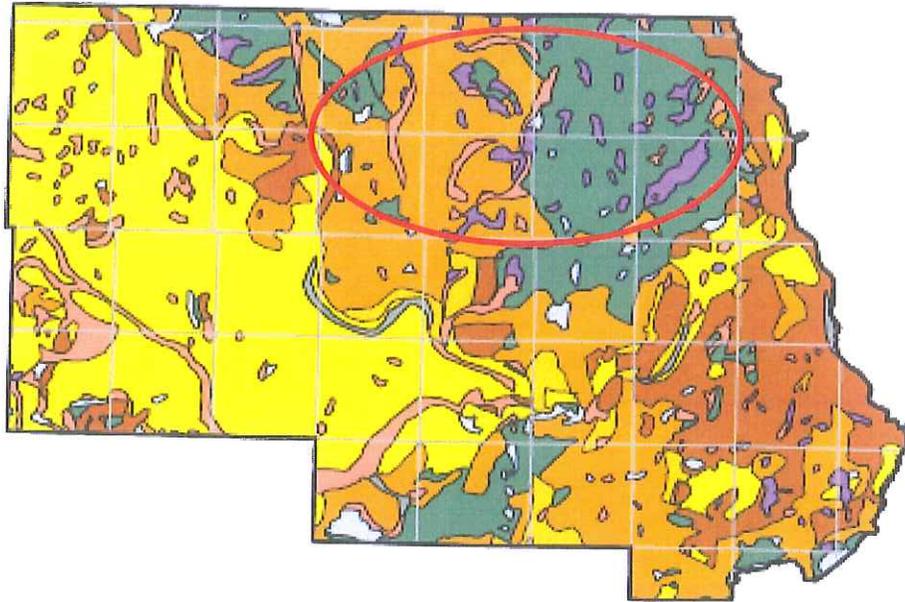
Attachment 11



Attachment 13



Attachment 14
THE VEGETATION OF STEARNS COUNTY
AT THE TIME OF THE PUBLIC LAND SURVEY



This map shows the vegetation of Stearns County as interpreted by Francis J. Marschner using Public Land Survey records from 1856-1898. The legend descriptions are slightly modified from Marschner's original descriptions as appropriate for central Minnesota. Extinct native plant community types corresponding to Marschner's categories are listed in parentheses.

HARDWOOD FOREST

- Upland Deciduous Forest (includes Marschner's "Big Woods" and "Aspen-Birch (Hardwoods)") - bur oak, white oak, red oak, northern pin oak, elm, basswood, ash, maple, hornbeam, aspen, birch (Oak Forest, Maple Basswood Forest, Lowland Hardwood Forest, Black Ash Swamp).
- River Bottom Forest - elm, ash, cottonwood, boxelder, silver maple, willow, aspen, hackberry (Floodplain Forest, Lowland Hardwood Forest).

BRUSHLAND

- Brush Prairie - grass and brush of oak and aspen (Oak Woodland-Brushland, Rock Outcrop).
- Aspen-Oak Land - aspen, generally dense, but small in most places, with scattered oaks and few elms, ash and basswood (Oak Woodland-Brushland, includes areas that have succeeded to Oak Forest).
- Oak Openings and Barrens - scattered trees and groves of oaks of scrubby form with some brush and thickets (Rock Outcrop, includes many areas that have succeeded to Oak Woodland-Brushland or Oak Forest).

GRASSLAND

- Prairie - (Dry Prairie, Mesic Prairie).
- Wet Prairies, Marshes and Sloughs - marsh grasses, flags, rushes, wild rice, with willow in some places (Calcareous Sedge-pole Fen, Wet Prairie, Rich Fen, Wet Meadow, Mixed Emergent Marsh, Cattail Marsh, Willow Swamp).

BOGS AND SWAMPS

- Conifer Bogs and Swamps - Tamarack (Tamarack Swamp, Mixed Hardwood Swamp, Rich Fen, Poor Fen, Alder Swamp).
- Open Water

Attachment 15

