



***Looking Back — Looking Forward:***  
**A Review of the 2002 Comprehensive Land Use Plan**  
**2002 - 2018**



**Duluth Township**  
**May 2018**

# Acknowledgements



**Town of Duluth**

**Prepared By**

**Sue Lawson**

**Beth Mullan**

**A very special thank you to Clinton Little, Minnesota's Lake Superior Coastal Program, for his expertise and technical assistance in mapping, data collection, and analysis.**



*This report was funded in part by the Coastal Zone Management Act of 1972, as amended, administered by the Office for Coastal Management, National Oceanic and Atmospheric Administration under Award NA16NOS4190119 provided to the Minnesota Department of Natural Resources for Minnesota's Lake Superior Coastal Program*

## Table of Contents

<b>Section</b>	<b>Page</b>
<b>Section 1: Introduction.....</b>	<b>1</b>
Purpose.....	1
Background and History of 2002 CLUP.....	1
Structure and Format of the Document.....	2
<b>Section 2: General Township.....</b>	<b>3</b>
<b>Section 3: General Land Use.....</b>	<b>5</b>
CLUP Vision and Policies.....	5
Land Use Planning and Zoning Ordinance.....	5
Land Change From 2004 – 2018.....	5
Discussion and Activities Since 2002 CLUP.....	8
Current Land Use Areas in the Township.....	8
<b>Section 3.1 Inland Commercial Areas.....</b>	<b>17</b>
<b>Section 3.2 Shoreland Commercial Areas.....</b>	<b>19</b>
<b>Section 3.3 Public Forest Lands.....</b>	<b>22</b>
<b>Section 3.4 Farm and Forest Lands.....</b>	<b>27</b>
<b>Section 3.5 Limited Industrial Use.....</b>	<b>29</b>
<b>Section 3.6 Rural Residential.....</b>	<b>31</b>
<b>Section 3.7 Lake Superior Shorelands.....</b>	<b>34</b>
<b>Section 4: The Natural Environment.....</b>	<b>37</b>
CLUP Vision and Policies.....	37
Discussion and Activities Since 2002 CLUP.....	37
Vegetation.....	37
Wildlife.....	41
Climate Change.....	42
Fires.....	45
Water and Water Quality .....	48
Wetlands.....	50
<b>Section 5: The Built Environment.....</b>	<b>52</b>
Demographics.....	52
Housing.....	52
Market Value.....	57
Residential Developments.....	57
Senior Housing.....	58
<b>Section 6: Community Infrastructure and Resources.....</b>	<b>59</b>
Duluth North Shore Sanitary District.....	59
Recreation and Open Space.....	60
Trails.....	60
McQuade Small Craft Harbor.....	62
North Shore Community School and Community Center.....	63
Congdon Trust Lands.....	64
Town Roads.....	65
High Speed Internet.....	67
Renewable Energy.....	67
Home Based Businesses, Home Occupations, Short Term Rentals.....	68
Tourism.....	70
<b>Appendix A. Data</b>	<b>1</b>

## Section 1: Introduction

---

A Comprehensive Land Use Plan (CLUP) guides community development. That is, it is a compilation of a vision, policy statements, goals, standards, maps, and action programs for guiding future development. In a broader sense, it is the result of citizens discussing and coming to agreements about how the community will live together as neighbors and what the community's relationship will be with the natural environment.

The process for creating an ongoing evaluation of a CLUP involves the following steps:

- I. Where have we been; what have we accomplished; where are we now; what challenges and opportunities face us?
- II. Where do we want to go?
- III. How will we get there?
- IV. Evaluation: Are we achieving our vision?

The Town of Duluth adopted their current CLUP, replacing the 1976 CLUP, in August of 2002. It has now been about 18 years since its adoption and the Town is at *Step IV: Are we achieving our vision?*

This document addresses *Step I: Where have we been; what have we accomplished; where are we now; what challenges and opportunities face us?*

### Purpose

The purpose of this document is to determine the accomplishments made towards meeting the vision of the 2002 CLUP and to provide other pertinent information about the Township in order to identify issues, concerns, and opportunities that help form planning questions to address in updating the 2030 CLUP.

### Background and History of 2002 CLUP

In May 2001 Duluth Township began the development of a Comprehensive Plan to replace the 1976 Plan. In developing the CLUP, a Comprehensive Land Use Plan Steering Committee met over an eighteen-month period. The Steering Committee gathered background information, analyzed existing conditions, and identified issues and opportunities to develop the new Land Use Plan.

All community residents were invited to participate in the planning process either through membership on the Steering Committee or through public meetings. The Steering Committee consisted of 37 community members and was established to guide and provide community input into the comprehensive planning process. The Steering Committee membership represented the diverse sectors of the community, including residents from all geographic areas and age groups, public officials, members of the business community, home-based business owners, agency professionals, and members of community organizations. Members from the Planning Commission and the Town Board also sat on the Steering Committee. The Steering Committee met frequently throughout the planning process.

The consensus decision-making process was structured in a manner that provided for the Steering Committee to make recommendations to the Town Board for the Land Use Plan. In the event that there was not agreement from the Steering Committee, the Planning Commission would make a decision and recommendation to the Town Board.

The Duluth Township newsletter kept the community informed of the Plan's progress and developments. Open houses/community meetings were held to solicit community input on each stage of the Plan, including the release of a draft plan for public input before the final plan was written. Two community surveys were mailed to all households during the planning process, as well. Over one-hundred residents responded to each survey.

The primary purposes of the Township's comprehensive planning effort in 2001-2002 were to: revisit the goals, policies and concepts in the 1976 Duluth Township Comprehensive Land Use Plan; analyze and review other pertinent information; and produce an updated Comprehensive Land Use Plan with full input of Township residents.

Reasons for developing the 2002 CLUP included:

1. To better address the conditional use permitting process;
2. To address a potential increase in development pressure along the shore from the proposed sewer line in the North Shore Corridor;
3. To review administrative procedures and enforcement policies; and
4. To meet the 1998 St. Louis County Zoning Ordinance which established county-wide regulatory minimums.

### **Structure and Format of this Document**

There are six sections in the Report:

Section 1. Introduction

Section 2. General Township

Section 3. Land Use Overview and By Specific Land Use Areas

Section 4. The Natural Environment

Section 5: The Built Environment

Section 6. Community Infrastructure and Resources

Each section and subsection of the document identifies vision statements, policies, and strategies (where applicable) from the 2002 CLUP. The vision and policies from the 2002 CLUP form the basis of the analysis in this report.

A vision represents the desired community that the townspeople are striving to create. Goals and policies, and strategies represent the backbone of a Comprehensive Land Use Plan (CLUP). They articulate the townspeople's desires as to both the extent and nature of future development. They should be referred to frequently as aids in making land use decisions and other Town decisions.

In addition, it is important to understand the significance and impact of the land use changes that occurred as a result of the 2002 CLUP. In this instance, the basis for analyzing these changes is based on the 1976 CLUP and the subsequent 1984 Zoning Map. These are identified as Land Use Changes from 2004 – 2018 in this document.

## Section 2: General Township

---

### 2002 CLUP Vision and Policies

#### **2002 CLUP Vision:**

*The Town of Duluth is a well-managed, rural community that is community oriented and in balance with its many natural amenities.*

*The Town promotes its rural character by protecting the shore area and open spaces and through the enhancement of its trail and open space system.*

*Participation in civic affairs is active and healthy.*

#### **2002 CLUP Policies:**

*Maintain the rural character of Duluth Township.*

*Provide that land use and development decisions are made with the maximum advice of the Township and with full opportunity for public participation.*

*The community's many gravel roads have been retained as they maintain the community's rural character and ambiance.*

*Build trust in the actions of Town government through conscientious adherence to public comment processes, policy goals, and administrative procedures.*

*Pursue Township advisory status with public agencies.*

### Discussion and Activities since 2002 CLUP

Using the vision and policies in the 2002 CLUP, the Town updated its Zoning Ordinance, focusing, in part, on maintaining rural character. Following are specific instances which, when aggregated, contribute to a sense of rural character:

- The land use areas that included public forest land were increased and specifically identified to contain public lands.
- Maintenance of the essential character of the locality is a specific criterion used in granting variances and conditional uses.
- In many instances, setbacks on roads and side yards were increased.
- No gravel roads have been converted to bituminous surfaces.
- Descriptions of zoning districts identified which districts would emphasize agriculture and forest lands.

Rural character is mentioned at least fourteen times in the visions and policies of the 2002 CLUP. It is identified in conjunction with tourism, open spaces, bike trails, infrastructure, and housing. However, "rural character" is a quality that can be very difficult to define. It may be that it's an essential part of the term to have multiple meanings. Two perspectives of rural:

Rural may also be a state of mind. (*Richardson, 2000*)

In the end, each community must take into consideration its own unique characteristics and through creating a vision and goals define *its* own concept of rural. (*A Community Planning Handbook, 2005*)

The Town continues to emphasize transparency in all its endeavors. The Town Board and the Planning Commission have, as a standing item on their agendas, a time for public comment.

The Town conducts its annual meeting with preparation and openness. Budget information is provided by department, compared with previous levies, and voted upon by the electorate. Resolutions by the community are entertained.

The Open Meeting law is adhered to regarding all public meetings and all public meetings are posted according to the Open Meeting Law (*Minnesota Statutes, Chapter 13D, Open Meeting Law*).

Community members are invited to serve the Town by running for the Town Board or applying to be on the Planning Commission. All openings are advertised in the Township newsletter and on the Town website. Other opportunities occur from time to time to serve on steering groups. Open houses are held for Township-initiated undertakings, such as Ordinance updates, Town building additions, etc. All members of the community are invited to attend and provide their comments.

The Town has undertaken two major facility additions, one to the Town Hall and the other to Fire Hall. Each of these was preceded by full descriptions in the Newsletter and on the Town website. Community members were invited to provide comment on the projects either in writing or by attending the open house presented for each project.

A Trails Plan for the Township was created with an emphasis on community input through a Steering Committee and open houses.

The Town is represented on the North Shore Management Board, which was created to direct the implementation and monitoring of a North Shore Management Plan (NSMP). The NSMP focuses on strategies for environmental protection and orderly growth along the North Shore of Lake Superior.

In numerous instances, the Town has commented on and made recommendations to St. Louis County on their proposed sales of tax forfeited State lands in the Township. The Town has also worked with the St. Louis County Public Works Department regarding safety and maintenance of both County roads and Town roads. In 2017 the Town worked with St. Louis County on a major project rehabilitating the property where the Clover Valley High School had been located.

## Section 3: General Land Use

---

### 2002 CLUP Vision and Policies

Goals and policies represent the backbone of a Comprehensive Land Use Plan (CLUP). They articulate the townspeople's desires as to both the extent and nature of future development. They should be referred to frequently as aids in making land use decisions and other Town decisions.

#### **2002 CLUP Vision:**

*The Town is a well-managed, rural community that is in balance with its many natural amenities.*

#### **2002 CLUP Policies:**

*Provide for quality, controlled growth that respects natural resources and retains the existing character of the community.*

*Maintain the rural character of Duluth Township.*

### Land Use Planning and Zoning Ordinances

The first CLUP for the Town was written in 1976. That CLUP provided guidance for the earliest zoning ordinances in the Town. The subsequent Zoning Ordinance and Zoning Map used for comparison in this report was based on 1984 zoning data.

The 1976 CLUP was used until the adoption of the current 2002 CLUP. As a result of the current 2002 CLUP there was a major re-write of the Zoning Ordinance adopted in 2005. There have been a number of amendments to the 2005 Zoning Ordinance. These amendments are considered in producing data for the land use changes from the 2005 - 2018 period.

**For planning purposes this document will also refer to Zoning Districts as "Land Use Areas." For ease of reading, the Land Use Areas will note the Zoning Districts associated with them.**

### Land Use Changes From 2004 to 2018

As shown in Table 3.1 and in Figure 3.1, the Inland Commercial area saw a 180% increase since the 2002 CLUP and subsequent zoning. The creation of a new commercial area at the intersection of the Lismore and McQuade Roads was mostly responsible for this increase. On the north side of Lismore Road, a garage formerly used by St. Louis County was converted into a building housing several commercial enterprises. Structures have been added to the commercial businesses located there and there has been continued remodeling of the businesses.

The Shoreland Commercial area of the Town was increased by 1,133% from 9 acres to 129 acres. This was due in part to the formal establishment of commercial zones on the Shore since the 2002 CLUP and subsequent zoning.

**Table 3.1****Land Use Changes by Zoning Districts and Land Use Area from 2004 - 2018**

<b>1984 - 2004 Zoning District</b>	<b>2005- 2018 Zoning District</b>	<b>Land Use Areas</b>	<b>1984 – 2004 Acres</b>	<b>2005 – 2018 Acres</b>	<b>Percent Change From 2004 - 2018</b>
C	COM-3	<b>Inland Commercial</b>	5	14	+180%
FM	FAM-1 FAM -2	<b>Public Forest Lands</b>	5057	8,366	+65%
A1	FAM-3	<b>Farm and Forest Lands</b>	10,777	8,168	-24%
ML	LIU-3A	<b>Limited Industrial</b>	178	136	-23%
AR	MUNS-4	<b>Rural Residential</b>	11,729	11,105	-5%
C	SCO-8A SCO - 8B	<b>Shoreland Commercial</b>	9	129	+1,333%
R1, W1, W2	SMU- 6 SMU - 8 SMU - 6A	<b>Lake Superior Shoreland</b>	1935	1,769	-9%
		<b>Total</b>	<b>29,686</b>	<b>29,686</b>	

The change in Public Forest Lands use areas saw a 65% increase since the 2002 CLUP and subsequent zoning. This came about from closely looking at all the contiguous public land ownership in the Forest Management zones (2004). The current Public Forest Lands with very minor exceptions are all public land.

The change in Farm and Forest Lands use areas decreased by 24%. This decrease was primarily the result of more closely determining public land ownership in the Township for inclusion in the Public Forest Lands area.

There was a 23% reduction in Limited Industrial use areas. Change in Rural Residential land use areas decreased by 5%. Again, as a result of more closely determining the public lands in the Township.

The 9% decrease in Lake Superior Shoreland land use areas is primarily a result of delineating Shoreland Commercial areas.



## Discussion and Activities since 2002 CLUP

Rights to land are not found in nature. Land use rights are conferred within a human society and for each there is expected a corresponding responsibility to use that land in ways that will not harm neighbors or the community. A land use plan adopted and implemented by a local government provides the basis by which land owners act responsibly toward their neighbors and the land. (1976-77 *Town of Duluth Comprehensive Land Use Plan*)

This section will look at the Township as a whole comparing each zone district and changes in land use that have occurred in the districts since the implementation of the current CLUP in 2002 and the subsequent implementation of the updated Zoning Ordinance in 2005.

The Zoning Ordinance was updated to reflect the directions expressed in the 2002 CLUP. Land use changes will be looked at in terms of both the Zoning Ordinance and Map as it was in 2004, and then as it was following the changes adopted in 2005. For the purposes of comparison and for updating the current CLUP, "**Land Use Areas**" will be used.

Table 3.1 correlates these Land Use Areas to the zoning districts used in the 2004 Zoning Ordinance and in the current Zoning Ordinance.

Overall, the Township, as of January 2019, was comprised of 1790 parcels. At the time, 919 of these parcels had some development on them.

## Current Land Use Areas in the Township

Table 3.2 displays some general statistics regarding over-all land uses in the Township. When viewed together they portray what has happened over the course of the CLUP both singularly and in combinations with each other.

### **Acresages of Current Land Use Areas**

Figure 3.2 displays the relationship of Land Use Areas in the Township. Commercial areas are concentrated in the shoreland, with a minor number inland. Possible explanations for this relate to the nature of the businesses, location to the traveling public, and existence of commercial activities prior to the enactment of land use controls.

Rural Residential is the largest percentage of land use in the Town. Farm and Forest Lands and Public Forest Lands are about equal and when combined account for almost one half of the land use area in the Town.

<b>Table 3.2 Comparison of Current Land Use Areas (Based on Jan. 2019 Data)</b>								
<b>Land Use Area</b>	<b>Inland Commercial</b>	<b>Shoreland Commercial</b>	<b>Public Forest Lands</b>	<b>Farm &amp; Forest Lands</b>	<b>Limited Industrial</b>	<b>Rural Residential</b>	<b>Lake Superior Shorelands</b>	<b>Totals</b>
<b>Current Zoning Designation</b>	COM-3	SCO-8A SCO-8B	FAM-1 FAM-2	FAM-3	LIU-3A	MUNS-4	SMU-6 SMU-6A SMU-8	-
<b>Acreages</b>								
Total Acres	14	129	8,366	8,168	136	11,105	1,769	29,686
Percent of Overall Township	< 1%	< 1%	29.1%	27.5%	< 1%	37.3%	6.1%	-
<b>Parcels</b>								
Number of Parcels	4	29	110	371	9	755	523	1,801
Parcels with Some Level of Development	3	15	1	208	6	433	253	919
Average Parcel Size	3.2	3.2	77.1	21.9	16.7	14.4	2.7	
Median Parcel Size	3.6	2.5	40	20	13.4	10	1	
Parcels if Subdivided to Max Potential*	26	93	310	901	17	2,416	866	4,629
<b>New Single Family Homes 2002-2018</b>								
Number	0	3	1	48	0	81	26	159
Percent of Overall New SF	--	2%	< 1%	30%	--	51%	16%	-
<b>Variations</b>								
Number	0	2	0	6	0	18	41	67
Percent of Variations	--	3%	--	9%	--	27%	61%	-

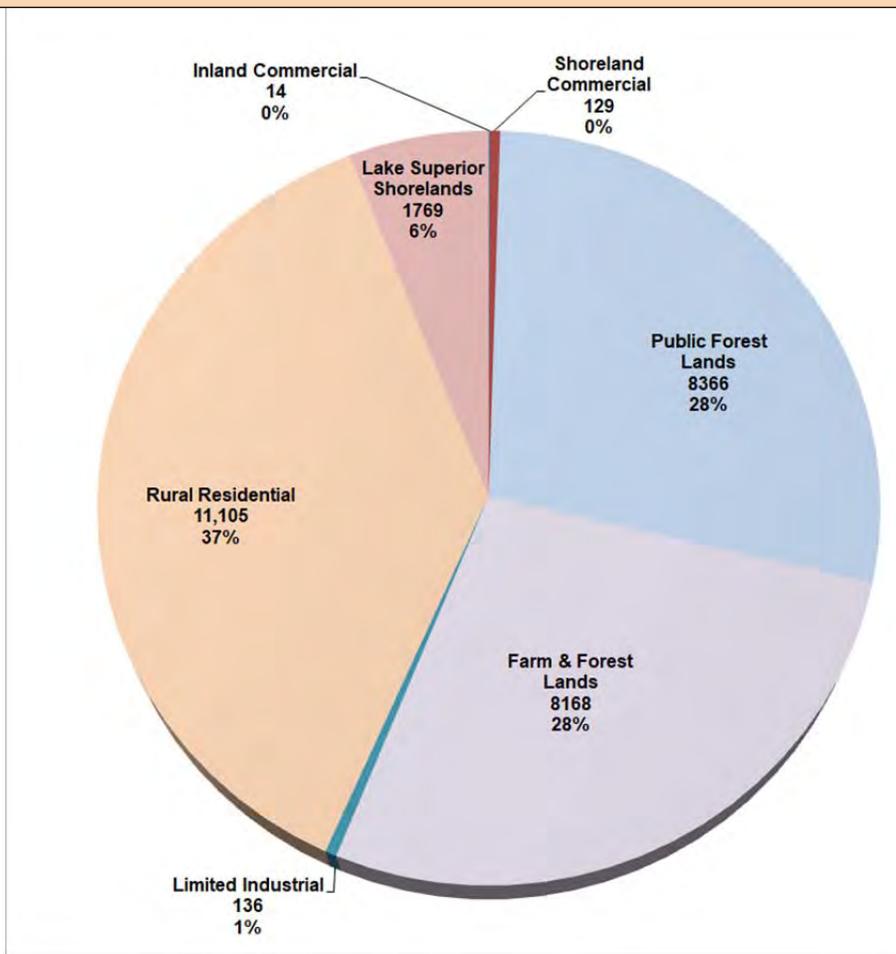
Table 3.2 Comparison of Current Land Use Areas (Based on Jan. 2019 Data)								
Land Use Area	Inland Commercial	Shoreland Commercial	Public Forest Lands	Farm & Forest Lands	Limited Industrial	Rural Residential	Lake Superior Shorelands	Totals
Current Zoning Designation	COM-3	SCO-8A SCO-8B	FAM-1 FAM-2	FAM-3	LIU-3A	MUNS-4	SMU-6 SMU-6A SMU-8	-
Conditional Use Permit Applications**								
Number Approved/ Not Approved	0	0	0	9 / 1	0	4 / 1	13 / 2	26 / 4
Percent of CUP Applications	--	--	--	33%	--	16%	50%	

\* This figure is strictly a calculation based on overall area divided by minimum parcel size for the zone district. It does not take into account parcels that would not be developable due to wetlands, topographic considerations, etc.

\*\* Includes only unique applications, not reviews or alterations to existing CUPs. Not Approved includes denied, withdrawn and tabled applications.

\*\*\* The Table reflects the deeded acres in the Township whereas the other data represents calculated GIS acreages.

**Figure 3.2. Total Acreages and Percent of Acreage by Land Use Area**



### Parcels

The parcels referred to in this report are tax parcels identified in the St. Louis County database. The largest percentage of parcels occurs in the Rural Residential land use area, 42%. Also, this area has the largest potential for future development. Note that this piece of data is based strictly on the minimum lot size requirements and not related to factors such as wetlands, streams, etc. Thus, this statistic should be used with that in mind. It is merely an indicator that there are opportunities for future development in the land use area.

The Forest and Farm Lands area has about 21% of the parcels in the Township. It also has the next highest number of parcels available for future development.

The Lake Superior Shorelands, accounting for about 29% of the parcels, similarly has the potential for additional development.

### Single Family Residences in the Township

Table 3.3 shows the number of permanent single-family residences constructed in the Township from 2002 through 2018 and is an indication of growth patterns in the Township. Over half of the new single family construction in the Township occurred in the Rural Residential land use area, with slightly less than one-third of the new development occurring in the Farm and Forest Lands area.

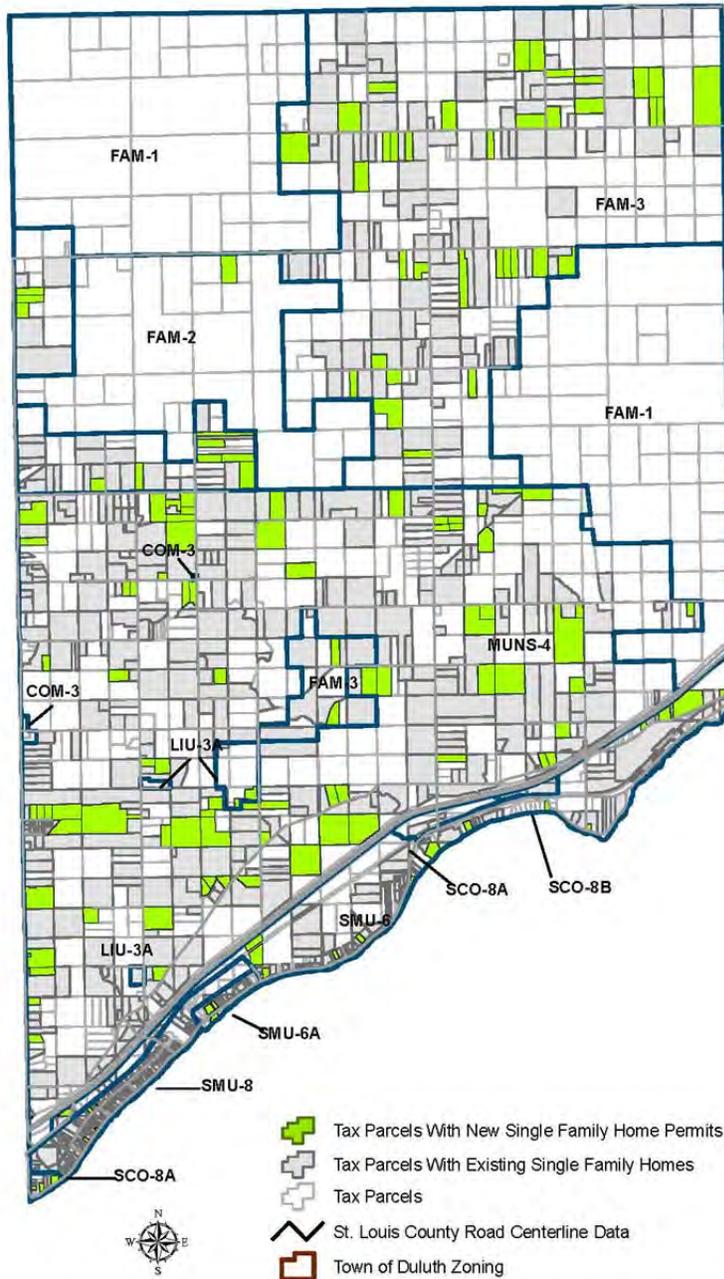
Figure 3.3 displays the location of these single family homes by parcel as well as parcels with existing single family homes.

<b>Table 3.3 Single Family (SF) Home Construction from 2002 - 2018</b>			
<b>2018 Zoning</b>	<b>Land Use Areas</b>	<b>Number SF Dwellings</b>	<b>% in Township</b>
<b>COM-3</b>	Commercial	0	--
<b>FAM-1 &amp; FAM-2</b>	Public Forest Lands	1	1%
<b>FAM-3</b>	Farm and Forest Lands	48	30%
<b>LIU-3A</b>	Limited Industrial Lands	0	0%
<b>MUNS-4</b>	Rural Residential	81	51%
<b>SCO-8A &amp; -8B</b>	Shoreland Commercial	3	2%
<b>SMU-6 &amp; -6A</b>	Lake Superior Shoreland	26	16%
	<b>Total</b>	<b>159</b>	<b>100%</b>

Figure 3.3. Single Family Home Construction: 2002 –2017

# DULUTH TOWNSHIP

## Permitted Single Family Homes 2002 - 2017



## Conditional Uses in the Township

<b>Table 3.4 Conditional Use Applications by Zone District and Use</b>					
<b>Use</b>	<b>Land Use Area</b>				
	<b>Farm and Forest (FAM-3)</b>	<b>Rural Residential (MUNS-4)</b>	<b>Lake Superior Shoreland (SMU-6 &amp; SMU-6A)</b>	<b>Lake Superior Shoreland (Small Lot) (SMU-8)</b>	<b>Total</b>
Bed and Breakfast	1		2		3
Commercial Business		1	2		3
Cultural Center			1		1
Electrical Substation		1			1
Home-Based Business		1		1	2
Kennel	1				1
Off-Site Sign			1		1
Planned Unit Development			1		1
Short-Term Rental	2		3	3	8
Subordinate Residential Dwelling	4	1			5
Build Home on 5 Acre Lot in 9 Acre Zone District	1				1
Livestock in Shoreland Area			1		1
Utility Tower		1			1
Wind Turbine	1				1
<b>Total</b>	<b>10</b>	<b>5</b>	<b>11</b>	<b>4</b>	<b>30</b>

The number of conditional use permits granted over the length of the CLUP can be considered an indicator of whether the descriptions of the Land Use Area, the goals, and policies in the CLUP are adequate or appropriate.

A conditional use is defined as “A land use or development that would not generally be appropriate without restriction throughout the zone district but which, if controlled as to number, area, size, location, design, performance, or relation to the neighborhood, and as to compatibility with official Town of

*Duluth plans, would not be injurious to the public health, safety, order, comfort, appearance, prosperity or general welfare.”*

Table 3.4 shows the number of unique applications received for various conditional uses and the use applied for. It does not include reviews of CUPs or alterations to existing CUPs. Of the 30 applications, 26 were approved, 1 was tabled, 1 was withdrawn, and 2 were denied.

One of the originally approved applications for a short-term rental in SMU-8 was subsequently revoked. In addition, the home-based business in MUNS-4 moved to a light industrial use zoned property. Some of the other 26 approved CUPs are on properties that have been sold with subsequent disuse of the CUP: 2 short-term rentals, 1 home business, 1 cultural center, 1 for livestock in a shoreland land use area and 1 planned unit development. These are not cited in the table as such.

At 27%, high frequency short term rentals comprised the most frequent request for a conditional use. The predominant geographical area where short term rentals were requested was overwhelmingly the Lake Superior Shoreland area followed by the Farm and Forest Lands area.

There have been essentially no new home businesses established since the CLUP was adopted. There were two conditional use requests for home-based businesses, both of which were granted but subsequently terminated, one due to a change of ownership and the other due to the business's relocation to a Limited Industrial land use area.

There were 88 businesses listed on the Town's website. It should be noted that this database was created by a listing of businesses known to the creator of the list and added to by others who wanted to be on the website. Thus, its accuracy concerning all businesses in the Township may be limited.

Of the 88 businesses identified, about 66 in the Township are still known to be operating and are not located in a Commercial Zoning District. An update of the website does not include these businesses any more. It is not known if this is an increase, as there was no available data prior to the 2002 CLUP.

A general breakdown of the 66 businesses indicates that about three-quarters of the businesses were home occupations, about 5% were home-based businesses, 5% were bed and breakfasts, and about 8% were short term rentals.

## **Variances in the Township**

The number and types of variances requested since the adoption of the CLUP can also be an indicator of the robustness of both the goals set by the CLUP and the definitions of the underlying land use areas.

*A variance is defined as: Any modification or relief from a Town of Duluth Land Use Ordinance within a permitted use where it is determined by the Planning Commission that, because of practical difficulties, the strict enforcement of the provisions of such ordinance would prevent the property owner from using the property in a reasonable manner not permitted by such ordinance when the plight of the property owner is due to circumstances unique to the property not created by the property owner; and, if granted, will not alter the essential character of the locality.*

Variances generally are related to the description of the Land Use Area, particularly in reference to lot sizes. Almost two-thirds of the variances in the Town occurred in the shoreland land use districts. In instances of shoreland lots it appears that there is some tension regarding what a residential lot is, especially in terms of lot size and setbacks. Another 27% of the variances occurred in the Rural Residential land use district, where lot size and setbacks were also the primary reasons.

<b>Table 3.5 Variances by Land Use Area</b>		
<b>Land Use Area</b>	<b>Number of Variances</b>	<b>% of Total</b>
<b>Shoreland</b>	39	63%
<b>Farm and Forest Lands</b>	6	10%
<b>Rural Residential</b>	17	27%
<b>Total</b>	<b>62</b>	

## Section 3.1: Inland Commercial Areas

### 2002 CLUP Vision and Policies

#### **2002 CLUP Vision:**

*New commercial services exist serving the basic needs of residents and are located in the same commercial districts as in 2001, along Scenic Highway 61 and in strategic neighborhood locations throughout the Township.*

*New commercial developments are locally based or compatible with local commercial needs.*

*There are no strip malls.*

#### **2002 CLUP Policies:**

*Provide opportunities for limited commercial growth within existing or in newly designated commercial areas.*

*Encourage commercial development that is locally based or compatible with local commercial needs.*

#### **2002 Description of Inland Commercial Land Use Area:**

*This district is intended for concentrated, commercial development that promotes the efficient delivery of goods and services.*

### Land Use Changes From 2004 to 2018

The Inland Commercial area saw a 180% increase since the 2002 CLUP and subsequent zoning. The creation of a new commercial area at the intersection of the Lismore and McQuade Roads was mostly responsible for this increase. On the north side of Lismore Road, a garage formerly used by St. Louis County was converted into a building housing several commercial enterprises. New structures have been added in this area and existing structures have been expanded.

<b>Table 3.1.1 Land Use Changes by Zoning Districts and Land Use Area from 2004 - 2018</b>					
<b>1984 - 2004 Zoning</b>	<b>2005 - 2018 Zoning</b>	<b>Land Use Areas</b>	<b>1984 – 2004 Acres</b>	<b>2005 – 2018 Acres</b>	<b>Percent Change From 2004 - 2018</b>
C	COM-3	<b>Inland Commercial</b>	5	14	+180%

### Discussion and Activities since 2002 CLUP

Table 3.1.2 shows the current acreage zoned for Inland Commercial Use and number of parcels available in these areas.

<b>Table 3.1.2 Current Inland Commercial Land Use Areas</b>		
<b>Location</b>	<b>Acres</b>	<b>Number of Parcels</b>
<b>Corner of Lismore and McQuade Road</b>	12	3
<b>Old French River Store corner of Shilhon and Bergquist Roads</b>	2	1
<b>Totals</b>	<b>14</b>	<b>4</b>

There are 14 acres of Inland Commercial area in the Town comprised of 4 parcels, all of which have some level of development on them. The current minimum lot size for this land use area is .5 (one half) acre.

The commercial area at the corner of Lismore and McQuade Road has a total of 12 acres and with that acreage and a minimum lot size of .5 acres, the Inland Commercial Land Use Areas have parcels available for future commercial development should the need arise.

The Lismore Road/McQuade Road commercial use area is located adjacent to similar commercial uses in Normanna and Lakewood Townships.

The old French River Store location remains a commercial area on a nonconforming lot but has not been in use as a business since prior to the adoption of the 2005 Ordinance.

No convenience store/gas station currently exists in the Town. There is, however, a gas station in Lakewood Township, approximately one-half mile west of the Town on Highway 61.

## Section 3.2: Shoreland Commercial Areas

### 2002 CLUP Vision and Policies

#### *2002 CLUP Vision*

*Provide opportunities for limited commercial growth within existing or in newly designated commercial areas.*

*Identify and reevaluate commercial development priorities in the North Shore corridor that maintain consistency of development type and intensity across jurisdictional boundaries.*

*Allow new commercial development and redevelopment at commercial nodes.*

#### **2002 CLUP Policies:**

*Encourage commercial development that is locally based or compatible with local commercial needs.*

*Balance the importance of tourism and other economic development with the needs and values of residents.*

*Identify and reevaluate commercial development priorities in the North Shore corridor that maintain consistency of development type and intensity across jurisdictional boundaries.*

#### **2002 Description of Shoreland Use Land Use Area:**

*Intended for concentrated, locally based, commercial development along the shores of Lake Superior, for uses consistent with providing goods and services for the local community, and incidentally for the locally based tourism industry. This district supports a light to moderate level of development intensity.*

### Land Use Changes From 2004 to 2018

The Shoreland Commercial area of the Town was increased by 1,333% from 9 acres to 129 acres. This was due to the formal establishment of commercial zones on the Shore based on the 2002 CLUP and subsequent zoning.

<b>Table 3.2.1 Land Use Changes by Zoning Districts and Land Use Area from 2004 - 2018</b>					
<b>1984 - 2004 Zoning</b>	<b>2005 - 2018 Zoning</b>	<b>Land Use Areas</b>	<b>1984 – 2004 Acres</b>	<b>2005 – 2018</b>	<b>Acres</b>
C	SCO-8A	<b>Shoreland Commercial</b>	9	129	

## Discussion and Activities since 2002 CLUP

Table 3.2.2 shows the current acreage zoned for the different Shoreland Commercial use areas and the number of parcels available in these areas.

<b>Table 3.2.2 Current Shoreland Commercial Land Use Areas</b>		
<b>Location</b>	<b>Acres</b>	<b>Number of Parcels</b>
<b>McQuade Harbor</b>	28.4	19
<b>Homestead Rd</b>	72.3	9
<b>Tom's Logging Camp area</b>	27.9	6
<b>Totals</b>	129	34

There are currently 129 acres of Shoreland Commercial area in the Town made up of 34 parcels. Of these 34 parcels, 15 of them have some development on them. The current minimum lot size for these land use areas is 1 acre. With 129 acres consisting of 15 developed or partially developed parcels and 19 undeveloped parcels, there are parcels available for future commercial development should the need arise.

It should be noted that there were a few long-standing commercial uses that existed prior to the 2002 CLUP in the Shoreland Land Use Area that are not located in a Commercial Land Use Area. Two of these businesses are the New Scenic Café (still active) and the Shorecrest (Nokomis) Restaurant (currently closed).

With the goals and policies recommended from the 2002 CLUP and the adoption of the 2005 Zoning Ordinance, design goals were put into place and a design review was required for all new construction in Commercial zone districts. Since then, the design review requirement has been removed because, as it was written, incorporation of the results of the design review into the proposed project was optional.

There are currently two Shoreland Commercial businesses available for sale or lease, both of them not located in a designated Commercial Land Use Area. These businesses are the Nokomis Restaurant property and an antique store property, both located in the Lake Superior Shoreland Land Use Area.

All of the business enterprises that have been established since 2002 have been essentially locally owned, that is they have not been big box nor franchise operations.

There has been a fair amount of commercial activity on the Shore since 2002. Some of that activity is outlined below.

- The Lakeview Castle property located in the Shoreland Commercial Area has changed ownership twice since the 2002 CLUP. It continues to be an important local and visitor destination as a restaurant, banquet hall, and catering business. They recently expanded with a deck on the front of the structure.
- The Shorecrest Restaurant (not in the Shoreland Commercial Area) closed and was reopened as Nokomis Restaurant. Nokomis Restaurant closed after a number of successful years so its owners could pursue other interests. Subsequently a Planned Unit

Development for condominiums was planned for that site but was not constructed. The property is currently vacant.

- The New Scenic Café (located in the Lake Superior Shoreland Land Use Area) continues to be a local, as well as visitor, destination and has expanded.
- The restaurants along the North Shore formed a loose-knit group and the area was marketed as the “North Shore Culinary Highway.”
- Tom’s Logging Camp (In the Shoreland Commercial Area) has added a sandwich/coffee shop to its premises.
- A new restaurant was built at the intersection of Highway 61 and Homestead Road (in the Shoreland Commercial Area), Lighthouse on Homestead. It was a strong local presence with food and a bar, and featured local entertainment. It subsequently moved to Knife River. The property was sold and now operates as a motel.
- The Cape Superior Inn (in the Shoreland Commercial Area) continues to operate with long term stays.
- A Bottle Shop was added to the Cape Superior Inn and has since has closed.

There was a rezoning request for a parcel on the corner of Highway 61 and Alseth Road. This request was denied for a number of reasons including that the request did not meet the requirement that there was a clear public need for the rezoning that goes beyond the benefit of the land owner because there was a nearby commercial area with a large acreage of undeveloped space. There were another existing location already being developed with a focus on access to the Lake.

## Section 3.3: Public Forest Lands

---

### 2002 CLUP Vision and Policies

#### **2002 CLUP Vision**

*Duluth Township promotes its rural character by protecting the shore area and open spaces and through the enhancement of its trail and open space system.*

*The streams and forests remain a scenic and recreational experience for both passive and active uses.*

*The most prominent aspect about Duluth Township is its diverse natural beauty... (including) mixed forests, native species, open spaces and contiguous green spaces for habitat.*

#### **2002 CLUP Policies and Strategies:**

*Advocate for silvicultural systems on public lands that promote maximum forest diversity while providing an economic base for specialized forest products.*

*On all public lands encourage the long-term sustainability of diverse forest ecosystems in terms of species, age, mixture and habitat.*

*Encourage the preservation and maintenance of agricultural lands and managed forest lands.*

*Use a mix of tools, emphasizing encouragement, education, regulation, and limited new acquisition.*

*Encourage the County to use third party certification of sustainable forest management, consistent with sustainable forestry guidelines promoted by the Forest Stewardship Council or the American Pulp and Paper Manufacturers' standards.*

*Consider limited new acquisition to support a variety of trails or recreational development. Identify high priority tracts that would enhance recreation opportunities, provide better access to public lands, or are sensitive areas adjacent to public lands. Consider possible land exchanges, donated conservation easements, or other low and no-cost methods of acquisition.*

*Publicize and promote sustainable use of public lands. Educate Town residents and visitors of their responsibilities in being proper stewards of public lands. Work with County and State to enforce existing regulations on use and recreation activities.*

#### **2002 Description of Public Forest Lands Land Use Area:**

*This area is intended to recognize and promote the development of the Township's forestry and agricultural industry and to provide for recreational use of such areas. This designation is typically used in areas with land developed at very low densities and often there is a moderate to considerable amount of contiguous acreages of government and corporate ownership. A low level of development is important in public forest land areas since the uses encouraged in these areas would be less compatible in a more urban setting.*

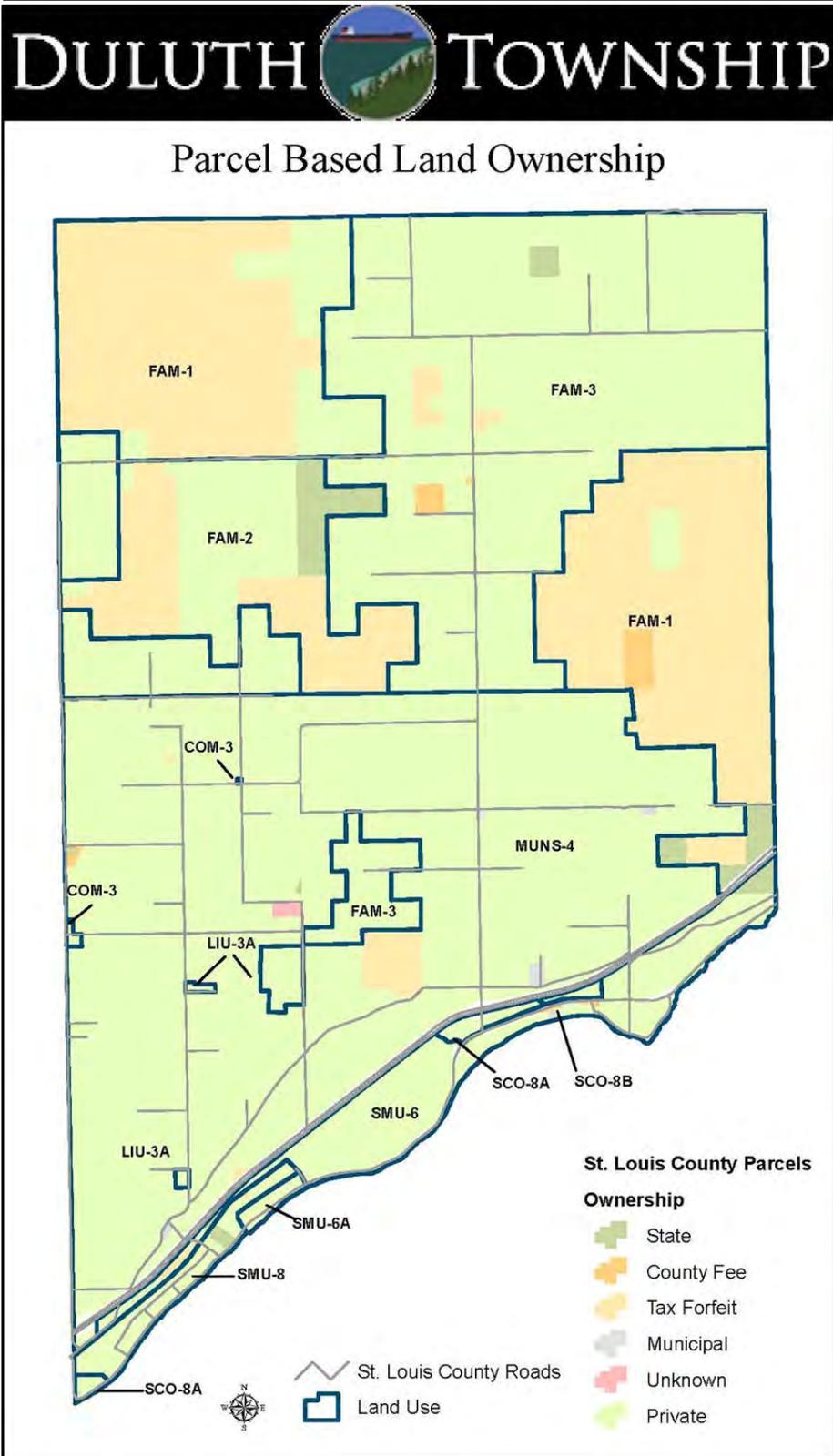
## Land Use Changes From 2004 to 2018

Table 3.3.1 compares the number of acres in the Public Forest Lands use areas from 2004 to 2018. In 2002 the CLUP was updated and in 2005, the Zoning Ordinance was amended to reflect the 2002 CLUP.

<b>Table 3.3.1 Land Use Changes by Zoning Districts and Land Area Type from 2004 - 2018</b>					
<b>1984 - 2004 Zoning</b>	<b>2005 - 2018 Zoning</b>	<b>Land Use Areas</b>	<b>1984 – 2004 Acres</b>	<b>2005 – 2018 Acres</b>	<b>Percent Change From 2004 - 2018</b>
FM	FAM-1 FAM-2	<b>Public Forest Lands</b>	5057	8,366	+65%

Public Forest Lands land use areas saw a 65% increase since the 2002 CLUP and subsequent zoning. This came about from looking closely at all the contiguous public land ownership in the Forest Management zones for inclusion in the Public Forest Lands use area. The current Public Forest Lands, with very minor exceptions, are all public land.

Figure 3.3.1. Parcel Based Land Ownership



## Discussion and Activities since 2002 CLUP

There are currently 8,366 acres in Public Forest Lands areas across the Township. These 8,366 acres are comprised of 110 parcels with an average of 76 acres per parcel.

FAM-1 and FAM-2 districts were established in an effort to maintain large, contiguous areas of forest habitat and to minimize fragmentation. These districts consist mostly of large parcel sizes that are almost all in public ownership with the exception of 28 parcels totaling 1656 acres. The minimum lot size for these zone districts were established as 35 acres for FAM-1 and 17 acres for FAM-2, the largest of any of the zoning districts.

There are 766 acres in private ownership in FAM-1. This is about 12% of the acreage in FAM-1. All of the properties in private ownership are in the northwestern portion of FAM-1 except for one 80-acre parcel located in the eastern portion of the FAM-1. The 686 acres in private ownership in the northwestern part of the zone district are divided between 3 owners, one with 400 acres, another with 246 acres and another with 80 acres. The owner of the 400 acres has committed these acres, along with 80 contiguous acres in FAM-3, to the Forest Legacy Program.

The percent of private ownership in the FAM-2 zone district is about 40%. It consists of 28 parcels totaling 890 acres. There are 6 owners of the non-public lands. Most of the private land in this zone district, 640 acres, is held by one owner. A large portion of this district has significant wetlands which serve to store water during storm events.

The Town has worked with the St. Louis County Land and Minerals Department in conveying the importance of and in support of these large public acreages of State tax forfeited lands. State of Minnesota tax forfeit land is land that is managed by St. Louis County. Minnesota Department of Natural Resources (MNDNR) is directed by state law to review, authorize and approve the sale of certain tax-forfeited lands (i.e. lands that have forfeited for non-payment of general real estate tax). The county where the parcel is located makes a determination of whether or not the parcel will require MNDNR review by referring to the summary of statutory review granted to DNR for the review of proposed land sales.

<b>Table 3.3.2 Public Forest Lands Ownership 2018</b>	<b>Acres Public Forest Lands</b>		<b>Total</b>
	<b>FAM-1</b>	<b>FAM-2</b>	
State of MN Tax Forfeit	5,140	1,110	6,250
State of MN Land	140	240	380
St. Louis County Fee Land	80	0	80
Private	766	890	1656
<b>Total</b>	<b>6127</b>	<b>2240</b>	<b>8367</b>

There are two large watersheds, the Knife River and the Sucker River, located in the Public Land Use Area whose streams are now considered impaired. Given that the majority of public ownership is tax

forfeit land (97%) it is important that the Town (to the extent statutorily permitted) work closely with St. Louis County and the MNDNR in management of these areas.

The Town, in the past, has expressed particular concern when St. Louis County proposes the sale of tax forfeited property with significant riparian and wetland elements.

## Section 3.4: Farm and Forest Lands

### 2002 CLUP Vision and Policies

#### *2002 CLUP Vision*

*The Town has protected natural resources and open space.*

*Attention has been given to the preservation/conservation of open space.*

*Housing developments conserve farm vistas.*

#### **2002 CLUP Policies and Strategies:**

*Maintain the rural character of the Township.*

*Encourage the preservation and maintenance of agricultural lands and managed forest lands.*

*Encourage the provision of goods and services that meet the basic commercial needs of the community.*

*Create a policy preference for agricultural practices in designated areas. To protect existing agricultural practices from nuisance complaints, designate agriculture as the primary land use in designated areas. Notify new residential development that agricultural practices will not be deemed to be nuisance activities within the designated areas.*

#### **2002 Description of Farm and Forest Lands Land Use Area:**

*This area is intended to recognize and promote the development of the Township's forestry and agricultural industry, to maintain and promote the rural character of the Township, and to prevent urban and suburban encroachment on the area. A low level of development is important in this district since the uses encouraged in this area would be less compatible in a more urban setting.*

### Land Use Changes From 2004 to 2018

Table 3.4.1 compares the number of acres in the Farm and Forest Lands district areas from 2002 to 2018.

<b>Table 3.4.1 Land Use Changes by Zoning Districts and Land Use Area from 2004 - 2018</b>					
<b>1984 - 2004 Zoning</b>	<b>2005 - 2018 Zoning</b>	<b>Land Use Areas</b>	<b>1984 – 2004 Acres</b>	<b>2005 – 2018 Acres</b>	<b>Percent Change From 2004 - 2018</b>
A1	FAM-3	<b>Farm and Forest Lands</b>	10,777	8,168	-24%

The change in Farm and Forest Lands use areas decreased by 24%. This decrease was primarily the result of more closely determining the public land ownership and designating that as a Public Forest Lands area.

### Discussion and Activities since 2002 CLUP

The Farm and Forest Lands land use area (FAM-3) currently consists of 8,168 acres, and is made up of 371 parcels with an average parcel size of 22 acres. At this time, 56% of the parcels have some development on them. The minimum lot size required by current zoning in this land use area is 9 acres. Considering that the average lot size is 22 acres and almost half of the existing parcels are not developed, there is potential for growth in this land use area.

This zone district is about 28% of the Township in area. If the total acreage in the land use area were to be divided to the minimum lot size of 9 acres, it would result in 907 parcels, nearly 2.5 times the current number of parcels.

There have been 48 new single-family home developments in the Farm and Forest Lands land use area since 2002. This accounts for 30% of the growth in the Township over that time. The only land use area with more development during this time is Rural Residential with 51%. The Lake Superior Shoreland area trails with 16% of the new homes in the Township.

In recent years there has been an increase in traditional crop agricultural. However, recent market prices have limited those increases. While there have been a fair number of farms in livestock production, especially cattle, in the Township over the past 20 years, those have steadily decreased since 2002. There has been an increase since 2002 in farming for produce for local markets. Production of hay in the Township appears to have remained steady over the past 18 years.

There is a continuing increase of interest in farming for food for retail sales as well as for crops to create value-added products on-site.

## Section 3.5: Limited Industrial Use

### 2002 CLUP Vision and Policies

#### *2002 CLUP Vision*

*The commercial and industrial sector has experienced some growth but only in a limited and well managed way.*

*The previous light industrial districts from 2001 have not been expanded and instead, a few new light industrial uses, which emphasize high technology and green technology, have been added and have replaced some of the previous light industrial uses.*

#### **2002 CLUP Policies:**

*Encourage limited development of new light industrial uses that emphasize high technology and green technology.*

*Evaluate current sites to determine if they are still functioning as light industrial sites.*

#### **2002 Description of Limited Industrial Land Use Area:**

*This district is designed to accommodate those industrial and manufacturing uses that foster orderly economic growth, without adversely affecting the residential character of the surrounding area, by imposing performance standards to minimize conflict between dissimilar uses and by prohibiting uses that may contribute to environmental deterioration.*

### Land Use Changes From 2004 to 2018

Table 3.5.1 compares the number of acres in the Limited Industrial land use areas from 2002 to 2018. The LIU zone district was reduced in size when the Clover Valley High School property on Homestead Road was rezoned to a Farm and Forest Lands area.

<b>Table 3.5.1 Land Use Changes by Zoning Districts and Land Use Area from 2004 - 2018</b>					
<b>1984 - 2004 Zoning</b>	<b>2005 - 2018 Zoning</b>	<b>Land Use Areas</b>	<b>1984 – 2004 Acres</b>	<b>2005 – 2018 Acres</b>	<b>Percent Change From 2004 - 2018</b>
ML	LIU-3A	<b>Limited Industrial</b>	178	136	-23%

### Discussion and Activities since 2002 CLUP

These Limited Industrial use areas are essentially existing, small-scale industrial operations (with the exception of the old BOMARC Missile Site on Bergquist Road) that were identified in the 1984 Zoning Ordinance. The Limited Industrial use areas consist of 136 acres and are made up of 9 parcels. The average parcel size is 15.8 acres. Of these 9 parcels, 6 are developed. There are 3 parcels that are not developed, averaging 14.6 acres each.

Since the adoption of the CLUP in 2002, there have been no additions to the Limited Industrial use areas. There was an active citizen group led by the Planning Commission that rewrote some of the zoning requirements for LIU areas because of the effects on nearby residential land owners.

## Section 3.6: Rural Residential

### 2002 CLUP Vision and Policies

#### *2002 CLUP Vision*

*Throughout the Township open spaces, residential and commercial uses are combined into well-designed developments or in some cases mixed use developments.*

*It is obvious that attention has been given to the reduction of impervious surfaces, the preservation/conservation of open space and natural resources, to energy conservation, the maintenance of view corridors and the preservation of large front yard setbacks where space permits.*

#### **2002 CLUP Policies:**

*Provide for quality, controlled growth that respects natural resources and retains the existing character of the community.*

*Develop land with respect for the physical limitation of natural resources so that a quality environment can be enhanced and preserved.*

*Define the ridgeline and manage ridgeline development to protect water quality and reduce erosion.*

*Create conditional use standards that protect the residential character of the surrounding areas.*

#### **2002 Description of Rural Residential Land Use Area:**

*This area is intended to maintain and promote the rural character of the Township, and to prevent urban and suburban encroachment upon these areas. A moderately low level of development is important in this district since the uses encouraged in MUNS-4 would be less compatible in a more urban setting.*

### Land Use Changes From 2004 to 2018

Table 3.6.1 compares the number of acres in the Rural Residential land use areas from 2002 to 2018. There was a very slight decrease in acreage due to a rezoning by request of a group of landowners from a Rural Residential land use area to a Farm and Forest Lands land use area.

<b>Table 3.6.1 Land Use Changes by Zoning Districts and Land Use Area from 2004 - 2018</b>					
<b>1984 - 2004 Zoning</b>	<b>2005 - 2018 Zoning</b>	<b>Land Use Areas</b>	<b>1984 – 2004 Acres</b>	<b>2005 – 2018 Acres</b>	<b>Percent Change From 2004 - 2018</b>
AR	MUNS-4	<b>Rural Residential</b>	11,729	11,105	-5%

## Discussion and Activities since 2002 CLUP

At 11,105 acres, the Rural Residential land use area is the largest in the Township (Table 3.6.1). By area, it makes up 37% of the Township. It contains 755 parcels which at 42% is also the highest number of parcels in a land use area in the Township.

The current average lot size is 14.7 acres. The minimum lot size for this zone district is 4.5 acres. If the area were to be completely subdivided to its minimum lot size, it would have 2,467 lots. Not all of these lots would support development because of site conditions such as wetlands, etc.

Of the 755 parcels that currently exist, 433 of them have some level of development on them, leaving 325 undeveloped parcels.

This land use area has experienced the greatest amount of development in the Township since 2002 in the form of single-family homes. From 2002 through 2018, 81 single-family homes were built in the Rural Residential land use area, a total of 51% of all homes built in the Township over that time period.

In addition, this area has had 18 of the 67 variance requests considered by the Town since 2002. This is 26% of the variance requests heard by the Town during that time, a relatively low percentage, given the predominance of the Rural Residential land use area in the Township in size and number of lots.

Even though population growth is predicted to level off for the Township, it seems that based on the number of single-family homes built in this land use area since 2002, disproportionate even to its large size, and the potential for growth based on the number of undeveloped lots, continued growth can be expected and accommodated in the Rural Residential land use area.

<b>Table 3.6.2 Comparison of Land Use Areas (Based on Jan. 2019 Data)</b>	
<b>Land Use Area</b>	<b>Rural Residential</b>
<b>Current Zoning Designation</b>	MUNS-4
<b>Acreages</b>	
Total Acres	11,105
Percent of Overall Township	37.1%
<b>Parcels</b>	
Number of Parcels	755
Parcels with Some Level of Development	433
Average Parcel Size	14.7
Median Parcel Size	10
Parcels if Subdivided to Max Potential*	2,467
<b>New Single Family Homes 2002-2018</b>	

Number	81
Percent of Overall New SF	51%
<b>Variances</b>	
Number	18
Percent of Variances	27%
<b>Approved Conditional Use Permits</b>	
Number	4
Percent of CUPS	15%

*\* This figure is strictly a calculation based on overall area divided by minimum parcel size for the zone district. It does not take into account parcels that would not be developable due to wetlands, topographic considerations, etc.*

## Section 3.7: Lake Superior Shorelands

### 2002 CLUP Vision and Policies

#### **2002 CLUP Vision**

*Development along the shore is characterized by high quality design, appropriate scale of development, sustainable site planning practices, and is in locations that recognize watershed capacities and the protection of natural resources.*

*There is a balance of locally compatible commercial uses and low impact tourism activities.*

*The Town promotes its rural character by protecting the shore area and open spaces.*

*Views to the lake and views from the lake have not been obstructed by development.*

#### **2002 CLUP Policies:**

*Maintain the current development density and mix of housing lot sizes, housing types, and amenities in the North Shore corridor.*

*Maintain and promote the North Shore's current character, image, landscape, and economic base to serve residents and visitors.*

*Identify and prioritize important habitat and natural areas.*

*Prevent development along Lake Superior which causes erosion or endangers water quality.*

#### **2002 Description of the Lake Superior Shorelands Land Use Area:**

*These land use areas are intended to provide residential and mixed uses consistent with the recreational and natural attributes of Lake Superior, on a suburban-scale lot size. In designated areas of the Lake Superior Shorelands area there is intention for limited expansion of certain waterfront commercial activities on the shores of Lake Superior where nodes of residential and commercial uses currently coexist.*

### Land Use Changes From 2004 to 2018

Table 3.7.1 compares the number of acres in the Lake Superior Shorelands land use areas from 2002 to 2018. The acreage decreased primarily due to the identification of and designation of Shoreland Commercial areas.

<b>Table 3.7.1 Land Use Changes by Zoning Districts and Land Use Area from 2004 - 2018</b>					
<b>1984 - 2004 Zoning</b>	<b>2005 - 2018 Zoning</b>	<b>Land Use Areas</b>	<b>1984 – 2004 Acres</b>	<b>2005 – 2018 Acres</b>	<b>Percent Change From 2004 - 2018</b>
R1, W1, W2	SMU- 6 SMU - 8 SMU - 6A	<b>Lake Superior Shoreland</b>	1935	1,769	-9%

## Discussion and Activities since 2002 CLUP

As shown in Table 3.7.2, the Lake Superior Shorelands land use area occupies about 5.9% of the Township. It is comprised of 523 parcels, making up 6% of the total parcels in the Township. If this land use area were subdivided to the maximum extent under current zoning, approximately 866 parcels would result. Not all of these parcels would support development.

<b>Table 3.7.2 Comparison of Land Use Areas (Based on Jan. 2019 Data)</b>	
<b>Land Use Area</b>	Lake Superior Shorelands
<b>Current Zoning Designation</b>	SMU-6, SMU-6A, SMU-8
<b>Acreages</b>	
Total Acres	1,769
Percent of Overall Township	5.9%
<b>Parcels</b>	
Number of Parcels	523
Parcels with Some Level of Development	253
Average Parcel Size	3.4
Median Parcel Size	1
Parcels if Subdivided to Max Potential*	866
<b>New Single Family (SF) Homes 2002-2018</b>	
Number	26
Percent of Overall New SF	16%
<b>Variiances</b>	
Number	41
Percent of Variiances	61%
<b>Approved Conditional Use Permits</b>	
Number	13
Percent of CUPs	50%

\* This figure is strictly a calculation based on overall area divided by minimum parcel size for the zone district. It does not take into account parcels that would not be developable due to wetlands, topographic considerations, etc.

In 2002, this area was zoned as SMU-6 and SMU-8. One home-based retail business (CUP) and one commercial use (CUP) have been established in these zone districts since 2002.

The SMU-6A zone district is described in the Ordinance as “intended for the limited expansion of certain waterfront commercial activities on the shores of Lake Superior where nodes of residential and commercial uses currently coexist. Existing residential lifestyles and property values will be protected when considering the limited expansion of commercial activities.” There have been no Commercial Land Use Permits or CUPs issued in SMU-6A in the past 16 years.

In the SMU-6A Since the adoption of the 2002 CLUP there has only been one commercial development in this zone district, an antiques store.

This land use area has experienced a 16% increase in single-family home construction from 2002 to 2018. Sixteen new homes were built in SMU-6, 3 in SMU-6A, and 7 in SMU-8, for a total of 26 over this time period. See Map 3.xx, Single Family Home Construction, 2002 – 2018.

## Section 4: The Natural Environment

---

### 2002 CLUP Vision and Policies

#### *2002 CLUP Vision*

*The most prominent aspect about Duluth Township is its diverse natural beauty -- the streams, Lake Superior, mixed forests, native species, open spaces and contiguous green spaces for habitat.*

*Development along the shore is in locations that recognize watershed capacities and the protection of natural resources.*

*The Township has managed its land and land development in a sustainable and ecologically sensitive manner given the erosion control along the streams/creeks and lakeshore and the protection of natural resources and open space.*

*Lake Superior's water quality, and that of the community's significant streams and creeks that flow into the Lake, continues to be high quality.*

#### **2002 CLUP Policies and Strategies:**

*Develop land with respect to natural resources to enhance and preserve a quality environment.*

*On all public lands encourage the long-term sustainability of diverse forest ecosystems in terms of species, age, mixture and habitat.*

*Advocate for silvicultural systems on public lands that promote maximum forest diversity while providing an economic base for specialized forest products.*

*Control the effects of development to minimize the risk of water contamination of Lake Superior and its tributaries.*

*Limit the effects of stormwater and non-point pollution from impervious surfaces on rivers, streams, wetlands, and Lake Superior.*

*Identify and preserve all significant wetland areas vital to the protection of fisheries and wildlife, and to minimize flooding.*

*In the North Shore corridor, identify and prioritize important habitat and natural areas.*

*Promote sustainable forest management. Adopt voluntary forest management standards and/or shoreland management standards and work with appropriate agencies to educate landowners. Encourage qualifying landowners to participate in State tax incentive programs for sustainable forest management.*

### Discussion and Activities since 2002 CLUP

#### Vegetation

The following Table 4.1 and map are one way of displaying the changes that have occurred from 2001 – 2016. Limitations of data available are reflected in the years. However, this is relatively close to the period of the 2002 CLUP.

**Table 4.1 Coastal Change Analysis Program (C-CAP) Change by Type Form 2001 - 2016**

*(Lake County SWCD Analysis and Data)*

Type of Disturbance	Acres	% of Change
Disturbance	0.2	0%
Forest Disturbance	1,733	6%
Forest Regeneration	208	1%
Unchanged	27,674	93%
Wetland Disturbance	11	0%
	<b>29,626</b>	

**Definitions Used in Table 4.1**

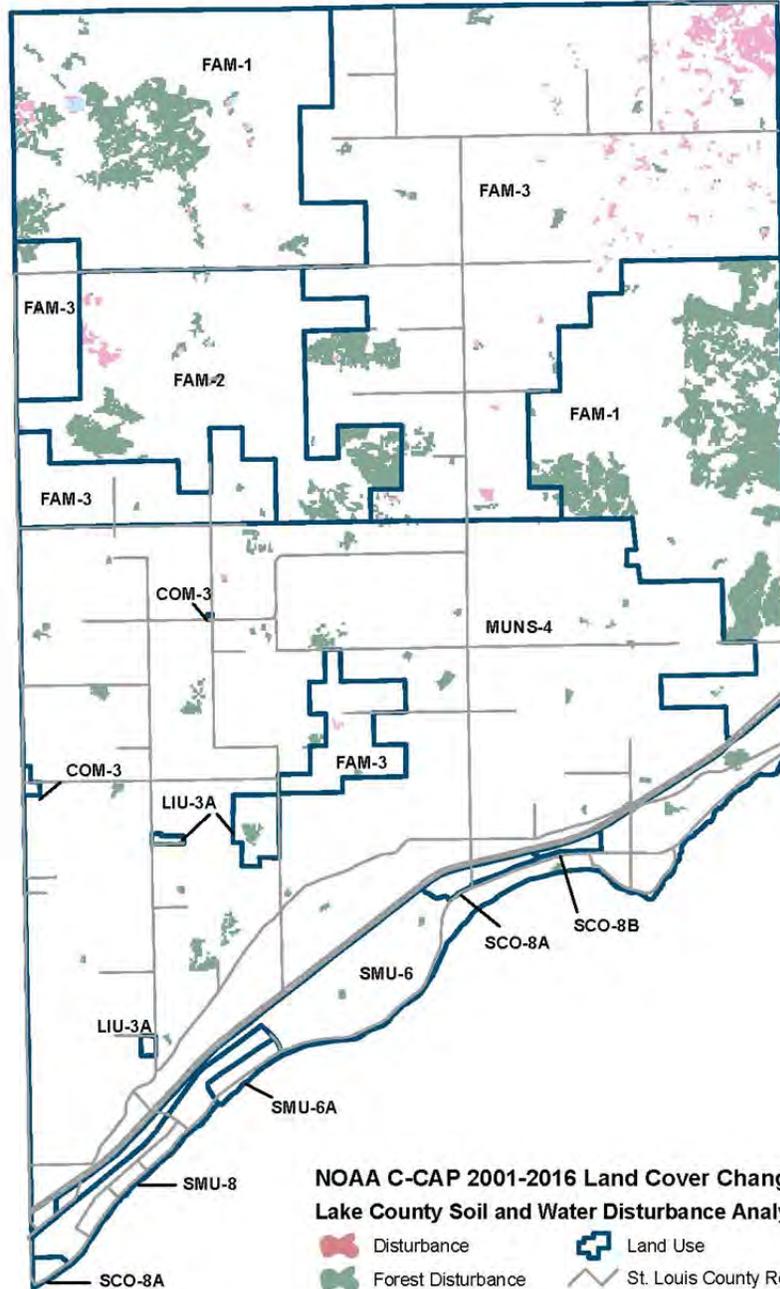
<b>Disturbance</b>	The disturbance class was all change from one land type to another that could not be classified under forest regeneration, forest disturbance, or wetland disturbance. Land change was classified in this way because all land change was thought to be driven by an external source.
<b>Forest Disturbance</b>	Forest disturbance was all forested land that either change a forest type possibly due to a select cut in logging, or scrub/shrub that was removed, or full forest change to bare ground. This also includes disturbance in forested wetlands.
<b>Forest Regeneration</b>	Forest regeneration was classified as any form of woody growth that indicated a change in height class. This includes growth to scrub/shrub from a shorter height class as in bare ground or grassland. This class does not include growth from bare ground to grassland, however.
<b>Unchanged</b>	Unchanged reclassification describes land cover types that have remained the same in the temporal period analyzed. This also includes the different development classes to another level of development class and the same type of palustrine or estuarine class to the same type of estuarine or palustrine class, respectively.
<b>Wetland Disturbance</b>	Wetland disturbance was any change in wetland type indicating a possible disturbance or change in hydraulic function. This does not include forested wetlands as it was the focus of this analysis.

NOAA explains “change” as the change in total area of a given land cover type between two dates. These are discrete observations and not an account of every change that has occurred. Only land cover at 2001 and 2016 were included. The data user can use local knowledge about processes at work during those two dates. i.e. forest harvest activity

Figure 4.1. C-CAP Regional Land Cover Changes 2001 - 2016

# DULUTH TOWNSHIP

NOAA's Coastal Change Analysis Program (C-CAP)  
2001 to 2016 Regional Land Cover Change Data



It is clear that a vast majority (27,674 acres or 93%) of the Township has not experienced land cover change. Almost all of the change has occurred in Forest Regeneration and Forest Disturbance (1,941 acres). The remainder of the acreage was in wetlands (11 acres or 7%).

Significantly, is the location and concentration of these land disturbances. The majority of the disturbance is in the Public Forest Land Use Area. The data and analysis in this report does not have specific data regarding the regeneration of these disturbed and regeneration areas. Anecdotally and with cursory look at aerial photography it appears that a good deal of the regeneration may be deciduous, most likely aspen.

One of the challenges in assessing this vision is the lack of over-all data to measure “diversity. The purpose of the Town designating Public Land Use areas was to “*encourage the long-term sustainability of diverse forest ecosystems in terms of species, age, mixture and habitat. Policies and Strategies 2002 CLUP.*) Presently, it is not clear if this is occurring in the Public Land Use Areas. A more detailed analysis would be needed.

Though the Township has developed a number of management practices (corridors, zoning districts, stream setbacks) to preserve diversity, there have also been numerous naturally occurring threats to diversity. Large stands of balsam throughout the Township are dead and dying due to spruce budworm. Ash stands are threatened by the emerald ash borer. Invasive species such as buckthorn and honeysuckle threaten forest diversity.

Over the past few years, drought has impacted forest health and extreme precipitation events have changed wetlands and stream habitat. Warm winters and short springs have caused a decline in local maple syrup production.

Longer summers and warmer winters have caused an increase in crop pests (such as cut worms). Deer tick populations have increased along with incidences of tick-borne diseases affecting residents and their pets.

A number of invasive plants (buckthorn, loosestrife, etc.) have made their way into the Township. For reasons not clearly understood, moose populations have declined (Moe, 2011), while deer and wolf populations have increased.

Zoning districts were re-drawn, re-named, and established with the adoption of the Duluth Township Zoning Ordinance #3, August 2005. In this Ordinance the following was accomplished:

- In seeking to maintain large, contiguous areas of forest habitat and in support of preventing fragmentation, the FAM-1 zoning district was established with a total of 6,136 acres. In this district-almost all of the parcels of lands were in public ownership with the minor exception of 7 parcels. The minimum lot size was established as 40 acres, the largest of any of the zoning districts.
- Large acres of contiguous forest (2,231 acres) were established in the FAM-2 zone districts. The district consists of large parcel sizes and a single owner is predominant where private ownership exists. In addition, a large portion of this district has significant wetlands which have the capability of storing water during storm events.

The Town has worked with the St. Louis County Land and Minerals Department in conveying the importance of and in support of these large public acreages of State tax forfeited lands. The Town expressed particular concern when the County proposed the sale of tax forfeited property with significant riparian and wetland elements.

One of the challenges in assessing this vision is the lack of over-all data to measure “diversity.” Though the Township has developed a number of management practices (corridors, zoning districts, stream setbacks) to preserve diversity, there have also been numerous naturally occurring threats to diversity. Large stands of balsam throughout the Township are dead and dying due to spruce budworm. Ash stands are threatened by the emerald ash borer. Invasive species such as buckthorn and honeysuckle threaten forest diversity.

Over the past few years, drought has impacted forest health and extreme precipitation events have changed wetlands and stream habitat. Warm winters and short springs have caused a decline in local maple syrup production.

Longer summers and warmer winters have caused an increase in crop pests (such as cut worms). Deer tick populations have increased along with incidences of tick-borne diseases affecting residents and their pets.

A number of invasive plants (buckthorn, loosestrife, etc.) have made their way into the Township. For reasons not clearly understood, moose populations have declined (Moe, 2011), while deer and wolf populations have increased.

The fluctuating water level in Lake Superior has numerous effects, one of which is the determination of the vegetation line and high-water levels for shoreline considerations. All of these changes should have an effect on land use considerations, and necessitate diligence in seeking the latest information on best management practices (BMPs), education programs, and maintenance of appropriate riparian zones and appropriate habitat.

Zoning districts were re-drawn, re-named, and established with the adoption of the Duluth Township Zoning Ordinance #3, August 2005. In this Ordinance the following was accomplished:

- In seeking to maintain large, contiguous areas of forest habitat and in support of preventing fragmentation, the FAM-1 zoning district was established with a total of 6,136 acres. In this district-almost all of the parcels of lands were in public ownership with the minor exception of 7 parcels. The minimum lot size was established as 40 acres, the largest of any of the zoning districts.
- Large acres of contiguous forest (2,231 acres) were established in the FAM-2 zone districts. The district consists of large parcel sizes and a single owner is predominant where private ownership exists. In addition, a large portion of this district has significant wetlands which have the capability of storing water during storm events.

## Wildlife

Wildlife has continued over time to be a focal and valued resource in the Township. Deer, coyotes, bears, wolves, and moose make up the better known and more frequently seen wildlife in the area. Whitetail deer are the most frequently encountered wildlife and are a mainstay for hunters. Deer populations have increased overall since the 1970s. Following a series of mild winters, the population reached record levels in the early 2000s and harvest number limits were increased to bring the population back down. At the present time in the Superior Uplands Arrowhead region, deer numbers have decreased in forested areas and are stable in farmland areas.

The moose population has been in a steady decline over recent years. From an estimated population of about 8,000 moose in 2004 through 2009, the population plummeted to only about 3,000 animals by 2013 and was estimated at 4020 in 2016. The stress of warming temperatures associated with climate

change is considered the most likely factor, increasing the vulnerability of moose to disease and other natural factors.

Northeastern Minnesota, including Duluth Township, is the core of the wolf population in Minnesota. The estimated number of wolves in Minnesota has grown from 1,521 in 1988 to 2,856 in 2017. The wolf population closely follows whitetail deer populations. In the North Shore area, including Duluth Township, problematic wolf and human interactions have become more frequent. The most common complaint is of wolves attacking and killing pet dogs. The wolf is on the endangered species list, so cannot be hunted. They were delisted for two years in 2012 and 2013, and a hunting season was established for them. They were relisted and are now considered threatened in Minnesota.

Since the early 2000s, sightings of cougar and lynx have both been reported in the Town. According to the MNDNR website: "Lynx live in dense forests across northern Canada, in northern Minnesota and Maine, and in mountainous areas of northwestern United States. Snowshoe hares are the main prey, but birds and small mammals are also eaten. Lynx do not occur where snowshoe hares are absent. Lynx have also been observed scavenging roadkill. Being a large predator itself, lynx have few predators, but lynx have been killed by wolves, fishers, bobcats, and coyotes."

"Cougar, also known as mountain lions, are found in a wide variety of habitats, as long as there is a sufficient prey base. If present in Minnesota, mountain lions are most likely inhabiting remote, heavily forested areas, although confirmed reports have also come from agricultural areas." (MNDNR website).

It appears that both the lynx and cougar need large acres of contiguous habitat. According to the MNDNR, "In order for mountain lions to persist, wildlife managers must protect large areas of contiguous habitat, minimize barriers, such as roads, maintain prey populations, and conduct long-term population studies (Hansen 1992). Additionally, connectivity should be maintained through habitat corridors, which dispersing mountain lions are known to use." (Beier 1999).

It is difficult to determine the amount of timber harvest in the Township for a variety of reasons. There are several public agencies (and divisions of public agencies) who manage the public lands within the Town and there is also harvesting on private lands. In addition, on public lands each agency has various ways of maintaining timber stand data and ages. Some of these management styles do not prioritize contiguous habitat.

However, there have been large investments in the Knife River watershed (almost a million dollars) to study and protect the watershed. In addition, there is a citizens group, Advocates for the Knife River Watershed, that has been actively participating with resource management agencies to protect the watershed. The group has also planted conifers to diversify habitat and protect stream habitat.

The Town's commitment to the dedication of large contiguous forest areas in zoning districts FAM-1 and FAM-2 is hoped to contribute to the preservation of habitat for wildlife species. This area contributes to the large expanse of forest habitat north of the Town and is a part of the corridor consisting of the Knife River watershed that runs through the Town.

Although the Town has no direct control over natural resource management of public or private lands in the Township it has, through its CLUP, very purposefully laid out a vision for natural resources in the Town. The Town can use the vision, goals and policies of the CLUP as part of its response to proposed developments and environmental assessments in the Township by others.

## Climate Change

Climate change is widely accepted as a phenomenon of the 20<sup>th</sup> and 21<sup>st</sup> century. That it is primarily anthropogenic (human caused) in origin is also now widely accepted. The degree to which it will affect us over the coming years continues to be a point of debate.

The natural resources and people of the Town will face increasing challenges from climate change. Climate change brings a bigger threat of periodic drought to our region, substantially increasing the threat of and intensity of forest fires during these periods. In addition, it remains to be seen how the vegetative landscape will adapt to climate change. Large scale die-off of forest species will increase fuel load for fires.

The major stresses and threats to the forest ecosystems in the Laurentian Mixed Forest Landscape (Of which Duluth Township is part of) include *(2014 USDA MN Forest Ecosystem Vulnerability Assessment and Synthesis)*:

- Fragmentation and land-use change
- Fire regime shifts
- Nonnative species invasion
- Forest pests and disease
- Overbrowsing by deer
- Extreme weather events
- Management practices during the past several decades which have tended to favor aspen across the landscape and reduce species diversity and structural complexity.

Of note, is the emphasis that the Township has placed on recognizing and emphasizing non-fragmentation through establishment and codification of contiguous forest areas and zoning them as FAM-1 and FAM-2 Zone Districts (Public Forest Lands). However, that land has primarily been managed through practices that tend to favor aspen across the landscape and reduce species diversity and structural complexity. Low diversity systems are at greater risk to climate change.

Future climate change impacts on forests include *(2014 USDA MN Forest Ecosystem Vulnerability Assessment and Synthesis)*:

- Boreal species such as quaking aspen, paper birch, tamarack, and black spruce are projected to decrease in suitable habitat and biomass across the assessment area.
- Species with ranges that extend to the south such as American basswood, black cherry, northern red oak, and eastern white pine may increase in suitable habitat and biomass.
- Many common species in northern Minnesota may decline under the hotter, drier future climate scenario.

With the 2005 revision of the Zoning Ordinance, a sensitive area overlay (SENSO) was added to the zoning map to protect areas with moderate to steep slopes, drainages, wetlands, erosive or shallow soils and groundwater re-charge areas. A protective lake and stream shoreline overlay were also added to the zoning map. Impervious surface standards were adopted to protect water resources and still allow for growth.

The Town has also paid attention to nonnative invasive species, which are increasing in the Township, possibly as a result of climate change, through appointing one of the Town Supervisors as a Weed Inspector.

In general, it is thought that climate change manifests itself as warming overall. Average temperatures across the globe are increasing. All global climate models project that temperatures will increase with continued increases in atmospheric greenhouse gas concentrations. Yet, in the midst of rising average

temperatures, it is still common to see extremes in cold winter events along with generally warmer climatic conditions.

Over time, it has been realized that climate change means not only a general warming, but more so, extreme variations in climate. These extremes are evidenced by higher than “normal” summer temperatures and then lower than “normal” winter temperatures. These periods of colder than normal temperatures are sporadic, sometimes not occurring for a number of years, and then suddenly plunging an area back to low temperatures thought to be in the past.

The overall trend towards warmer temperatures was further affirmed by the 2012 release of a new USDA Plant Hardiness Zone Map. The Duluth Township area, which was long classified as Zone 3a for plant hardiness, was officially changed to Zone 4b in 2012. Township gardeners confirmed this, able to routinely grow tomatoes and peppers to maturity and overwinter plants that were previously unreliable. A Zone 3a designation means that a plant can withstand temperatures from -35°F to -40°F. Zone 4b, on the other hand, means that a plant is hardy to only -20°F to -25°F. However, weather records for Duluth, which is generally slightly warmer than the Township, show temperatures dropping to -35°F in 2019 and to -28°F in 2018.

Another component of the extremes expected and already seen as a result of climate change is the nature of rain or snow events. Areas across the nation, as well as the Duluth Township area, are seeing episodes of more intense storms, resulting in more frequent storm events of a magnitude that was previously considered as only occurring every 100 years or less.

The Environmental Law & Policy Center released a report in 2019, *An Assessment of Climate Change on the Great Lakes*, a collaboration between 18 Midwest scientists and researchers, that outlines changes that have occurred in the Great Lakes area that may be attributable to climate change, along with predictions for the future if these trends continue. (*An Assessment of Climate Change on the Great Lakes, March 2019, Donald Wuebbles et al. Environmental Law & Policy Center*)

In it, the scientists say that the Great Lakes region has seen an air temperature increase of 1.6° since 1901 as opposed to an average increase of 1.2° for the rest of the contiguous U.S. “By the end of the 21st century, global average temperatures are expected to rise an additional 2.7°F to 7.2°F, depending on future greenhouse gas emissions, with corresponding changes in the Great Lakes region.” The number of days above 90°F will increase to an additional 17 to 40 days.

The report says that “A warmer atmosphere holds more moisture, increasing the frequency and intensity of heavy rain and snow events. Overall U.S. annual precipitation increased 4% between 1901 and 2015, but the Great Lakes region saw an almost 10% increase over this interval with more of this precipitation coming as unusually large events.”

With the increased intensity of rain events, exacerbated flooding is expected to occur. The ELPC report indicates that extreme winter rain events in 2017 and 2018 led to serious flooding and that rain events exceeding 6 inches now occur regularly, exceeding the capacity of culverts and storm sewers to handle runoff.

In addition, the report states that:

- Fish respond sensitively to water temperature, assembling in distinct cold, cool, and warm water groupings. This means that warmer temperatures, seasonal weather shifts, and storms that bring a quick influx of water will all affect fish species. The geographic ranges of fish, demographics within species, system productivity, species-specific productivity, the spatial arrangement of species, and their physiological state and performance will all change in response.

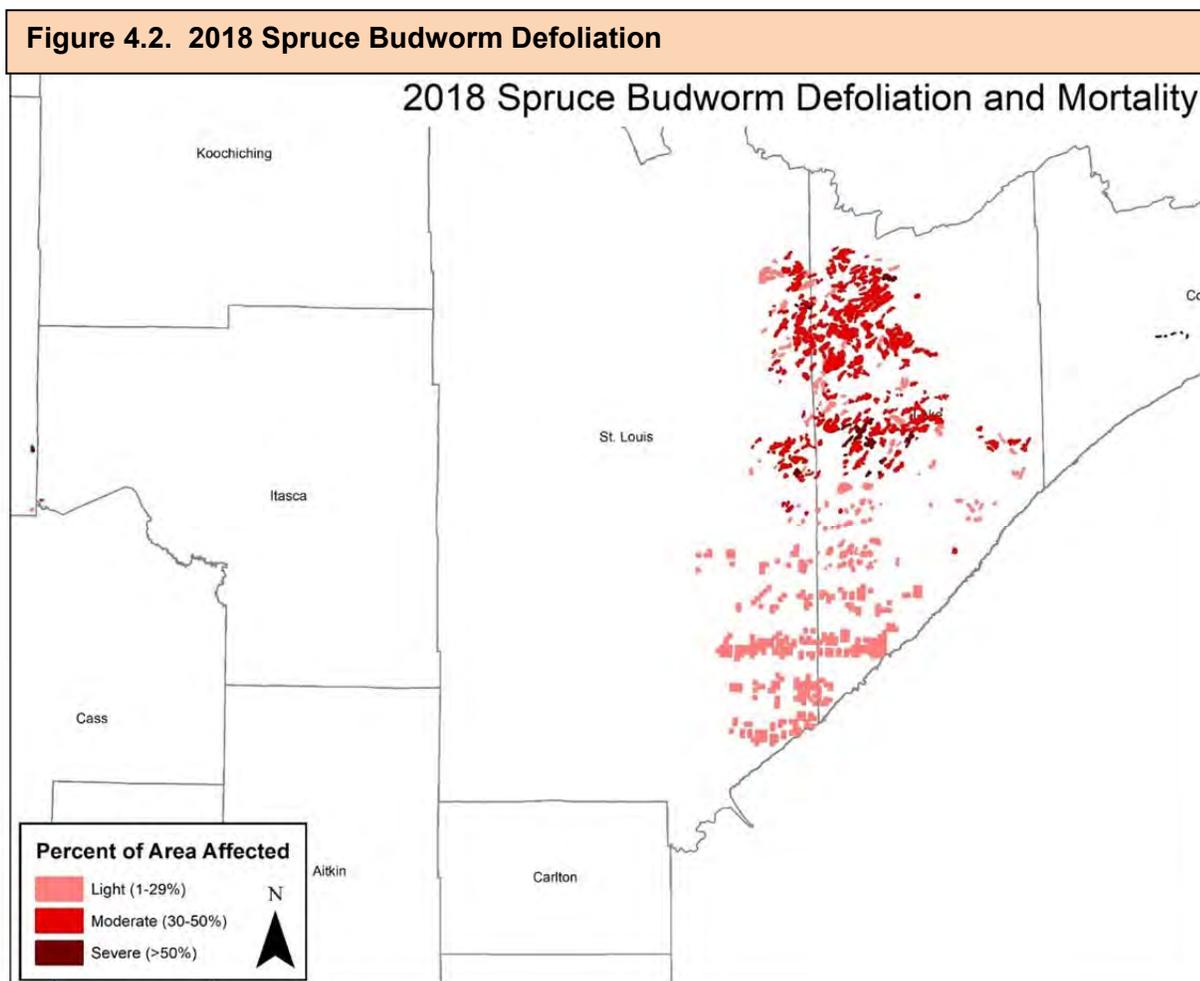
- Birds could also suffer from phenological mismatch, as the insect species they relied on for food hatch earlier with warmer springs or decline as vegetation shifts northward.

In general, the citizens of the Township have shown a desire to contribute what they can to offset the effects of climate change. Many residents have installed solar panels to offset their own use of fossil fuels, and, in some cases, feed power back into the grid.

There has been an increased awareness in the Township of the impacts impervious surface areas and deforestation have on the environmental factors that contribute to climate change.

## Fires

Recently, spruce budworm infestations have decimated stands of spruce and fir trees throughout the Township resulting in large acreages of dead trees that increase the potential for forest fires through high fuel loads and substantial fuel laddering potential. Figure 4.2 from the MN DNR shows the extent of defoliation as of 2018.

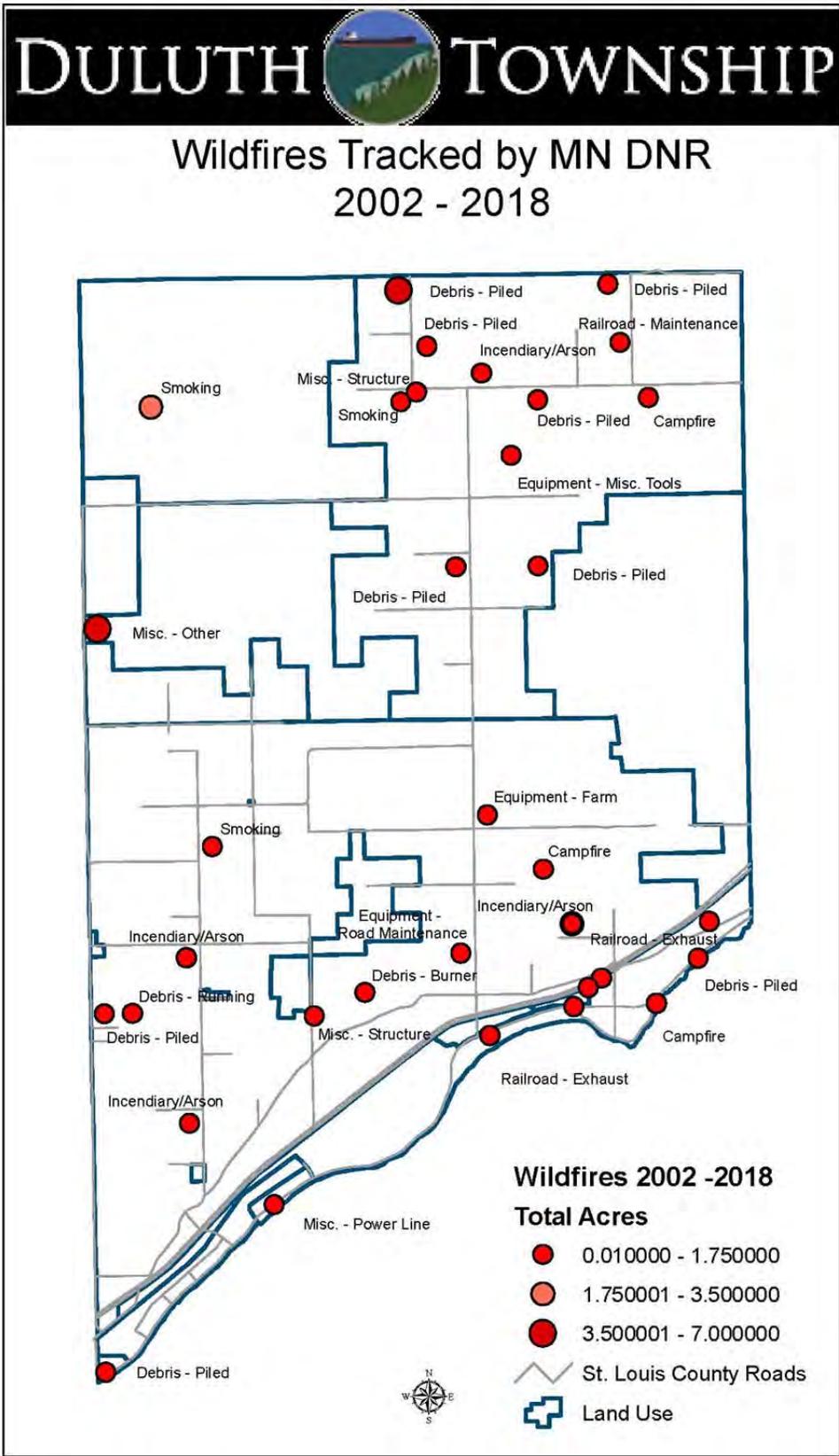


The MNDNR documented moderate to severe damage in the Arrowhead region with newly affected areas in 2018 to the west of Two Harbors in southeastern St. Louis County. They expect that these areas will likely see additional defoliation and mortality over the next few years.

The eastern larch beetle is in St Louis County and there is increasing mortality of tamaracks accompanying its move east across the State. The MNDNR said in 2017 that the eastern larch beetle is removing tamaracks from “our forests at an alarming rate.” In addition, the emerald ash borer is moving north in the State and is expected to severely affect stands of ash in the Township. Although, these are generally lowland species, if there is an extended drought it is possible that the fire danger may be increased.

Figure 4.3 shows where wildfires occurred from 2002 to 2018 in the Township. The majority of the fires during this period occurred as a result of debris pile burning, campfires and smoking.

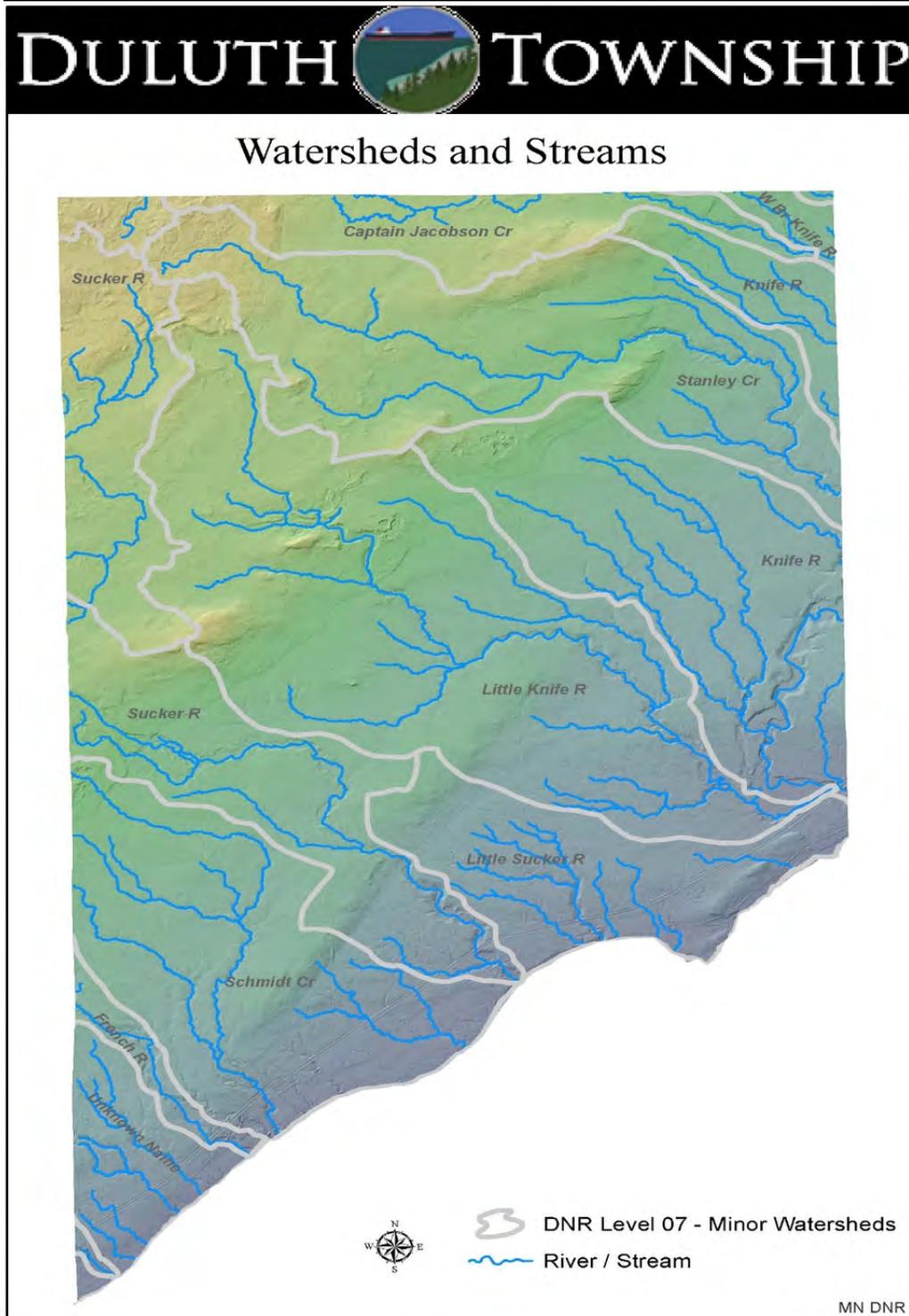
Figure 4.3. Wildfires, 2002-2018



## Water and Water Quality

All of Duluth Township drains into Lake Superior. Rivers and streams in the Township include the Sucker, Little Knife, Knife, West Branch of the Knife, Little Sucker, French and Talmadge Rivers, as well as Schmidt and Stanley Creeks, and a number of unnamed watercourses.

**Figure 4.4. Watershed and Streams in Duluth Township**



In 2003, Duluth Township was put on the Municipal Separate Storm Sewer System (MS4) list for stormwater planning. The MS4 requires that the all stormwater from any properties the Township owns or oversees, including its roads and ditches, is clean. In 2008, the Township developed a Storm Water Pollution Protection Plan (SWPPP) to implement the requirements of the MS4.

In 2015 the Township enacted the Stormwater, Erosion, and Sediment Control Ordinance whose purpose is to reduce stormwater rates and volumes, reduce soil erosion, and nonpoint source pollution.

In 2002 both the Talmadge River and the Knife River were on MPCA's 303d list of impaired water bodies. Most of Duluth Township is in the Knife River watershed, while only a small part of the main stem of the Talmadge runs through the lower SW corner of the Township. Both of these streams are designated trout waters.

The Knife River was determined to have low pH problems that have been resolved. The greatest problem on the Knife was determined to be excessive turbidity due to erosion, mostly of clay banks. A total maximum daily load (TMDL) study for turbidity was completed and approved by the U.S. EPA in 2009 and an implementation plan for reducing sediment load was approved by MPCA in 2011. This effort was the result of multiple Federal, State and local governments (including members of Duluth Township). Recently, Minnesota has funded a number of projects to reduce runoff to the river and to mitigate highly erodible areas. Because Duluth Township is an MS4, it is an important participant in the implementation plan.

Most of the Talmadge River was determined to have excessive turbidity and parts of it were determined to have low dissolved oxygen.

Through volunteer efforts and a partnership with the Regional Stormwater Protection Team, the Township has been provided with educational opportunities through Township workshops and newsletter articles. In 2011, through funding by the Minnesota Environmental Partnership, a citizen's group called the Advocates for the Knife River Watershed (AKRW) was formed. MEP has provided a number of educational sessions on watershed protection. Recently, the AKRW was incorporated as a non-profit and continues to provide an opportunity for community members to be involved in protecting the watershed and to be a voice in implementation of land practices (such as logging of public lands).

Since the CLUP was approved, both the Big Sucker River and the French River have been placed on the MPCA's impaired list for turbidity. This does not mean necessarily that conditions have become worse since the 2002 CLUP. It is likely that data was not previously available or processed to make these determinations earlier or that there was some other delay in listing the impairments. Both of these streams are also designated trout waters. (See Appendix B, History of Impaired Waters.)

While there has been an addition of streams to the Impaired Waters list since 2002, it is not clearly understood what contribution the development of new single-family home sites has had on the overall degradation of the streams.

The Town recognized that streams in the Town needed protection and included language in the 2002 CLUP to encompass this. The Town has actively pursued limiting the amounts of impervious surface and subsequent runoff in the Township, as well as creating a Sensitive Area Overlay in the Knife River watershed.

The Planning Commission has been concerned about stream degradation in the Township and has sought education on causes and preventative measures. The Commission has recommended that the

Town, within its authority, proactively participate with agencies and institutions that have management and regulatory authority to protect the streams and rivers in the Township.

## Wetlands

<b>Table 4.3. Wetlands by Land Use Area</b>			
<b>Zoning District</b>	<b>Land Use Areas</b>	<b>Acres</b>	<b>Percent of Land Use Area Occupied by Wetlands</b>
FAM-1	Public Forest Lands	1183	19%
FAM-2	Public Forest Lands	615	28%
FAM-3	Farm and Forest Lands	852	10%
LIU-3A	Limited Industrial	0	0%
MUNS-4	Rural Residential	928	8%
SCO-8B	Shoreland Commercial	0	0%
SCO-8A	Shoreland Commercial	6	6%
SMU-6	Lake Superior Shoreland	41	3%
SMU-6A	Lake Superior Shoreland	2	3%
SMU-8	Lake Superior Shoreland	9	3%
	<b>Total Acres of Wetland</b>	3692	

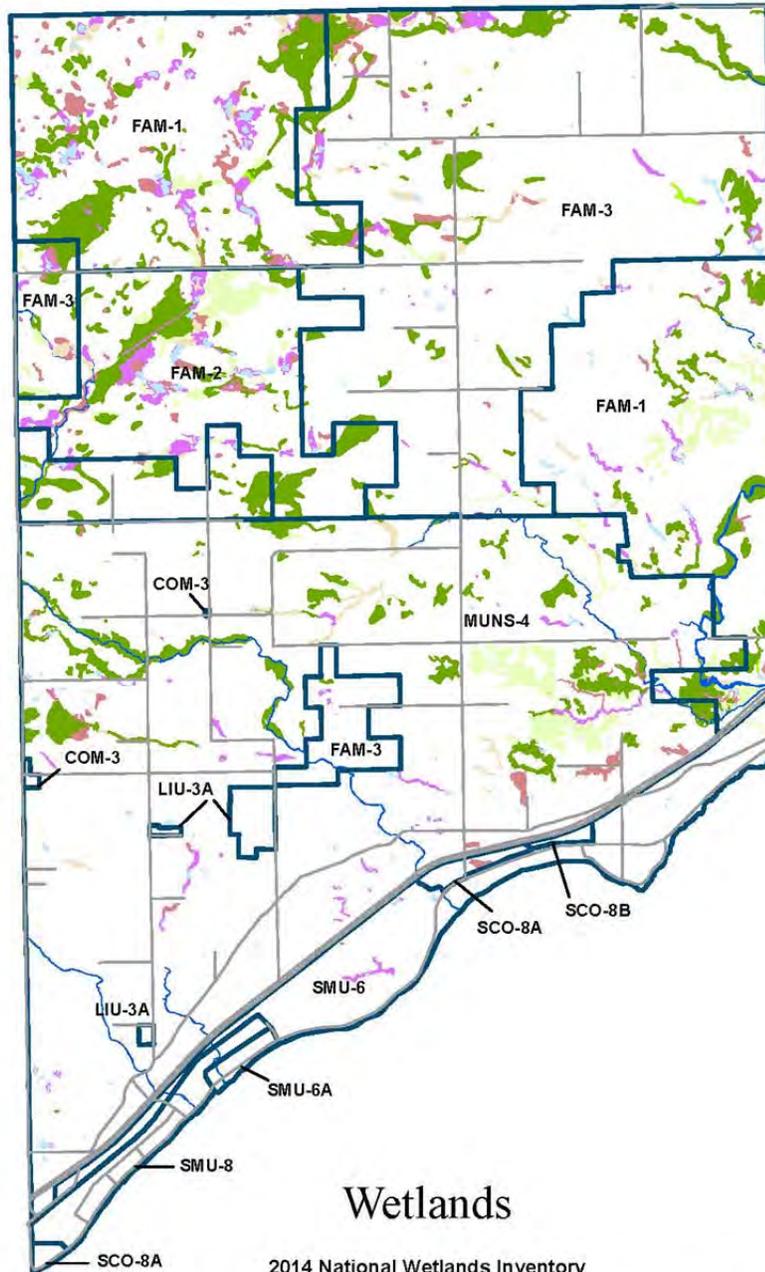
Wetlands throughout the Township help to control flooding and maintain water quality. Wetlands are a critical component of stormwater control. Wetlands serve to hold stormwater and release it slowly, reducing flooding and erosion. In addition, wetlands may play a role in retaining carbon and helping to mitigate climate change:

Scientists are beginning to realize that atmospheric maintenance may be an additional wetlands function. Wetlands store carbon within their plant communities and soil instead of releasing it to the atmosphere as carbon dioxide. Thus, wetlands help to moderate global climate conditions. From:

<https://www.epa.gov/wetlands/how-do-wetlands-function-and-why-are-they-valuable>

Figure 4.5. 2014 Wetlands Inventory

# DULUTH TOWNSHIP



- |  |   |
|--|---|
|  Freshwater Emergent Wetland          |  Freshwater Shrub Wetland          |
|  Freshwater Forested Wetland          |  Freshwater Shrub/Emergent Wetland |
|  Freshwater Forested/Emergent Wetland |  Lake                              |
|  Freshwater Forested/Shrub Wetland    |  Riverine                          |
|  Freshwater Pond                      |  Land Use                          |



## Section 5: The Built Environment

### Demographics

In the 10 years since the 2002 CLUP, population growth has continued at a relatively steady rate. Population grew 10.4% over the ten-year period from 1990 to 2000, and increased to 12.6% from 2000 to 2010.

The estimate from the Minnesota State Demographic Center for 2017, the most up-to-date estimate available, predicts a sharp drop in population growth from 2010 to 2017, from 10-12% growth over the 20 years prior to 2010, to a 1% decrease from 2010 to 2017. This seems to be in keeping with a statewide trend: “Sixty-six percent of Minnesota’s townships have lost population since 2010.” (Analysis of the 2015 Population and Household Estimates, James W. Hibbs, November 2016, [mn.gov/demography](http://mn.gov/demography))

In Minnesota the population sector of older adults, aged 65 to 80+, is expected to increase steadily over the next 30 years, while the sector of working adults, aged 24 to 65, is expected to drop sharply over the next 10 years. (Demographic Considerations for Long-Range & Strategic Planning, Minnesota State Demographic Center Occasional Report, OSD-16-152, March 2016)

Census Year	Population	% increase From Previous Census
Estimate for 2017*	1,926	(1%)
2010	1,941	12.6%
2000	1,723	10.4%
1990	1,561	

\* from [mn.gov/admin/demography/data-by-topic/population-data/our-estimates/](http://mn.gov/admin/demography/data-by-topic/population-data/our-estimates/)

### Housing

#### **2002 CLUP Vision**

*New housing has occurred throughout the Township. All new housing promotes the community’s rural character and sustainable development practices. Attention has been given to the reduction of impervious surfaces, the preservation/conservation of open space and natural resources, to energy conservation, the maintenance of view corridors and the preservation of large front yard setbacks where space permits.*

*Residential developments now include a broader mix of homes and some multi-unit, larger parcel developments.*

#### **2002 CLUP Policies:**

*Encourage housing of various types for people of all economic levels in a manner consistent with Town land use goals.*

*Explore incentives for clustered development.*

*Define density and intensity standards for the community.*

*In the North Shore Corridor maintain the current development density and mix of housing lot sizes, housing types, and amenities in the North Shore corridor.*

In accordance with population projections for 2017 from the Minnesota State Demographic Center, the number of households in the Township is not expected to increase from 2010 to 2017 (Table 5.2). This projection is an abrupt drop in the growth of households after two decades of over 1% growth per year. By the same token, Township records show that there have been 47 Land Use Permits issued for single-family homes from 2011 through 2018. It is possible that a small number of these replace temporary mobile homes.

<b>Table 5.2 Comparison of Households from 1990 to 2010</b>		
<b>Census Year</b>	<b>Households</b>	<b>% Increase from Previous Census</b>
<b>Projected</b>		
<b>Est. for 2017*</b>	<b>751</b>	<b>0%</b>
<b>2010</b>	<b>750</b>	<b>12.1%</b>
<b>2000</b>	<b>669</b>	

\* from [mn.gov/admin/demography/data-by-topic/population-data/our-estimates/](http://mn.gov/admin/demography/data-by-topic/population-data/our-estimates/)

Occupied housing units increased by 14% between 1990 and 2000 and 12% between 2000 and 2010. The majority of housing units in the Township are owner occupied.

<b>Table 5.3 Comparison of Housing Units from 1990 to 2010</b>				
<b>Census Year</b>	<b>Housing Units</b>		<b>% Increase from Previous Census</b>	
	<b>Total</b>	<b>Occupied</b>	<b>Total</b>	<b>Occupied</b>
<b>2010</b>	<b>840</b>	<b>750</b>	<b>17.6%</b>	<b>12.1%</b>
<b>2000</b>	<b>714</b>	<b>669</b>		

\* from [mn.gov/admin/demography/data-by-topic/population-data/our-estimates/](http://mn.gov/admin/demography/data-by-topic/population-data/our-estimates/)

<b>Table 5.4 New Single-Family Homes by Land Use Areas</b>							
<b>Land Use Area</b>	<b>Inland Commercial</b>	<b>Shoreland Commercial</b>	<b>Public Forest Lands</b>	<b>Farm &amp; Forest Lands</b>	<b>Limited Industrial</b>	<b>Rural Residential</b>	<b>Lake Superior Shorelands</b>
<b>Current Zoning Designation</b>	COM-3	SCO-8A SCO-8B	FAM-1 FAM-2	FAM-3	LIU-3A	MUNS-4	SMU-6 SMU-6A SMU-8
<b>New SF Homes 2002-2018</b>	0	3	1	48	0	81	26
<b>Percent of Overall New SF</b>	--	2%	< 1%	30%	--	51%	16%
<b>Total Acres</b>	14	129	8,366	8,168	136	11,105	1,769
<b>Percent of Overall Township Acres</b>	< 1%	< 1%	28.1%	27.5%	< 1%	37.4%	5.9%
<b>Number of Parcels</b>	4	34	110	371	9	755	523
<b>Percent of Overall Township Parcels</b>	< 1%	2%	6%	21%	< 1%	42%	28%

Table 5.4 shows that of the 159 single-family homes constructed from 2001 through 2018, 51% of them were in the Rural Residential land use area. This area also occupies the most area in the Township (37%), and has the most parcels of any of the land use areas (42%).

The Farm and Forest Lands land use area had the next highest number of new single-family homes at 30%. This is also the next largest land use area.

The Lake Superior Shorelands area, which includes zoning districts SMU-6, SMU-6A and SMU-8, comprises only 5.9% of the Township in acreage but contains 28% of the parcels in the Township. There were 26 new single-family homes constructed in this land use area over that period of time, 16% of the new homes in the Township.

There was only one new single-family home in the Public Forest Lands area, despite it occupying almost one-third of the area of the Township. The land in this land use area is primarily public land.

The Rural Residential land use area, where the most single-family homes have been constructed, also contains a Sensitive Area Overlay. This overlay was put into place with the 2005 Zoning Ordinance to protect the natural resources, particularly to offer protection from increased runoff. This overlay has turned out to be very well-placed, given the smaller minimum lot size in this land use area and in terms of where the most single-family development has occurred.

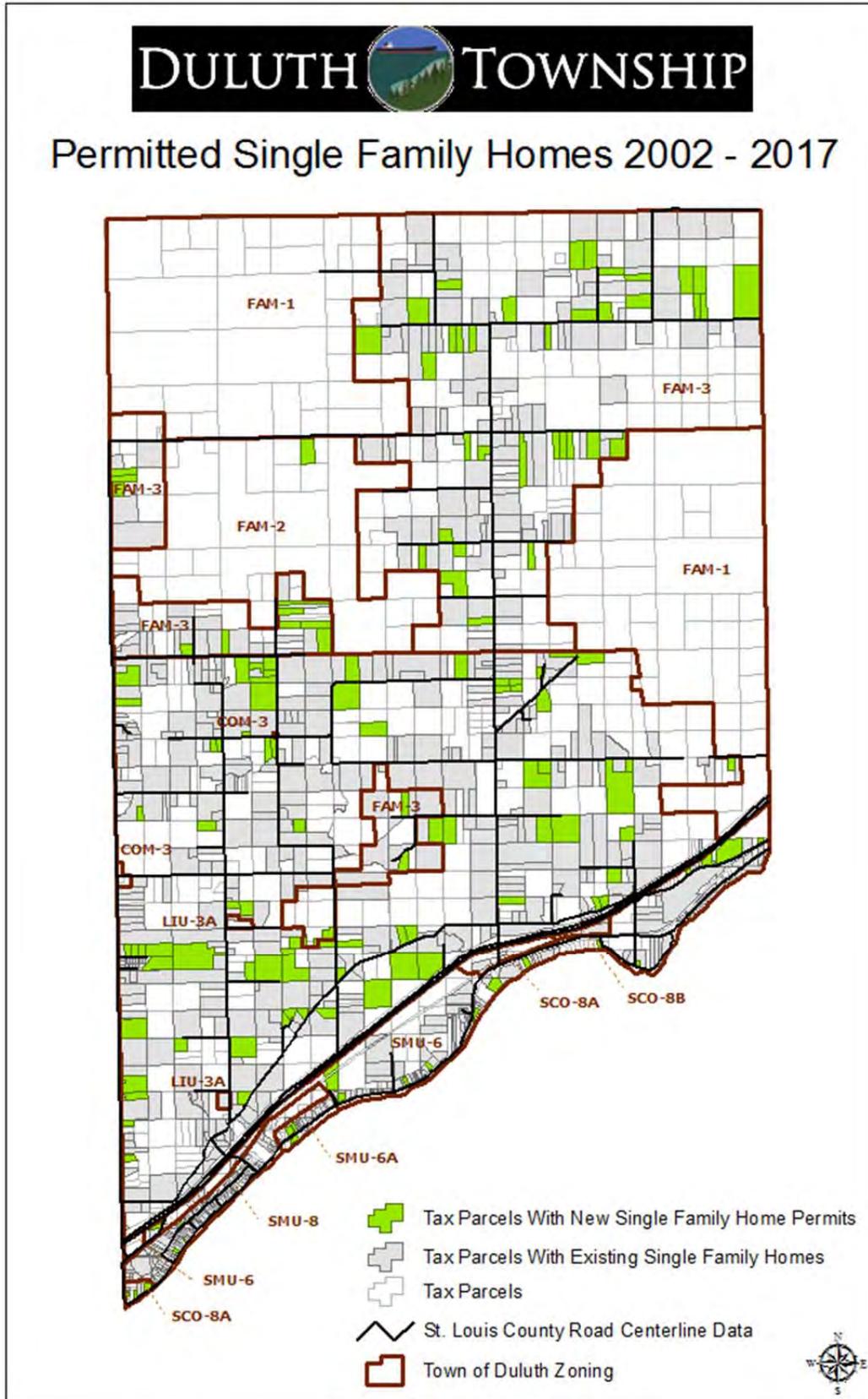
**Table 5.5  
Land Use Permits for Single Home and Mobile Home Construction**

<b>Year</b>	<b>Single Family</b>	<b>Mobile Home</b>	<b>Total Homes</b>
<b>2002</b>	13	1	<b>14</b>
<b>2003</b>	13	1	<b>14</b>
<b>2004</b>	18	1	<b>19</b>
<b>2005</b>	20	1	<b>21</b>
<b>2006</b>	11	1	<b>12</b>
<b>2007</b>	4	1	<b>5</b>
<b>2008</b>	9	0	<b>9</b>
<b>2009</b>	8	0	<b>8</b>
<b>2010</b>	7	0	<b>7</b>
<b>2011</b>	5	0	<b>5</b>
<b>2012</b>	3	0	<b>3</b>
<b>2013</b>	3	1	<b>4</b>
<b>2014</b>	3	1	<b>4</b>
<b>2015</b>	7	1	<b>8</b>
<b>2016</b>	8	0	<b>8</b>
<b>2017</b>	8	0	<b>8</b>
<b>2018</b>	10	0	<b>10</b>
<b>Total</b>	<b>150</b>	<b>9</b>	<b>159</b>

The growth of new housing units was significantly greater during the period 2002–2006 than over the period 2006-2018 (Table 5.5). This difference is largely due to a downturn in the real estate market from the mortgage crisis, which led to a nationwide recession.

Table 5.5 reveals that the vast majority of the new housing permits over the past ten years have been for single family residential use that have conformed to the large front yard setbacks established in the 2005 Zoning Ordinance.

Figure 5.1. Permitted Single-Family Homes 2002 - 2017



Reduction of impervious surface; preservation/conservation of open space, natural resources and energy have been achieved through the 2005 Zoning Ordinance.

View corridors were not addressed in the 2005 Zoning Ordinance and, as such, there exists no empirical evidence that this aspect of the vision statement has been achieved.

### Market Value

<b>Table 5.6 Assessed Valuation by Zone District (Taken from St. Louis County Tax Records, January 2019)</b>			
<b>Zone District</b>	<b>Land Use Area</b>	<b>Building Valuation</b>	<b>Total Valuation</b>
<b>COM-3</b>	Inland Commercial	545,200	\$662,700
<b>FAM-1</b>	Public Forest Lands	0	\$6,501,600
<b>FAM-2</b>	Public Forest Lands	45,700	\$2,607,500
<b>FAM-3</b>	Farm and Forest Lands	29,787,200	\$48,259,800
<b>LIU-3A</b>	Limited Industrial	1,271,700	\$1,780,600
<b>MUNS-4</b>	Rural Residential	92,059,600	\$126,065,000
<b>SCO-8A</b>	Shoreland Commercial	2,912,500	\$4,127,300
<b>SCO-8B</b>	Shoreland Commercial	259,000	\$355,300
<b>SMU-6</b>	Lake Superior Shorelands	18,179,400	\$36,340,100
<b>SMU-6A</b>	Lake Superior Shorelands	2,732,400	\$4,975,200
<b>SMU-8</b>	Lake Superior Shorelands	19,213,700	\$26,114,400
<b>Total</b>			<b>\$257,789,500.00</b>

There was a steady increase in housing market values illustrating a growing housing market, increasing housing demand and growth pressure. Housing prices appreciated by 51% between 1995 and 2000. (2002 CLUP). However, the housing downturn in 2007 had a marked effect on housing values as well as the number of new single family home construction.

### Residential Developments

Since 2002 there has only been one residential development approved in the Township (Stoney Point Cottages Plat). This development was created under a conventional platting process and conformed to existing zoning density parameters.

Multi-unit residential developments statewide trended upward from 2002 to 2006. This was followed by a significant downward trend since 2007 as a result of the burst in the real estate bubble and nationwide recession.

Based on this analysis, the vision for a broader mix of homes and multi-unit housing on larger parcels has stalled over the past five or more years due largely to market forces outside of the Town's jurisdiction. This vision should still be viable and achievable when real estate market conditions improve in the future.

The number of homes per year increased relatively the same as described in the background information up until 2006 when the housing market crashed, albeit 2 years before the rest of the State and the Nation.

The rate of construction of new homes has not yet recovered and still remains at about 25% of historic levels. It is not known how long the recovery of the housing market will take. However, clearly the projections for housing units are below what was anticipated in the CLUP. The cumulative impact of new housing, even at historically high rates, could affect from 60 to 250 parcels (given one house per parcel and immediate recovery of the housing market) over the next ten years. It is questionable that this level of construction will significantly affect the density of existing zoning districts overall and result in significant changes to the existing rural qualities of the Town over the next ten years.

## Senior Housing

To assist in providing for senior housing, the Town amended the Zoning Ordinance in 2007 to provide for "subordinate residential dwellings" by which seniors within a family could be housed in a separate unit on the family property.

In 2005 the Town Board appointed the Duluth Township Rural North Shore Senior Housing Initiative Steering Committee. This Steering Committee included an appointed Board member, senior citizens, and other volunteers. It met regularly until 2008, at which time the Committee was still intact but would meet only when a new possibility for senior housing arose. One of the major accomplishments of the Committee was to complete a survey of seniors in the Township regarding senior housing and to then estimate the number of units likely to be sustained by those desiring senior housing in the Township.

Since 2005, there have been three developers who have expressed interest to the Planning Director in developing senior housing in the Township. One had developed plans and was moving forward with them. In his conversations with the Corps of Engineers he was denied permission to construct a pond, which he felt was critical to the development. Subsequently he decided not to continue with the project.

A second developer expressed an interest in a conversation with the Planning Director but there were no subsequent proposals.

Another developer chose a site in the Town and researched placing a cooperative senior housing unit on the site. The concept proved to not be feasible.

The only senior housing proposal that moved forward to a large degree was a conventional subdivision proposal. It appeared that the developer had adequate land to develop the subdivision. However, the developer did not proceed with the development due to landscape design concerns.

Planned unit developments offer the potential for an efficient way to develop senior housing. There are standards associated with planned unit developments that allow for bonus densities based on a number of parameters, including affordability and creation of open spaces.

## Section 6: Community Infrastructure and Resources

### Duluth North Shore Sanitary District (DNSSD)

#### **2002 CLUP Visions**

*With the sewer line from Two Harbors to Duluth, there has been some development along the shore.*

*Lake Superior's water quality continues to be high quality.*

#### **2002 CLUP Policies:**

*Limit development in the North Shore corridor that puts at risk the engineered carrying capacity of community or regional infrastructure.*

The Duluth North Shore Sanitary District (DNSSD) was originally the result of a community effort to address the problem of failing septic systems and the consequent negative impact on quality of life in the areas affected. At the time of planning for the sewer line, over 500 septic systems along the North Shore were failing, with wastewater running into Lake Superior. The DNSSD was established to provide an environmentally responsible and efficient wastewater collection system with a long-term treatment system at WLSSD. The original plans for determining capacity included both Knife River and Larsmont. To-date, Knife River has hooked into the system and Larsmont has not.

At the time of planning, there was concern that putting in sewer along the North Shore corridor would facilitate more intense development than the area had traditionally seen. The DNSSD Joint Powers Board set a goal to restrict new equivalent domestic units (EDU) to 2% per year. From 2003 through 2011 there were 25.5 EDUs added to the system. If additions had equaled the allowed 2% during that time, there would have been 77 additional EDUs. Hence, the concern that growth would be facilitated by sewer service in the North Shore corridor has not been an issue. Community members have cited the substantial cost to hook up to the system, as well as monthly fees, as one possible reason growth has not approached potential. As shown in Table 6.1, below, the total number of new home constructions from 2002 through 2018 in the North Shore corridor was 29.

**Table 6.1  
Number of New Single Family Homes in Lake Superior Shorelands Area, 2002 – 2018**

<b>Zone District</b>	<b>Land Use Area</b>	<b>Number of Single Family Homes</b>
SCO-8A	Lake Superior Shorelands	3
SMU-6	Lake Superior Shorelands	16
SMU-6A	Lake Superior Shorelands	3
SMU-8	Lake Superior Shorelands	7
	Total	29

## Recreation and Open Space

### **2002 CLUP Vision**

*Duluth Township promotes its rural character by protecting the shore area and open spaces, and through the enhancement of its trail and open space system. The streams and forests remain a scenic and recreational experience for both passive and active uses.*

### **2002 CLUP Policies:**

*Support low impact recreation activities, such as hiking, cross-country skiing, wildlife watching, kayaking, and canoeing in the management of North Shore corridor public areas.*

*Support a broad range of recreational activities on public lands outside the North Shore corridor.*

*Identify areas with sensitive natural areas or undisturbed natural features and encourage the development of parks, greenways, and other green infrastructure to include these areas.*

Since adoption of the 2002 CLUP, the concept of open space was reinforced through recognition of public lands in the Township. During the Zoning Ordinance update process, the Steering Committee carefully reviewed all of the parcels in the contiguous public land areas in the Town. The resultant FAM-1 and FAM-2 zone districts, with minor exceptions, are comprised of public land. These zone districts were designated as zones with large minimum lot sizes, 35 acres and 17 acres, respectively, to maintain open space, contiguous areas of habitat, and retain rural character. With this recognition of the value of open, green, rural areas, the Town reinforced the importance of public lands in the Township and subsequently started a stronger working relationship with public land managers.

In addition, furthering recreation opportunities in the Township since the 2002 CLUP, the Superior Hiking Trail was expanded to include portions crossing the Township, the Town adopted a Trails Plan, and the McQuade Small Craft Harbor was built (see sections below).

## Trails

### **2002 CLUP Vision**

*Duluth Township promotes its rural character through the enhancement of its trail and open space system. The trail and open space system consist of motorized and non-motorized trails. It has been designed to serve Township residents and follow strategic community roads and public and private land where landowners desire. The trail system also connects users to the Lake Superior Hiking trail and the Scenic Highway 61 bike trail.*

*The bike lane along the Scenic Highway is connected to the community's multi-user trail system.*

*The community has created a trail network that provides recreational use and is also an alternative transportation network.*

### **2002 CLUP Policies:**

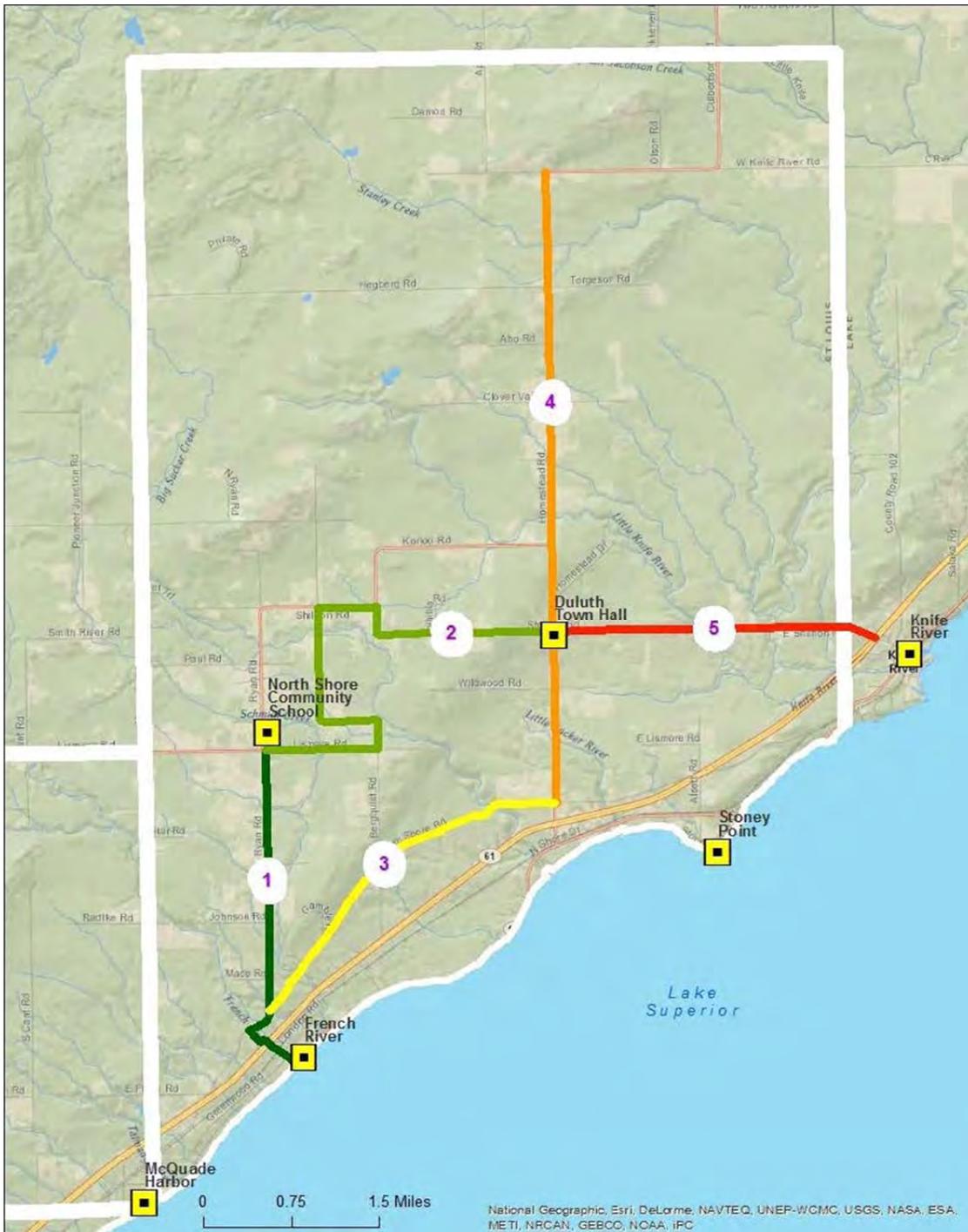
*Encourage an accessible and interconnected community-wide trail and open space system that is designed for responsible, multiple use by residents.*

There continue to be three formally designated trail systems in the Town, the trails at the North Shore Community Center, the Korkki Nordic cross-country ski trails, and a very small portion of the North

Shore Corridor Trail in the northwest part of the Township. In addition, there are a number of informal trails, mostly on public land, that interconnect with the North Shore Corridor Trail and the Superior Hiking Trail. There has not been a formal designation of these trails.

In 2016 the Town invested in trail planning, engaging the Duluth-Superior Metropolitan Interstate Council to guide the process. The goal of the planning was to identify existing trails, existing road shoulders used as trails, and corridors for trails that would connect different areas of the Township.

**Figure 6.1. Duluth Township Trails Plan**



The resultant plan identified the following trail corridors (as shown in Figure 6.3): 1) The Ryan Road Trail which will connect the North Shore Scenic Dr to North Shore Community School; 2) Community Connector Trail which will connect North Shore Community School to the Duluth Town Hall following Lismore Rd, Bergquist Rd, and Shilhon Rd; 3) Old North Shore Road Trail which will connect Ryan Rd and the French River to Homestead Rd; 4) Homestead Road Trail which will connect Duluth Town Hall at Shilhon Rd along Homestead Rd to Old North Shore Rd; and 5) Knife River Connector Trail which will connect Shilhon Rd at the Duluth Town Hall and Homestead Rd to Knife River at Highway 61.

This plan has been approved by the Town Board and is in place to help guide future development. See <https://dsmic.org/study/duluth-township-trails-plan/> for the full plan.

Scenic Highway 61 is considered a bike route along the North Shore. It consists of paved shoulders along the Scenic Highway. It connects to the Two Harbors Sonju Trail which then connects to the Gitchi Gumi Trail, an under-construction dedicated bike trail that continues up to Grand Marais. The portion of Scenic Highway 61 that crosses the Township is shown on MNDOT's Minnesota Bicycle Map as a road with paved shoulders greater than 4 feet that has a traffic load of 751 to 2500 cars per day.

There have been no formalized trail connections to the Scenic Highway 61 bike trail. The Town has not made progress on inter-connecting trails along public roads. In particular it would be beneficial to look at "Safe Routes to School" types of trails.

As stated earlier, the Town recognizes the importance of public lands in the Town. These public areas provide many informal interconnecting trails for use by local residents. All of these trails are multi use and all types of uses are occurring on them.

## **McQuade Small Craft Harbor**

### ***2002 CLUP Vision***

*The public land along the lakeshore is well maintained with a pleasing mix of native vegetation and scenic vistas.*

*The lakeshore and its expansive views are accessible to everyone.*

*A community park for active recreational uses has been created.*

### ***2002 CLUP Policies:***

*Explore creating a park for local community use.*

*Ensure that public facilities fit into existing natural and community landscapes.*

The McQuade Small Craft Harbor was opened In July 2008. McQuade Harbor is a public facility managed by the MNDNR providing access to Lake Superior. The Town of Duluth owns the property where there is a parking lot and tunnel to the McQuade Safe Harbor docks. The Town entered into a 99- year lease with the State of Minnesota for this property.

The Safe Harbor borders Duluth Township, Lakewood Township, and the City of Duluth. There are four boat ramps for launching boats, a kayak launching site, four docks, and an accessible shore-fishing platform. There is a paved parking lot across the highway with parking for 60 cars/trailers. From the parking lot there is a walking tunnel which provides safe access to the walkways and benches that

overlook the lake and to the fishing platform. All power to this facility is provided through solar panels. In 2012 a shelter for an interpretive display was installed.

A secondary benefit of the construction of the harbor and breakwall was that a high erosion zone area along the shore was addressed.

This breakwall has been breached at least twice in the last 10 years resulting in damage to the facility. The cause of this is may be associated with the effects of a changing climate resulting in higher lake levels combined with very high seas.

In August of 2009, the DNR estimated use of facility at approximately 1000 cars per week in the parking lot. Use has continued to rise since then.

## **North Shore Community School and Community Center**

### ***2002 CLUP Vision***

*The Duluth Township Community Center is a vital community-gathering place that includes the North Shore Elementary School, a small business incubator center, a day care center, recreational opportunities, and community education classes.*

*A community park for active recreational uses has been created.*

### ***2002 CLUP Policies:***

*Encourage the development of a community center including active recreational opportunities at the North Shore school site.*

*Explore creating a park for local community use.*

The Town purchased the North Shore School from Lake Superior School District (District 381) in 2002 after the School District made the decision to close the school. Transference of ownership to the Town was facilitated through a concerted effort on the part of community members and the Town. Through the purchase of the school by the Town, the school was able to stay open as a charter school, maintaining an elementary school in the Township. As part of the overall agreement the Town continues to use the school as a community center. The Town has used the school for community purposes, with an emphasis on the outdoor amenities.

The charter school, North Shore Community School, was established in 2002. Because charter schools at that time were not allowed to own their school property, the Town rented the property to them. In the years following the establishment of the school as a charter school, enrollment grew and the Town added an addition to the school and portable classrooms to accommodate the growth.

The Town, together with the school and the community, improved the recreational fields and trails. A pavilion picnic structure, including bathrooms, was also constructed, for use by the community and the school.

In December 2008 the Town, along with the North Shore Community School, and community members created a Master Site Plan for the Community Center to direct future development.

In 2013 the Town transferred ownership of the property to Affiliated Building Company (ABC), a non-profit corporation that owns and manages the property. As a part of this transfer agreement, The Town still uses the property as a Community Center.

The Town, the school, and ABC, have continued to invest considerable resources in developing the grounds of the North Shore Community School/Community Center. Among some of the joint projects undertaken are the following:

- Warming facility for the skating rink
- Hockey boards for the rink
- Additional parking spaces adjacent to the Ryan and Lismore Roads intersection
- Tennis/Basketball courts

These developments have moved the school grounds toward achieving the vision of a community park. Although it is not specifically designated as a park, it actively serves the community with uses similarly associated with parks.

Since the establishment of the property as a school/community center, there have been sporadic efforts to hold community education classes there. Despite initial success, community education classes have not been sustained. In addition, the nationwide need for enhanced school security over recent years has also affected NSCS and has affected use of the school during school hours.

## **Congdon Trust Lands**

### ***2002 CLUP Vision***

*The public land along the lakeshore is well maintained with a pleasing mix of native vegetation and scenic vistas.*

*The lakeshore and its expansive views are accessible to everyone.*

### ***2002 CLUP Policies:***

*Encourage the state, county and City of Duluth to manage their lands to prevent destructive recreational activities.*

*Pursue Township advisory status with public agencies.*

The Congdon Trust Lands are comprised of a strip of land that includes the Scenic Highway that is owned by the City of Duluth. This land runs from the southwest edge of the Township up to and including some of Stoney Point. It includes the shoreline across a large portion of the Township.

This land provides a buffer between developed parcels along the shore and Lake Superior. It is also vital in retaining access to and views of Lake Superior. In addition, it can serve in preventing shoreland erosion when managed appropriately.

The Town has had a number of conversations with the City of Duluth regarding the management of the Congdon Trust Lands along the North Shore. There have been no formalized agreements or memorandums of understanding signed. Direction from the CLUP provides the basis for further

discussion with the City, potentially leading to agreements with the City regarding the management of these lands.

## Town Roads

### **2002 CLUP Vision**

*New road building and road paving have been kept to a minimum. The community’s many gravel roads have been retained as they maintain the community’s rural character and ambiance.*

*The few new roads complement the natural landscape as much as possible and native vegetation has been used along the roadside.*

*Highway 61 is well maintained as a scenic highway and provides leisurely scenic travel through the community.*

*There are no four-lane roads other than the expressway.*

### **2002 CLUP Policies:**

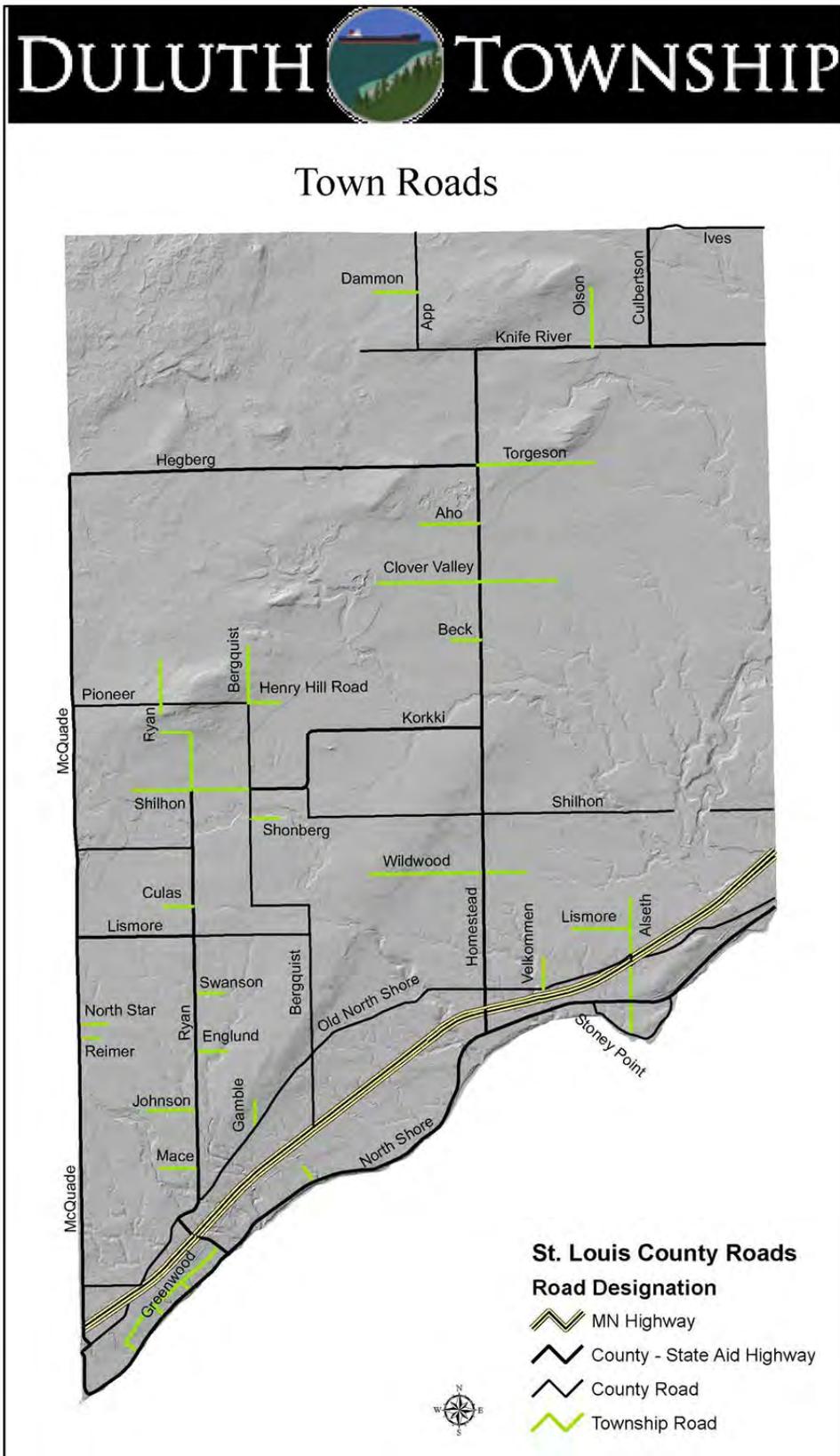
*Where desirable and safe, maintain existing gravel roads, thereby maintaining the rural character and reducing potential run-off.*

*Participate in planning with the County Highway Department in developing road standards that are in keeping with the rural character of the community.*

There are three road authorities in the Township: The Town of Duluth, St. Louis County, and the State of Minnesota. In addition, there are a number of private roads in the Township, many of which have road association agreements. Table 6.2 displays the miles of roads under the jurisdiction of each road authority and Figure 6.4 shows their locations in the Township.

<b>Table 6.2 Roads and Road Jurisdiction in the Town of Duluth (Mileages are approximate)</b>		
<b>Road Authority</b>	<b>Miles</b>	<b>Surface</b>
Town of Duluth	12	Gravel
St Louis County	62	Gravel and Paved
State of Minnesota	7	Paved

Figure 6.2. Town Roads



The Town is authorized by State Statute to maintain Township roads. There are approximately 12 miles of Township roads, including: Aho, Alseth, Beck, North Bergquist, Cemetery, Clover Valley, Culas, Dammon, Englund, Gamble, Greenwood, Henry Hill, Johnson, East Lismore, Mace, Nordling, Olson, Pine Tree, Riemer, North Ryan, North Star, Schoenberg, Shilhon, Spruce Court, Swanson, Torgeson, Velkommen, and East and West Wildwood Roads.

Starting with Zoning Ordinance Number 3 in 2005, the Town began regulating access to Town roads and requiring a site entry permit for any new driveway onto a Town road. The purpose of the site entry permit is to keep erosion to a minimum and reduce runoff.

No gravel roads in the Township have been converted to bituminous nor has the Town constructed any new roads since the 2002 CLUP. Recent studies across the country have indicated it is more cost effective to maintain gravel roads. Further, some studies indicated that converting bituminous surfaced roads back to gravel would be desirable.

Town road maintenance includes dust control, surface and ditch maintenance, and culvert maintenance. Ditches are one of the only conveyances that the Town has in regards to its MS4 permit. All culverts on Town roads are a part of the Town's MS4 permit as well and the Town is responsible for maintaining them under the requirements of the permit. An inventory of culverts was completed in 2014. At that time there is a total of 84 culverts (cross culverts) on Town roads.

## **High Speed Internet**

### ***2002 CLUP Vision***

*High-speed internet capability is now available for Township businesses and residents.*

### ***2002 CLUP Policies:***

*Encourage the development of high-speed internet connections for Township residents.*

Internet capabilities were improved when Cooperative Light and Power offered wireless broadband service to most of the Township.

Around 2010, Lake County received a federal grant and loan to build a fiber-optic network throughout Lake County as well as parts of rural St Louis County. Duluth Township was included in this project. The network was brought to the Town in 2014 giving the entire Town access to quality internet service, including areas of the Township that were not able to access the Cooperative Light and Power's wireless broadband service.

Some residents in the Town are also served by DSL connections.

The Town provides 24-hour access to wireless internet to the community at the Town Hall. The Town's public internet can be accessed in the Town Hall when it is open, as well as in the parking lot. This has proven to be useful to many community members.

## **Renewable Energy**

### ***2002 CLUP Vision***

*Some solar panels and wind energy generators are visible.*

### **2002 CLUP Policies:**

*Encourage the responsible use of local renewable energy resources, consistent with aesthetic and natural resource policies.*

*Promote the use of alternative energy sources for the benefit of the Township residents.*

In 2017 the Town purchased one solar panel at the Co-op Light and Power Community Solar Garden in support of solar development and to contribute solar energy to the electric distribution system.

In 2016 North Shore Community School received a grant for \$150,000 from Minnesota Power to install a solar array that they expected to generate enough electricity to power the addition to the school. The installation included an interactive kiosk to allow students to visualize energy savings provided by the solar panels.

The Town adopted Ordinance language to clarify requirements for installation of solar panels. Solar panel systems installed on roofs do not require a permit.

On privately owned properties, there was one windmill that was permitted and another that is known to have been dismantled. Numerous residents throughout the Township have put in solar panels. Some have just one or two panels to offset other energy use and others have constructed arrays that routinely feed power back into the grid.

### **Home Based Businesses, Home Occupations, Short Term Rentals, and B and B's**

#### **2002 CLUP Vision**

*High-speed internet capability is now available for Township businesses and residents and this is a great benefit to the large home-based occupation/business sector.*

*Residents work in the Township, the greater community, in their homes as Duluth Township has several hundred home-based occupations/businesses...*

*The home-based business sector has grown.*

#### **2002 CLUP Policies:**

*Create home business standards.*

<b>Table 6.3. Types of Livelihood as Identified on Town Website</b>		
<b>Type</b>	<b>Number</b>	<b>Percentage</b>
Agriculture	6	9%
Home Business	3	5%
Home Occupation	49	74%
B and B	3	5%
Short Term Rental	5	8%
Total	66	100%

Until recently, the Town had a section on its website that identified services and businesses in the Township. This was compiled by people asking to be put on the list and by local knowledge of who provided services in the Town. This is not a validated list, but rather an indication of what services and business are available in the Township.

Based on this data, there seem to be a substantial number of folks who have home occupations. Home businesses are not quite as plentiful. This is also shown to be the case in terms of Conditional Uses granted for home businesses.

It appears that the vision for increases home based business / occupations has not reached the numbers anticipated. However, there is an indication that this is a viable option for folks, especially with the availability of broad band internet.

Short Term rentals and bed and breakfasts have increased over the last 10 years.

Short term rentals are a phenomenon that almost all local governmental units are struggling with. A few years ago, the Minnesota Legislature struggled with them and Counties, cities, and Town continue to seek a way forward that is acceptable to individual property owners and their neighbors.

Short term rentals gained attention in the Town in 2008 with the establishment of short term rentals as a Conditional Use in the Zoning Ordinance. During a year-long moratorium in 2009, the Commission conducted a study of short term rentals that included gathering information from the State and other communities, public meetings with the community seeking input, and the experience of the Town with short term rentals. At the end of this moratorium, the Planning Commission made a recommendation to the Town Board that short term rentals be discontinued. The Board did not act on the recommendation.

One of the things learned by the Town was that a successful short term rental is related directly to how it is managed by the owners. A Conditional Use Permit, if granted goes with the property regardless of owner. Since those early experiences, a type of Conditional Use, an Interim Use, was added to allow another possible option for short term rental permitting.

An Interim Use permit is similar to a Conditional Use but it can be set to expire after a certain time or event, and therefore is not necessarily attached to the property upon sale of the property. The Planning Commission has granted the past few short term rentals under the Interim Use category. This has proved helpful for both the permittees and the neighbors in allowing for short term rentals but providing tools through which the effect of the rental can be assessed. Interim Uses can be extended, requiring another public hearing.

Table 3.4 shows that 27% (or 8) of the Conditional/Interim Uses were for high frequency short term rentals, comprising the most frequent request for a conditional use. The predominant geographical area where short term rentals were requested was the Lake Superior Shoreland area followed by the Farm and Forest Lands land use area.

There are currently 5 short term rentals in the Township.

## Tourism

### **2002 CLUP Vision**

*Tourism activities are in harmony with Duluth Township's historic and rural character and its natural amenities. Tourism is not a dominant economic activity; its activities are locally based or compatible with local commercial services. Visitors to Duluth Township are attracted to its natural beauty and diverse amenities: the lakeshore, streams, woods, rural character, and community feel. The overall atmosphere for visitors is not over commercialized.*

### **2002 CLUP Policies:**

*Encourage tourism activities that complement and do not detract from the community's historic and rural character.*

*Support low-impact recreation activities such as hiking, cross-country skiing, and wildlife watching, kayaking, and canoeing in the management of North Shore corridor public areas.*

*Limit and restrict nuisance behavior to promote civil sharing of the North Shore Corridor.*

*Ensure that public facilities fit into existing natural and community landscapes.*

Tourism continues to be a presence in the Township. Traditionally the North Shore Corridor has experienced the bulk of the tourist activity. While that continues to be true, more activity is taking place inland, especially with the Superior Hiking Trail and the North Shore Corridor Trail for snowmobilers. Three of the 5 short-term rentals and one of the 3 bed and breakfasts in the Township are located inland. A new 2-unit motel has been established at the intersection of Homestead Road and Highway 61. The New Scenic Café is considered a "destination" restaurant. The Clearwater Grill has facilities for small to large parties and frequently hosts weddings. The McQuade Safe Harbor is a boat launching site and has fishing from the piers. There are numerous lodging options along the shore, from Cape Superior Inn to The Lighthouse Inn to small resorts with cabins and rooms. There is biking along the Scenic Highway, snowmobiling, cross-country skiing and birding. Fishing draws many folks from out of the area, some to the streams and rivers inland, but most along the shore on Lake Superior and at the mouths of the streams and rivers feeding into it. It all adds up to a vibrant and varied tourism scene in the Township.

Explore Minnesota shows that St. Louis County gross sales in the leisure and hospitality industry of \$558,982,545 employing 11,204 in that sector, resulting in \$37,671,354 in state sales tax. As a comparison, in the NE Region total gross sales are \$945,916,164 indicating that St. Louis County represents about 59% of the revenue produced in the leisure and hospitality industry. There is very little information regarding the economic impacts of tourism on a township level.

As iterated in the section on Commercial development, the only new development was the Lighthouse Restaurant, which has since closed. All of the tourist / commercial enterprises that have evolved in the last 10 years occurred at already existing sites. The scale is small and they are locally based. They also are an asset and serve the community as local gathering spaces.

# Appendix A: Data

---

The maps provided within this resource are meant to inform the comprehensive land use update process. Duluth Township and the Minnesota Department of Natural Resources (MNDR) - Minnesota's Lake Superior Coastal Program (MLSCP) make no warranty, representation, or guaranty as to the content, sequence, accuracy, timeliness, or completeness of any of the information provided herein for any reason.

We used the most current and relevant data available for this project. All aspects of the data provided herein are susceptible to a degree of error due to the complexities of the process involved in compiling and creating the map.

Duluth Township and MLSCP shall assume no liability for any errors, omissions, or inaccuracies in the information provided, regardless of how caused. Furthermore, Duluth Township and MNDNR MLSCP shall assume no liability for any decision made or action taken or not taken by the reader in reliance upon any information or data furnished herein.

Technical assistance from MLSCP staff are provided through funding by the Coastal Zone Management Act.

## The Data

### Town of Duluth Data

#### ***Town of Duluth Zoning / Land Use Data***

This data originated from St. Louis County Planning Department. Since 2002, The Town of Duluth has worked with MLSCP staff to maintain the data.

#### ***1984 Town of Duluth Zoning / Land Use Data***

This data were recreated using St. Louis County parcel data and old planning maps.

#### ***Town of Duluth Land Use Permit Data***

Permit data in Microsoft Excel format joined to St. Louis County Parcel Data based on property identification numbers (PIN).

### St. Louis County Data

Data acquired through the St. Louis County Open Data Portal.

<https://stlouiscountymndata-slcgis.opendata.arcgis.com/search>

#### ***St. Louis County Parcel Data***

This dataset contains a polygon layer representing tax parcels for Saint Louis County, Minnesota. In addition to the parcel geometry, the attributes include the current tax year MCIS data.

#### ***St. Louis County Road Centerline Data***

Depiction of county 911 addressing network, including public and private roads, highways, driveways, cart-ways, water access shorelines, and addressed trails. Primarily in support of 911 address

assignment and address geocoding. Covering all areas within St. Louis County, including incorporated municipalities. Line topology and attributes are also in place to support transportation network routing.

#### MN DNR Data

Available through the Minnesota Geospatial Commons

<https://gisdata.mn.gov/> and MN TOPO <http://arcgis.dnr.state.mn.us/maps/mntopo/>

#### ***2014 National Wetlands Inventory***

National Wetland Inventory (NWI) data for Minnesota provide information on the location, extent, and type of Minnesota wetlands. Natural resource managers use NWI data to improve the management, protection, and restoration of wetlands. Wetlands provide many ecological benefits including habitat for fish and wildlife, reducing floods, recharging, improving water quality, and supporting recreation.

<https://gisdata.mn.gov/dataset/water-nat-wetlands-inv-2009-2014>

#### ***Wildfires Tracked by Minnesota DNR***

Locations of wildfires for which the DNR was the primary responding agency. These include fires on state lands and rural private lands for which there is not another agency with primary responsibility. Wildfires that are not included in this layer are those that occur on federal and Native American lands (several hundred annually) and those that are responded to by local fire departments (several thousand annually). DNR wildfire suppression responsibility is heaviest in the forested part of the state.

<https://gisdata.mn.gov/dataset/env-wildfires-tracked-by-mndnr>

#### ***MNDNR Watershed Suite - DNR Level 07 - Minor Watersheds***

The MNDNR Watershed Suite is a collection of watershed delineations at various levels, flow network lines, and pour points. Follow the links below to the individual metadata pages for each layer:

<https://gisdata.mn.gov/dataset/geos-dnr-watersheds>

#### ***Digital Elevation Model - 30m Resolution LiDAR (Image Service)***

Web-based image featuring LiDAR derived elevation

<http://arcgis.dnr.state.mn.us/maps/mntopo/>

#### ***LiDAR Hillshade - WMS Source***

Web-based image featuring LiDAR derived hillshade

<https://gisdata.mn.gov/dataset/elev-lidar-hillshade>

<http://arcgis.dnr.state.mn.us/maps/mntopo/>

## NOAA Data

### ***NOAA Coastal Change Analysis Program (C-CAP)***

C-CAP is a nationally standardized data inventory of land cover for the coastal areas of the U.S. We used 3 C-CAP products in this project. 2001 Regional Land Cover, 2016 Regional Land Cover and 2001 – 2016 Regional Land Cover Change.

C-CAP Regional Land Cover and Change Page

<https://coast.noaa.gov/digitalcoast/data/ccapregional.html>

Coastal Land Cover Product Information

<https://coast.noaa.gov/data/digitalcoast/pdf/ccap-product-page.pdf>

C-CAP FAQ

<https://coast.noaa.gov/data/digitalcoast/pdf/ccap-faq-regional.pdf>

Regional Land Cover Classification Scheme

<https://coast.noaa.gov/data/digitalcoast/pdf/ccap-class-scheme-regional.pdf>