North Shore Management Plan Update

A Shoreland Management Plan for Lake Superior's North Shore

June 2016

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CHAPTER 1: INTRODUCTION

1.1 NORTH SHORE MANAGEMENT PLAN PURPOSE

In early 2001, the North Shore Management Board (NSMB) recognized that the North Shore Management Plan needed to be updated. A traditional comprehensive plan is generally updated every five to ten years. The NSMP, as of September 2003, is almost 15 years old.

In 2001 and 2002, the NSMB pursued funds to complete the plan update. The NSMB received funds from Minnesota's Lake Superior Coastal Program and contributions from NSMB members in order to make the plan update a reality.

To summarize, there are three main purposes to the NSMP Update:

1) Create a template for future operations for the North Shore Management Board that is sustainable and provides a benefit to local units of government.
2) Review and update as needed the shoreland management standards in the plan.
3) Provide land use goals, objectives, and action steps. These action steps can provide a future framework for NSMB activities.

1.2 NORTH SHORE MANAGEMENT BOARD HISTORY

1.2.1 Board Organization and Structure

The North Shore Management Board is a ten-member Joint Powers Board that contains a representative from all local units of government that exercise zoning authority on the North Shore of Lake Superior. The membership as of June 2016 is as follows:

Counties	Cities	Townships
St. Louis	Two Harbors	
Lake	Beaver Bay	Duluth
Cook	Silver Bay	Silver Creek
	Grand Marais	

All members joined the NSMB when it was originally created in 1987. Silver Creek Township joined the NSMB in 1999 upon the creation of the zoning ordinance for the Castle Danger Subordinate Service District, which is administered by the Township. Lake County administers other areas within the North Shore Management Zone in Silver Creek Township. Lakewood Township was an original member, who left in 2012, due to lack of funds and having minimal land within the shoreland overlay boundary.

The members of the NSMB include one elected official from each county, city, and township on the Board. They operate under the provisions defined in the Joint Powers Agreement. Part of the plan revision will be the creation of operating procedures that will supplement the Joint Powers Agreement.

A Citizens Advisory Committee (CAC) has met continuously since the inception of the NSMB. The committee may have up to 16 members, representing a cross-section of interests and geographical areas. The NSMB has relied on the Citizens Advisory Committee to monitor key land use issues and offer suggestions to the NSMB for projects that may serve to help address these issues.

A Technical Advisory Committee (TAC) was created to assist in the creation of the NSMP, but has not met regularly for over a decade. The TAC consisted of local, county, and state agency officials with expertise in a number of diverse areas.

1.2.2 The birth of the North Shore Management Board

Minnesota's Statewide Shoreland Management Program was conceived by the Legislature in 1969 as a cooperative effort of the Minnesota Department of Natural Resources (DNR) and local units of government. In 1981, the Legislative Commission on Minnesota Resources (LCMR) funded a program evaluation that identified Lake Superior as a distinctive management unit, not adequately addressed by the existing Statewide Shoreland Management Program. Recommendations from this evaluation called for the initiation and support of a local government effort to develop a shoreland management plan for the North Shore of Lake Superior.

During the fall of 1986, the DNR proposed new state shoreland management regulations. DNR staff at a public information meeting presented these draft regulations to concerned citizens and government officials on the North Shore. During that meeting, it became evident that there was a large amount of opposition to the proposed management regulations. The opposition mainly centered on the rules not being applicable to the North Shore, the difficulty and added administrative costs for enforcement of the rules, and the further erosion of local control.

From October 1986 to July 1987, a task force consisting of representatives from the North Shore, local units of government, DNR, and the Arrowhead Regional Development Commission (ARDC), discussed the possibility of jointly organizing the governmental units along the North Shore for the purpose of developing and implementing a management plan for the shoreland corridor of Lake Superior. The creation of a Joint Powers Board was recommended. In July of 1987, the NSMB was established.

The purpose of the NSMB was to direct the development of a North Shore Management Plan with strategies for environmental protection and orderly growth along the North Shore of Lake Superior (North Shore Management Plan, 1988).

1.2.3 The Creation of the North Shore Management Plan

In October 1987, the North Shore Management Board and the DNR signed a memorandum of understanding pertaining to the coordination, cooperation and responsibilities in developing a shoreland management plan for Lake Superior.

The DNR and the NSMB agreed that the focus for the 1988-89 planning program would be shoreland management. The goals of the Memorandum of Understanding were to define the responsibilities of the NSMB and the DNR in support of common objectives, interests and statutory requirements, to ensure timely identification and resolution of differences, and to enhance communication and coordination. (North Shore Management Plan, 1988)

The intent was for the shoreland management portion of the North Shore Management Plan to serve as a substitute for what would eventually become the Statewide Standards for Management of Shoreland Areas. These standards, adopted in July 1989, provide minimum standards for management of shoreland areas for all lakes in Minnesota except for the North Shore of Lake Superior.

Minnesota Rules Section 6120.2800, Subpart 1a clearly makes this distinction:

"**North Shore Management Plan.** *The minimum standards and criteria for the subdivision, use, and development of the shoreland of Lake Superior, other than for the City of Duluth, are those specified in the North Shore Management Plan, A Shoreland Management Plan for Lake Superior's North Shore, December 1988, adopted by the North Shore Management Board on November 29, 1988. The plan is incorporated by reference, is available through the Minitex interlibrary loan system, and is not subject to frequent change."*

It was intended that during plan implementation, the NSMB would play an ongoing monitoring role to insure that policies and standards in the North Shore Management Plan were implemented and consistency maintained by local government units. Thus, the NSMB, through the Memorandum of Understanding, took over the oversight responsibilities that were exercised by the DNR under the Shoreland Management Program. In other words, the DNR is responsible for monitoring compliance with the Statewide Standards for Management of Shoreland Areas on all lakes in Minnesota except Lake Superior. Instead, the NSMB is responsible for monitoring compliance with the North Shore Management Plan.

1.2.4 Implementation of the North Shore Management Plan

The North Shore Management Plan was completed in December 1988. It was the responsibility of each local unit of government to review and amend their existing land use ordinances so they were in agreement with the final North Shore Management Plan. Local units of government took different approaches to meet this responsibility.

Some communities created a zoning overlay where special shoreland provisions were added, others placed text from the NSMP in their ordinances in areas where it made the most sense. Others adopted the NSMP by reference. The NSMB found that all of the local units of government adopted the NSMP in a sufficient manner.

1.3 NORTH SHORE PLAN UPDATE PLANNING PROCESS

The North Shore Planning process started in earnest in December of 2001. Stakeholders representing various state agencies and local units of government were invited to a strategic planning session discussing future opportunities for the NSMB. The initial meeting looked at past successes and missed opportunities and discussed suggestions for change. This discussion formed an initial framework for the plan revision.

For the development of the plan update a steering committee was formed with representatives from the NSMB, the CAC and members of organizations and/or agencies that formed the original Technical Advisory Committee of for the NSMB. The steering committee met throughout the planning process and discussed various elements of the plan at each meeting. They began by clarifying operational issues for the NSMB activities, and then moved on to land use goals and objectives and the shoreland standards. At each meeting a set of recommendations was developed to be included in the plan. Throughout the planning process representatives of the member units of government reviewed the recommendations as part of the NSMB meetings.

Citizen input was gathered through a survey that was mailed out in July of 2002. The survey was mailed to approximately 1200 households and received a 17 percent response rate.

When the initial draft plan update was completed presentations were made to the local units of government by NSMB staff or in some cases by the staff of the local unit of government.

1.3.1 2016 Plan Update Process

Another North Shore Update process started in May 22nd of 2015. Stakeholders representing various state agencies and local units of government were invited to a strategic planning session discussing future opportunities for the NSMB. The initial meeting looked at past successes and missed opportunities and discussed suggestions for change. This discussion formed an initial framework for the plan revision.

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-The update addressed definitions and related sections of the plan, current events that should be considered by the board moving forward, and also created a new accessible online format for the plan.

1.3.1.1 Emerging Topics addressed in update

One Watershed One Plan

The Lake Superior North Watershed plan was created to maximize the ecosystem services delivered by this globally significant body of water that provide economic, social and environmental well-being particularly in Cook and Lake County. This comprehensive plan is used for the management and health of these County's water resources. This plan identifies problematic water and resource areas and maps out a sustainable course of action to improve and protect.

In 2014, both Cook and Lake Counties were required to do regular 10 year updates of their Local Water Management Plan by the Comprehensive Local Water Management Act of Minnesota. In August of 2014, the planning process of the Lake Superior North Watershed was initiated and in October 14, 2014, this 10-year ongoing plan was adopted by the County Board of Commissioners as one of the five watersheds chosen for the pilot program. The process included assessing the successful past and current management plans, framing concerning areas from the public, collaborating with regional experts, utilizing zonation results, prioritizing issues, developing measurable goals and then implementing the plan to protect and restore environmental, economic, and other social impacts of regulations, policies, and control techniques/technologies affecting water resources management. This plan represents the actions and importance of maintaining and protecting the environment of this area. For the complete targeted implementation schedule, look to pages 46-51 in the One Watershed, One Plan-Lake Superior North.

This LSNW comprehensive plan stretches from the northeastern tip of the state, near Grand Portage, to the southwest, extending a small amount into the St. Louis County. That includes most of the north shore and its communities. This plan targets concerns of the environment in these communities, such as storm water drains, drinking water, climate change, pollution, invasive species, sewage treatment systems, etc. Addressing these challenges will improve numerous north shore cities.

Many of the areas that were seen as a priority are the north shore communities, such as the cities of Two Harbors and Grand Marais. These two cities were both categorized as tier 1 priority areas (the highest priority tier). These communities will undergo changes to the city's planning and zoning to implement the protection and restoration of the environments. If these concerns are not addressed now, they will be greater risk factors in the future for the generations to come. Overall, the communities and their citizens are large assets to helping the Lake Superior North Watershed plan be successful. Citizens are an immense portion of the protection, restoration, implementation, education and development of the comprehensive plan.

A majority of the streams and rivers in Lake and Cook counties flow into Lake Superior, and a majority of these are impaired waters, meaning that they do not meet the requirements for designated uses (swimmable, fishable, drinkable or consumable). Two of the highest impaired waters are the Poplar River and the Knife River; these both flow through the land of north shore communities. The goal is to improve the quality of these streams or rivers by engaging local citizens, businesses and organizations to help restore and maintain quality water. This is especially important because the majority of the public drinking water supply for many of these communities is sourced from Lake Superior, and many of these impaired streams flow into Lake Superior. These waters must be protected to ensure proper and safe drinking water for the north shore communities. The streams, forests, and lakes of northeastern Minnesota are some of the highest quality natural resources in the United States, with millions of people visiting annually to enjoy activities utilizing these natural wonders of the north shore.

Both Cook and Lake Counties have comprehensive plans that serve as the legal basis for their official controls, but they will ensure that the LSNW management plan is implemented by revising and adopting these policies. Both counties have developed incentive programs for the protection, restoration and management of the LSNW's plan. The plan is over a 10-year time frame, but it will be reviewed on a bi-annual basis, reprioritizing as needed. The NSMB can provide assistance as needed during these review and implementation processes throughout the plan's lifespan.

Great Lakes Compact

The Great Lakes Water Compact and Agreement was adopted in 2008 to jointly determine how to manage the waters of the Great Lakes basin. It protects the health of the world's largest surface freshwater resource for generations to come by setting responsible standards for water use. This water management plan is an interstate compact involving the eight states of Illinois, Indiana, Michigan, Minnesota, Ohio, Pennsylvania, New York and Wisconsin. These states are also required to develop their own water conservation policies with keeping the Great Lakes Compact goals in mind.

The compact is mainly concerned with four issues: clean water, conserving water, invasive species and coastal conservation. Maintaining clean water protects the health of people, fish and wildlife of the Great Lakes. In order to do this, the compact particularly addresses untreated municipal sewage overflows, nutrient runoff, algae growth, pollution from petroleum refineries and pharmaceutical pollution. Around 40 million people rely on the great lakes as their source of drinking water.

The Great Lakes alliance has even created a report outlining six different options for separating the watersheds of the Mississippi River with the great lakes to prevent invasive species, called "Preliminary Feasibility of Ecological Separation of the Mississippi River and the Great Lakes." The lake's coasts are the first line of defense against pollution and the safety of fish and wildlife; the reason why conservation of the coasts are prominently significant.

Since the north shore communities boarder the basin, when someone wants to use a large amount of water and take it outside the basin they must contact the compact and use it in a way that does not damage natural resources that depend upon water. In Minnesota, permits are required for water uses of over 10,000 gallons, a lower threshold than the Great Lakes Compact. This compact has countless respectable ideas on how to preserve and protect the lakes that Lake Superior could and should utilize. They also have many resources and educational opportunities that communities and citizens of the north shore can take advantage of, such as, a ravine restoration toolkit, a K-12 educational curriculum, a community guide to contaminated sediment cleanup, an adopt-a-beach program and much more.

Climate Change

Climate change is a growing concern for many, and was requested to be addressed during the planning process. Dramatic changes in our weather system (locally and globally) could have a potential large scale effect on communities in Northeastern Minnesota, specifically along the shoreline. The NSMB should stay apprised of upcoming climate related studies and impacts, and utilize information in future decision making. An example is a recent multi-university study aimed at climate change and potential impacts along the North Shore which can be found at http://northshoreclimate.com/ .

Temporary Rental Properties

Temporary rental sites like '*AirBnB'* and *'VRBO'* allow owners to rent out a room or entire home to travelers looking to visit the area. This emerging trend should be observed by the NSMB, as there are potential zoning related issues that could arise. After discussion, it was decided that the NSMB would not take a specific stance on the issue as it was outside of their role. Instead, the board will acknowledge it as an item to monitor as use becomes more apparent in the future, and take action at a later date if necessary.

Online Presentation and Map Updates

An improved online presentation was a major focal point of the 2016 update. Prior to the update, the plan required being downloaded in eight separate files, hosted on the NSMB's website. A user friendly format was developed to help local governments be able to reference the plan during meetings concerning land use instead of going through the process of having to preform additional research to be presented at a later date. Questions and concerns could be addressed immediately and decisions reached more quickly.

Additional data including vegetation, storm water, and erosion files can be added to the online version as well. As new data emerges, integrating it into the new plan format will be easy and dynamic. It should be noted, that updates to the online version will also be

reflected in the hard copy version, which also will be made available for download via the NSMB's website.

1.4 PLAN AREA BACKGROUND

1.4.1 North Shore Management Plan Boundary

The North Shore of Lake Superior is part of the shoreline of the Great Lakes and is in northeastern Minnesota in Cook, lake and St. Louis counties. The planning area is approximately 150 miles long, extending from and including Lakewood Township, just north of Duluth, to the Pigeon River on the U.S./Canada border. (See Figure 1.1)

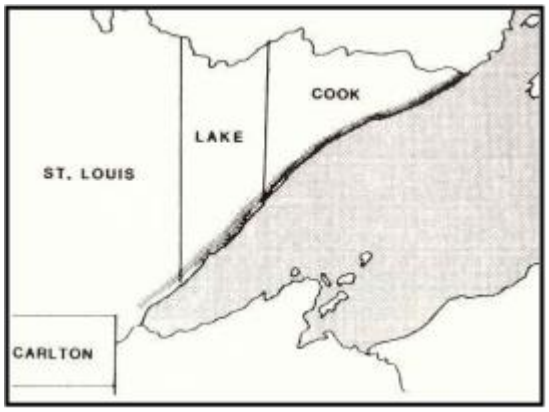
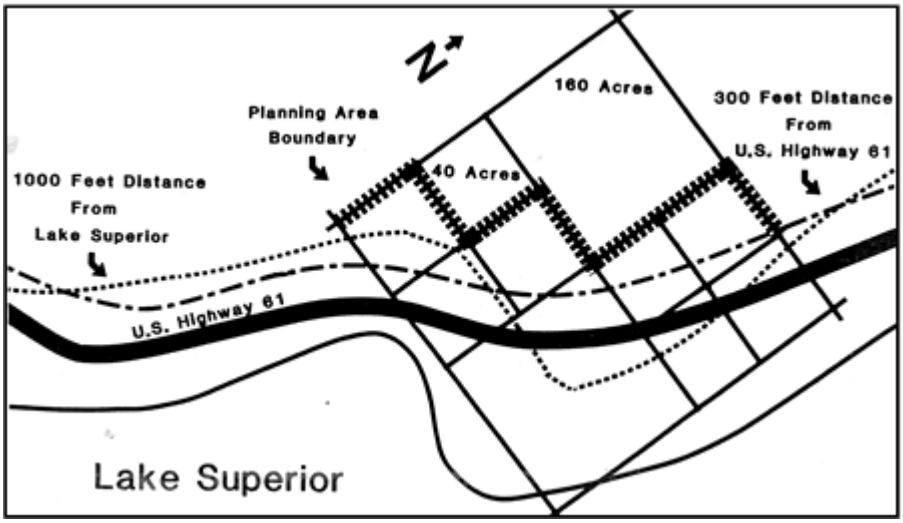


Figure 1.1: The North Shore of Lake Superior

Source: 1988 North Shore Management Plan

The North Shore Management Plan area boundary is defined along the 40-acre subdivision lines of the rectangular coordinate system established in the U.S. Public Land Survey, nearest to the landward side of a line 1000 feet from the shoreline of Lake Superior or 300 feet landward from the center line of U.S Highway 61, whichever is greater. However, the boundary between Lakewood Township and the western corporate limits of Two Harbors is the centerline of the U.S. Highway 61 Expressway. (See Figure 1.2)

Figure 1.2: Definition of the North Shore Management Plan Area Boundary



Source: 1988 North Shore Management Plan

1.4.2 Plan Area Physical Characteristics

The Minnesota Shore of Lake Superior is characterized by very rugged relief on the northern half of the North Shore starting approximately at Silver Bay and going Northeast. The shore becomes less rugged going South West with a more rolling landscape traveling Southwest of Castle Danger. This landscape creates an environment for fast flowing streams and waterfalls. Map 1.1 Appendix A, displays the streams that flow into Lake Superior. There are 27 primary streams along the North Shore, draining an area of 2,184 square miles. Most streams drain a relatively small watershed and travel a short distance to the Lake. Streams north of Tofte typically drain larger areas. The Brule River with 270 square miles and the Poplar River with 114 square miles are among the larger watersheds on the shore. (MPCA, An assessment of representative Lake Superior Basin Tributaries, 2003)

According to the soil survey done for the area one mile inland and 1.5 miles inland for major streams, nine percent of the area has slight development limitations while the remainder has severe limitations and requires special measures to overcome construction problems. Soils along the North Shore are characterized by bedrock and thin and highly erodible glacial soils for over 75 percent of the area project. These soil conditions create challenges for development and wastewater management needs.
Slow drainage, shrinking and swelling and low bearing strength are other limitations associated with these soils. Steep slopes cover 14 percent and wetlands cover 3 percent of the project area. These last two categories pose the most severe development limitations. Most of the soils within the project can accommodate recreational development such as trails and campgrounds and only pose slight to moderate limitations. (Soil survey of the North Shore of Lake Superior Coastal Zone Management Area, 1977, Soil Conservation Service)

Land cover along the North Shore is dominated by forest. Approximately half of the plan area is within the Superior National Forest Boundary. Further, there are eight state parks, two state forests, and five Scientific and Natural Areas (SNA) located with the plan area (see Maps 1.2A, B, and 1.3 Appendix A). All three Counties in the plan area have a large percentage of their land base in public ownership. It should be noted however that a relative large amount of these private lands are located within the plan area.

1.4.3 Land Use Controls

The land use controls are under the jurisdiction of the ten members of the NSMB and Grand Portage Reservation. Zoning classifications tend to change over time. For the most current zoning information contact the zoning administrator. For St. Louis County zoning information can be located at http://www.co.st-louis.mn.us/planning/PPPage/maps_zoning.htm.

1.4.4 Population and Development Trends

The population within the project area has seen a significant increase since the 2000 Census. Over the entire project area, the population increased by 4 percent or 564 residents between 2000 and 2010. Map 1.4, Appendix A, provides an overview of population change for areas within the project area using census block data.

The total number of housing units increased by 2,797 within the project area or a 15 percent increase according to Census block data. Tables 1.1 through 1.3 provide an overview of changes in housing units throughout the plan area. Cook County experienced the largest increase in housing units with almost two thirds of the new units being built in Cook County.

Table 1.1: Change in Housing Units St. Louis County

Area	**1990**	**2000**	**2010**	**Change Actual (2000-2010)**	**Change Percentage (2000-2010)**
Duluth Twsp	705	714	840	126	17.6

Source: Census 1990, 2000 and 2010

Table 1.2: Change in Housing Units Lake County

Area	**1990**	**2000**	**2010**	**Change Actual (2000-2010)**	**Change Percentage (2000-2010)**
Beaver Bay	115	139	187	48	34.5%
Beaver Bay Twsp	371	403	419	16	%
Crystal Bay Twsp	312	350	329	-21	-6.4%
Lake UT 1	198	183	241	58	31.7%
Lake UT 2	1,069	1,096	1,397	301	27.5%
Silver Bay	947	933	974	41	4.4%
Silver Creek Twsp	904	984	1,073	89	9%
Two Harbors	1,660	1,631	1,799	168	10.3%
Total Change	**5,576**	**5,719**	**6,419**	**700**	**12.2%**

Source: Census 1990, 2000 and 2010

Table 1.3: Change in Housing Units Cook County:

Area	**1990**	**2000**	**2010**	**Change Actual (2000-2010)**	**Change Percentage (2000-2010)**
East Cook UT	987	1,128	1,365	237	21%
West Cook UT	1,380	1,526	1,797	271	17.8%

Grand Portage	202	286	313	27	9.4%
Grand Marais	680	722	863	141	19.5%
Lutsen Twsp	549	611	856	245	40.1%
Schroeder Twsp	228	210	323	113	53.8%
Tofte Twsp	286	225	322	97	43.1%
Total Change	4,312	4,708	5,839	1,131	24%

Source: Census 1990, 2000 and 2010

1.4.5 Survey Highlights

As part of the planning effort a survey was distributed to approximately 1200 households within the plan area. A total of 165 responses or 17 percent were returned. A complete overview of the survey results can be found in Appendix B. Below is a discussion of the survey highlights.

The highest ranking problem areas that people considered a moderate, serious or very serious issue were:

- Safety in relation to traffic access points — 62 percent
- Septic systems polluting Lake Superior — 57 percent
- Declining fish habitat — 53 percent
- Amount of signage — 53 percent
- Visual impacts of development — 52 percent
- Residential runoff polluting the lake — 51 percent

Twenty-seven percent of the respondents felt the quality of life has gotten worse rather than better and 44 percent felt it had stayed the same. 18 percent felt the quality of live has gotten worse. Increased traffic and development are the most frequent concerns mentioned in the written comments. When asked how the quality of live could be improved on the North Shore the majority of the comments indicated addressing development issues and traffic concerns. Other areas identified include wastewater treatment needs, services and economic development.

The survey asked residents to respond to a number of development scenario statements. The responses were as follows:

- High density commercial and residential development is appropriate anywhere as long as wastewater services can be provided? Sixty-four percent oppose this statement while 19 percent supports the statement.
- Commercial and high density development should be clustered near existing centers? Forty-two percent support this statement while 29 percent opposes the statement.
- Commercial and high density residential development is appropriate if offset by other areas remaining undeveloped (Transfer of Development Rights). Forty-two percent support this statement while 30 percent opposes.
- Seventy percent favored maintaining the current level of public land on Lake Superior and 44 percent supported increasing the amount of public land. Seventy percent supports encouraging private preservation of open space.

The survey also included questions regarding future NSMB action steps:

- Seventy-two percent of the respondents support ridgeline development guidelines while 9 percent opposes.
- Seventy-eight percent supports signage guidelines on Highway 61 while 5 percent opposes.
- Sixty-six percent support development of guidelines that encourage development in areas already served by utilities and wastewater

Chapter 2:
North Shore Management Board Operations

CHAPTER 2: NORTH SHORE MANAGEMENT BOARD OPERATIONS

2.1 INTRODUCTION

The purpose of this section of the North Shore Management Plan Update is to discuss the organizational and funding issues facing the North Shore Management Board (NSMB). A strategy will be formulated to address these issues, which includes future activities for the NSMB, new operating procedures, a new Joint Powers Agreement, and finally, an updated Memorandum of Understanding with the Department of Natural Resources. All of these items will reflect the long-term goal that the NSMB provide strategies for orderly growth and resource protection along the North Shore. A copy of the operating procedures, Joint Powers Agreement and the Memorandum of Understanding can be found in Appendices C-E.

The long-term role of the NSMB was not clear in the previous plan. It is clear that the short-term goal was to create shoreland management standards that met the criteria outlined in Memorandum of Understanding between the NSMB and the DNR. For the NSMB to continue as an entity, it is important the NSMP Update move beyond these still important standards and offer goals, actions, and implementation steps more commonly found in a traditional comprehensive land use plan.

In discussions with citizens, local officials, state agencies, and others, there were many areas identified where the NSMB could provide assistance to local units of government. There was a general view that the NSMB has suffered to some degree since its inception from a lack of direction. There also were comments that people were unfamiliar with the purpose and role of the NSMB.

In summary there are three critical questions for the NSMB that will chart their future:

1) Is there a reason for the NSMB to exist?
2) If there are reasons for the NSMB to exist, how can the NSMB structure their future activities to meet the needs of local units of government?
3) What are funding sources for continued operation of the NSMB?

These questions will be discussed in more detail in the sections below.

2.2 IS THERE A REASON FOR THE NSMB TO EXIST?

Oversight of Shoreland Regulations:
Despite uncertainties over future funding, the NSMB has indicated that they wish for the NSMB to continue following the plan update. If the NSMB dissolved, there are a number of issues that would have to be addressed.

Technically, if the NSMB dissolved after finalizing the new plan, the state statute that refers to the North Shore Management Plan would still be fulfilled. The statute makes no mention of a continuing role for the NSMB, it only states that the NSMP shall serve as the state shoreland regulations for the North Shore of Lake Superior. The oversight responsibilities of the NSMB, however, as outlined in the Memorandum of Understanding, could be transferred back to the DNR. Essentially, the DNR would serve in the same oversight role they currently have for all lakes in Minnesota other than Lake Superior.

While the relationship between North Shore communities and the DNR has improved in recent years, the NSMB still prefers that local control be preserved through the NSMB. In addition to their oversight responsibilities, a reenergized NSMB that takes a leadership role in key North Shore issues can be seen as an excellent way to ensure continued positive relations with state and federal agencies.

Long Range Planning Activities in a Growing Corridor:
With so many natural amenities and with continued development pressure in the corridor, it makes sense to have a body that can gather information and facilitate discussion among local jurisdictions. In larger cities and counties, it is common to have a member of the planning staff who works solely on long-range or comprehensive planning issues. These staff members are free from the day-to-day tasks that other planners must perform in order for a local unit of government to operate efficiently. The NSMB could assist in long-range planning for the jurisdictions along the North Shore. Facilitating orderly growth and resource protection is one of the key goals of the NSMB in the original plan. It clearly makes sense to strongly take a role in stating that economic development and resource protection can both be achieved

NSMB staff could also represent the needs of North Shore communities on relevant planning projects that may be taking place in and around the North Shore Management Planning Area. Staff can also help to add a regional context to these discussions.

Coordinating the flow of Information from Studies to Local Units of Government:
Finally, there is a multitude of data and studies that are taking place along the North Shore. The NSMB can play an important role in analyzing these studies and determining how local units of government can best utilize this data. In addition, the NSMB can seek grant funds to complete projects that will address pertinent data needs along the North Shore. It should be noted that demonstration of regional and multi-jurisdictional approaches is a benefit when seeking funding to complete projects.

2.3 FUTURE ACTIVITIES OF THE NSMB

Four tasks have been identified which the NSMB will aim to consistently achieve following the plan revision:

1) EXAMINATION OF IMPORTANT NORTH SHORE LAND USE ISSUES- At the beginning of each fiscal cycle, staff will work closely with the NSMB, local land use officials, and the CAC to set aside key issues to be examined. The number of issues addressed will be dependent on funding availability. The process would be to create a workgroup that would develop a policy document on the issue at hand. This document could contain a model ordinance and/or suggestions for comprehensive plan amendments to address the particular issue. The work group would consist of members of the CAC, local land use officials, technical experts on the issue, and relevant non-profit organizations dedicated to dealing with the issue.

2) DATA COLLECTION AND COORDINATION- At the present time, there is a myriad of state, federal, and local agencies collecting land use data, conducting planning studies, and gathering GIS data, to name just a few examples. All of this information has relevance for local units of government, but the question of how to use this data effectively needs to be addressed. Minnesota's Lake Superior Coastal Program (MLSCP), the Natural Resources Research Institute, MPCA, SeaGrant and ARDC are just a few of the organizations that are currently working on studies that have the potential to provide valuable information to North Shore communities.

NSMB staff will serve as directed by the NSMB as a liaison between these agencies and local units of government. Staff would serve, as necessary, on task forces for shorewide planning efforts to ensure that the interests of local units of government are represented. In addition, staff can serve to represent the shorewide goals outlined in the North Shore Management Plan. A key goal in this process would also be to ensure consistency in shoreland management policies as much as possible and to facilitate the exchange of information among the members of the NSMB regarding shoreland management related issues. Federal and state agencies should identify the NSMB as a valuable partner in ensuring that plans that reach local units of government are usable and pertinent.

Finally, the NSMB will be proactive in gathering and prioritizing the data needs along the North Shore. In coordinating with the agencies mentioned above, the NSMB should be able to identify what the specific data needs are along the North Shore. The NSMB can then write grant applications or support the grant applications of other agencies to address these specific needs.

In summary, the NSMB will function as forum that allows for discussion of shoreland issues and sharing of land use data and current planning studies affecting the North Shore of Lake Superior.

3) EDUCATION AND INFORMATION DISTRIBUTION- In order to provide for input on major land use projects proposed by federal, state, and local agencies, the NSMB will perform a number of tasks.

a) Receive notices from local units of government for variances, plats, conditional uses, planned unit developments, and rezonings. The NSMB, CAC, and other

interested citizens would receive this information via e-mail in addition to the information being posted on the proposed NSMB web site.
b) Receive notices from federal and state agencies on any construction projects they initiate and for projects that they have review authority.
c) Create a web site where meeting notices are posted for federal and state agencies, along with notices for public meetings held by member governments on the NSMB. This web site will also contain links to relevant land use and planning information.
d) Staff will produce monthly reports that detail all the coordination notices they have received. These reports will detail any trends that may indicate future issues that could be addressed by the NSMB.
e) A more detailed report will be completed at the end of each year that analyzes the data sets that have been identified as most important to the members of the NSMB, CAC, and local land use officials.

4) MEETING STRUCTURE- The NSMB will meet quarterly to receive updates on projects and to set overall policy goals. It is anticipated that issues will come up during the various planning processes on the North Shore where general policy statements are needed by the NSMB.

The CAC will meet as directed by the NSMB. Depending on funding, regular CAC meetings could be eliminated entirely. In response to this, the CAC could consider meeting informally without staff to discuss information or issues that may need to be brought to the NSMB. These informal meetings should take place at least on a quarterly basis in order to provide timely input to the NSMB.

In order to further preserve citizen involvement, CAC members will also be part of the task forces formed to address specific issues and part of the work plan group that sets priorities for each year. If held, quarterly CAC meetings can be used to discuss any new land use issues that the members are hearing from members of their community.

Finally, the NSMB will call a meeting of local land use and zoning officials at least once per year to discuss any common problems or issues they are facing in both the day-to-day administration of their zoning ordinances and also with long-term policy goals.

2.4 FUNDING

Since the NSMB began operation in 1988, they received $100,000 each biennium from the Board of Water and Soil Resources (BWSR). In June 2001, BWSR allocated only $50,000 for the next biennium and stated that no additional state funds would be allocated. Clearly, this presented a funding crisis for the NSMB. Local units of government had not contributed to the funding of NSMB until this point. It was clear that some support would be needed for the NSMB to continue operations.

In order to complete the plan revision, the NSMB sought funds from Minnesota's Lake Superior Coastal Program (MLSCP) in addition to contributions of $1,500 from counties and $500 from cities and townships toward the plan revision. Beginning with the 2004 work plan, the NSMB will ask each county for a yearly contribution of $2,500, with each city and township being asked to contribute $750.

With state funding eliminated, the primary funding for the NSMB now must come from local units of government and grant sources. The Minnesota Lake Superior Coastal Program (MLSCP) has a number of grant programs that could be used to fund NSMB activities for discrete projects. However, MLSCP cannot be used as source of ongoing funding of the administrative costs of the NSMB.

In the long-term, the relationship between MLSCP and the NSMB should be discussed. Both agencies have similar goals. There may be creative ways for both entities to utilize each other's strengths to achieve common goals.

To carry out the future tasks identified in this chapter, it seems reasonable that one staff person and/or organization work approximately 20 hours per week on NSMB-related issues. Approximately half of this time would be devoted to the items set out in Tasks 2, 3, and 4. Cost for this work program could fluctuate depending on the level of involvement the NSMB expects from the staff person to monitor and coordinate shore related developments.

The remainder of staff time (ten hours per week) could be used on the discrete projects identified by the NSMB during their yearly strategic planning sessions (Task 1: Examination of Important North Shore Planning Issues).

2.5 OPERATING PROCEDURES

Revised operating procedures were created by the NSMB early in the plan revision process. The goal was to clearly set out roles for members of the Citizens Advisory Committee, Technical Advisory Committee, Planning and Zoning Staff form local units of government, and NSMB staff. These procedures will be implemented at the onset of the 2016 work plan. A copy of the operating procedures can be found in Appendix C.

2.6 JOINT POWERS AGREEMENT

The Joint Powers Agreement (JPA) was reviewed and updated early in the process. The most important task with the revised JPA is to solidify the ongoing role for the NSMB in the process. The original JPA did not explicitly indicate the NSMB was to continue after the completion of the NSMP. The revised JPA offers clear guidance under Duties and Responsibilities that allow the NSMB to complete its ongoing work. A copy of the Joint Powers Agreement can be found in Appendix D.

2.7 MEMORANDUM OF UNDERSTANDING

The revised memorandum of understanding (MOU) changes statute references to ensure they are accurate. It also better clarifies the roles and responsibilities of the NSMB and the DNR. In addition, the MOU states that the DNR will assume the responsibilities of the NSMB should the NSMB dissolve. This means the DNR would be monitoring the implementation of the NSMP as they monitor the implementations of the state shoreland regulations in the rest of the state. A copy of the MOU can be found in Appendix E.

Chapter 3:
Shoreland Management Standards

CHAPTER 3: SHORELAND MANAGEMENT STANDARDS

3.1 PURPOSE

Through Minnesota Rule 6120.2800, Subpart 1a, the North Shore Management Plan provides minimum standards and criteria for the subdivision, use, and development of the shoreland of Lake Superior. Local units of government are required to adopt standards that are as restrictive or more restrictive than those contained in the NSMP. Standards are provided for five areas: Zoning, Planned Unit Development, Wastewater Systems, Shoreland Alterations, and Erosion Hazard Areas. In the following chapter, the specific minimum standards are in bold.

All the shoreland management standards apply to lots created after the approval of the NSMP Update. Local units of governments are encouraged to look at innovative policies for dealing with lots that are non-conforming but have been "grandfathered" in since the initial NSMP was completed.

Listed below are a number of definitions that are critical to the interpretation of the North Shore Management Standards.

• Definitions: Riparian – Lots that have shoreline frontage

Non-riparian – Lots within the NSM Planning Area that do not have shoreline frontage

Area Plan – A community-based comprehensive plan for a designated unincorporated area.

Impervious Surface – A constructed hard surface that either prevents or retards the entry of water into the soil and causes water to run off the surface in greater quantities and at an increased rate of flow than prior to development. Examples include: rooftops, sidewalks, patios, driveways, parking lots, storage areas, and concrete, asphalt, or gravel roads.

Vegetation Line – Measurements taken from the point where terrestrial vegetation begins. (This is commonly where a sod layer has developed).

Land Disturbance – Any change in the land surface including removing vegetative cover, excavating, filling, grading, and the construction of any structure.

Dwelling -- means any building or portion thereof designed or used primarily for residential occupancy, including single-family dwellings, duplexes, triplexes, fourplexes, and multifamily dwellings, but not including hotels or motels.

Dwelling unit -- means any building or portion thereof that contains separate living facilities for not more than one family. Separate living facilities shall constitute provisions for sleeping, eating, kitchen facilities (including at least an oven range or cooking device and a permanently installed sink), and bathroom/sanitary facilities. "Dwelling unit" does not include a tent, travel trailer, bunkhouse, hotel, motel, tourist court, rooming house, boardinghouse, or tourist home units.

Transient Unit-- A unit in a bed and breakfast inn, inn, hotel, motel, motor hotel, hotel-motel complex, condominium, time share complex or so-called interval ownership complex designed for and offering one or more lodging units to travelers and transient guests for temporary lodging and sleeping purposes.

Bed & Breakfast - An establishment in a residential dwelling that supplies temporary accommodations to overnight guests for a fee where an owner or manager resides on the premises.

Hotel/Motel/Resort - A lodging facility under single ownership containing two or more individual sleeping rooms, suites or cabins used primarily for providing accommodations for pay for periods of less than 30 days.

Tourist Home - A dwelling occupied by permanent residents where lodging is regularly provided for pay to three or more overnight guests for period of less than 30 days, where such use is secondary to the occupancy of the dwelling by a family.

Shoreland: The North Shore Management Zone as defined earlier in this document. (The 40-acre subdivision lines of the rectangular coordinate system established in the U.S. Public Land Survey, nearest to the landward side of a line 1000 feet from the shoreline of Lake Superior or 300 feet landward from the center line of U.S Highway 61, whichever is greater.)

Shoreline- The minimum horizontal distance between a principal building and the ordinary water elevation of Lake Superior (601.5 feet) as established by the Minnesota Department of Natural Resources.

3.2 ZONING

3.2.3 Introduction

In order to have a discussion on the zoning standards, staff reviewed all ten ordinances along the North Shore. In addition, the state shoreland standards were reviewed for comparison purposes. During this review, there were a number of areas where change was suggested.

Shorewide applicability is one of the major issues when discussing changes to the minimum standards. Since Lake Superior is different than other lakes in Minnesota, it poses unique questions. There are four cities that have sizable incorporated areas within the shoreland management zone. As part of the discussion in the planning process, it was determined that the NSMP update should encourage development in these areas and other development nodes. The original NSMP seemed to also support this conclusion by stating that commercial-urban areas as defined in that plan were exempted from the density and dimensional standards in the Planned Unit Development Guidelines.

In the state shoreland standards, there is a provision for local units of government to adopt different standards if they can demonstrate they meet the defined criteria. Two examples of the criteria are: 1) cases in which shorelands have been developed with urban uses for many years and much of the development does not meet the standards and 2) cases where the central business district is within shorelands.

This plan does not propose that incorporated areas be exempted from the standards of the plan, but it does provide, as mentioned above, some flexibility for incorporated areas and other established development nodes to develop at different densities than more sensitive, undeveloped areas.

In addition to PUD density, "implementation flexibility" is built into the North Shore Management Plan through the fact that lots created prior to the adoption of the plan need not be consistent with the plan. While this solution does not penalize landowners for having substandard lots under the new plan, it creates many new non-conforming lots or lots that are "grandfathered" in under the old standards. In the future, further work by the NSMB in looking at different ways to deal with non-conforming lots would be useful

This section of the Shoreland Management Standards provides standards for the following areas:

3.2.4 Lot Area and Lot Width
3.2.5 Structure Setbacks
3.2.6 Highway Access Control
3.2.7 Building Height
3.2.8 Lot Coverage
3.2.9 Subdivision of Property
3.2.10 Adoption of shoreland zoning standards into local

3.2.4 Lot Area and Lot Width Standards

During the plan revision process, the main point of discussion regarding both lot area and lot width standards was the notion of computing density on a scale of dwelling units per acre rather than the current standards, which control density through minimum lot area and lot width.

Changing to an allocated density allows for lot area to be flexible when new plats are proposed. This can lead to a more flexible design that takes into account the natural features of the land instead of imposing rigid lot width and size standards. Secondly, allocated density is useful if planning tools such as Purchase of Development Rights (PDR) and Transfer of Development Rights (TDR) are utilized in the future.

As discussed earlier, the NSMP has a general theme of encouraging development in existing areas and discouraging development in undeveloped areas. With this in mind, the density proposed for unsewered areas is 0.5 units per acre, which corresponds to a two-acre lot size for single-lot developments.

In order to facilitate more open space and less individual septic systems, local units of government could consider bonus densities if a development is proposed that provides some form of a managed wastewater system for the development, dedicated open space, and a comprehensive stormwater management plan, among other items. These types of developments, sometimes called cluster developments, open space development, or conservation subdivisions, are beginning to occur elsewhere in Minnesota. In particular, this technique could be useful as subdivision pressure increases along the ridgeline and in other non-shoreland properties near Lake Superior. Certainly market factors come into play regarding the feasibility of these developments, but it still would be beneficial to have the ordinances in place to accommodate new development techniques. Planned Unit Development ordinances remain in place to address higher-density hotel and/or mixed use developments. Some entities on the North Shore already allow or are considering these types of developments in their own ordinances.

Lot Area Standards:

- **Density in unsewered areas shall be 0.5 units per acre (2-acre minimum lot size).**
- **Density in incorporated areas served by a public sewer system shall be a maximum of eight units per acre.**
- **Density in unincorporated areas served by a public sewer system or decentralized system and designated as development nodes in a County Comprehensive Plan or County-approved Area Plan shall be a maximum of four (4) units per acre.**

Lot Width Standards

- **All riparian lots must be a minimum of 200 feet in width.**
- **Unsewered non-riparian lots in developments of four or less lots must be a minimum of 200 feet in width.**
- **No minimum lot width shall be established for new platted development of five lots and two acres or more in area located in:**
  - **a) non-riparian areas**
  - **b) incorporated areas**
  - **c) unincorporated areas served by a public sewer system and designated as development nodes in a County Comprehensive Plan or County-approved Area Plan**

3.2.5 Structure Setback Standards

The structure setback is one area where the NSMP differs substantially from the statewide shoreland regulations. For example, inland General Development lakes require a setback of 75 feet from the ordinary high water line (OHWL) for new construction, while the NSMP requires a structure setback of 40 feet from the permanent vegetation line of Lake Superior. At the time the NSMP was adopted, the OHWL for Lake Superior was defined as a water surface elevation of 601.5 (mean sea level elevation) which corresponded, more or less, to the water's edge, depending on the lake level.

Due to the topography of the Lake Superior shoreline, implementing this standard would have resulted structures placed 75 feet back from that OHWL were still within the active beach area of the lake. To alleviate this problem, the DNR, by policy, defined the OHWL on Lake Superior as the permanent vegetation line. Also, in the development of the NSMP, the structure setback was set at 40 feet. The reasoning was that a structure set 40 feet back from the vegetation line is always inland of the active beach, which protects both the structure and the beach. Overall, 40 feet from the vegetation line plus the average distance of the vegetation line from the water reasonably matches, or even exceeds, a setback of 75 feet from the water in most cases.

The NSMP update better defines the differences between the vegetation line and the average water level. This two-step process will ensure that all new development is at least 75 from the average water level, regardless of the location of the permanent vegetation line.

Much like non-conforming lots, existing structures in the setback would be "grandfathered" in. However, there was discussion on the idea of mitigation for construction in the setback areas. An action step later in the plan will address this issue.

Riparian Structure Setback Standards

- **40 feet horizontal distance from the permanent vegetation line of Lake Superior or 75 feet horizontal distance from the average water level, which is an elevation of 601.5 feet above sea level, whichever is greater.**
- **75 feet from the ordinary high water level of streams**

Road Setback Standards

- **35 feet from the right-of-way line on Trunk Highway 61, except where municipal ordinances specify otherwise**

3.2.6 Highway Access Control Standards

Access management is a critical issue facing the NSMB. Proper access management supports the notion that transportation and land use are linked. This is true in any situation but is more important in an area where there is essentially one major route. With few reliever routes available, land use decisions in one area could potentially affect traffic flow farther up and down the route.

MNDOT is strongly emphasizing access management with new guidelines being devised and steps taken to improve coordination with local units of government.

The designation of CSAH 61 and TH 61 as an All-American Road should also weigh into access management decisions. The scenic qualities of the route may create situations where flexibility is needed in determining access standards.

The steps in this section are meant to formalize the notification procedures between MNDOT and local units of government.

Some of these steps may be taken informally already by some jurisdictions, but a unified shorewide standard will provide consistency to MNDOT. In the long-term, the NSMB could participate in access management planning in the TH 61 corridor.

Highway Access Control Standards

- **It shall be the goal to minimize access points to County State Aid Highway 61 and Trunk Highway 61. Accordingly, shared driveways shall be encouraged wherever possible. All proposed subdivisions shall be reviewed by appropriate authorities.**
- **A letter from MNDOT shall be required stating plans have been submitted to MNDOT prior to any LUG accepting an application for a plat, conditional use, change of use, or building permit that includes a new access point on TH 61.**
- **An access permit from MNDOT shall be received prior to the approval of any proposal.**

3.2.7 Building Height Limitations

Building Height and Elevation Standards:

- **Maximum building height for all structures is 35 feet from top of building to average natural grade line. The top of the building is defined as the peak of the roof.**
- **No structure, except decks, piers and docks, shall be placed at an elevation such that the lowest floor, including basement floors, is less than three feet above the highest known water level. In those instances, where sufficient data on known water levels are not available, the elevation of the line of permanent shoreland vegetation shall be used as the estimated high water elevation.**

3.2.8 Lot Coverage

In some jurisdictions, the threshold for a stormwater management plan is 10%. Further work by the NSMB in discussing impervious surfaces on a watershed level could lead to adjustment to this standard in the future.

Lot Coverage Standards

- **In all management areas, lot coverage by impervious surfaces shall not exceed 25% unless a surface water runoff plan certified by a registered professional engineer is submitted and approved by the local zoning office. However, in no case shall lot coverage by impervious surfaces exceed 50% of the total lot area. The surface water runoff plan shall contain, at a minimum, provisions for sediment entrapment and erosion control in order to minimize impacts on the receiving waters.**

3.2.9 Subdivision of Property

Surveys will ensure that non-conforming lots are not created in addition to providing a record for local units of government.

Subdivision of Property Standards

- **A registered survey shall be submitted upon the subdivision of any parcel into two or more parcels.**

3.2.10 Incorporation of zoning standards for areas within the North Shore Management Zone

Adoption of Zoning Standards in local Ordinance

- **The members of the North Shore Management Board shall comply with the zoning standards of the North Shore Management Plan through one of the following methods:**
- **Adoption of text from the NSMP into their zoning ordinance**
- **Creation of an overlay zoning district along Lake Superior that contains standards equal to or more restrictive than those contained in this chapter.**

3.3 PLANNED UNIT DEVELOPMENT

3.3.1 Introduction

This section outlines guidelines intended to provide uniform criteria for the local units of government to review and approve Planned Unit Developments (PUD). This section starts with explaining the purpose of these guidelines, followed by the definition of minimum size of a PUD. It further discusses design criteria, sewage disposal and a plan approval process.

3.3.2 Purpose, Goal, Definition

Purpose:

The purpose of these guidelines is to provide uniform criteria for the local approval of planned unit developments within the North Shore Management Planning Area. The criteria allow for development densities greater than those provided for in this plan. These provisions apply to new planned unit developments, both commercial and

residential, on undeveloped land, redevelopment of previously built sites, or conversions of existing buildings and land.

Planned unit developments must be designed and operated to be compatible and harmonized with their surroundings and located in compliance with the North Shore Management Plan. It is the intent of these guidelines to provide the North Shore units of government with the flexibility to review, modify and approve planned unit developments that follow the rules of common sense and practicality. The end result should be development that optimizes the use of building sites and protects and enhances the natural amenities of those sites.

Goal:

It is the goal of these guidelines to provide uniform standards to local officials and potential developers for the optimization of development opportunities and maximum environmental protection on any given planned unit development site.

Definition:

Minimum Area for Planned Unit Development:

- **Area Served by public sewer system: 1 acre**
- **Area served by decentralized system or individual sewage treatment system: 10 acres**

Minimum number of Units:

- **The minimum number of dwelling or transient units for a Planned Unit Development shall be five (5) while meeting other criteria contained in this document such as impervious surface, setbacks and wastewater needs.**

3.3.3 Planned Unit Development Design Criteria

The purpose of the following criteria is to provide guidance to citizens, local officials, and developers in evaluating, reviewing and designing planned unit developments. Many free local resources and services are available to assist in meeting these criteria. These include city and county zoning administrators, health officials, county extension, and soil and water conservation district personnel.

Many state and federal resources are also available. These include the Minnesota Department of Natural Resources, Pollution Control Agency, University of Minnesota Sea Grant Extension, Department of Transportation, Natural Resources Conservation Service, and the U.S. Army Corps of Engineers.

1) Maximum Density:

- **Unsewered Areas: 0.5 units per acre**
- **Area served by decentralized waste water system: 0.5 units per acre**
- **Incorporated Areas Density standards do not apply**

- **Bonus densities may be allowed in unsewered areas up to a maximum of one unit per acre based on criteria established by local units of government except for Lake Superior riparian areas outside incorporated areas and while considering habitat, pollution, view from the lake, accommodation for greater density at development nodes and shoreland alteration.**

2) Structures, parking areas, and other facilities must be designed and placed to reduce visibility as viewed from Lake Superior, roads and adjacent shorelands by vegetation, topography, increased setbacks, color, or other means acceptable to the local unit of government, assuming summer, leaf-on conditions. The end result should be a development that is visually unobtrusive to the natural environment or surrounding properties.

3) Units, recreation facilities, and commercial uses must be clustered into one of more groups and located on suitable areas of the development site.

4) At least 50% of the development area must be dedicated as open space for the users and residents of the development. Road rights-of-way, land covered by road surfaces, parking areas, units, and structures area considered developed areas, units, and structures are considered developed areas and should not be included in the computation of minimum open space. This 50% open space dedication must be filed as a restriction against the property. At least 40% of the lot width at the shoreline setback line shall be left as open space. For other development in shoreland areas, 25% open space at the structure setback line shall be open space.

5) Open space areas, including topography, vegetation, and allowable uses must be preserved by the use of restrictive deed covenants, permanent easements, public dedication and acceptance, or other equally effective and permanent means.

6) Areas with physical characteristics unsuitable for development in their natural state, such as wetlands or areas containing significant historic sites shall be considered open space.

7) The development must also provide access to developed public roads.

8) The dimensional and density provisions of these guidelines do not apply to incorporated areas served by a public sewer system, but the purposes and intent of these PUD guidelines and policies must be met.

3.3.4 Sewage Disposal Standards

1) On-site water supply and sewage treatment systems must be centralized and designed, installed and operated to meet or exceed applicable standards or regulations of the Minnesota Pollution control Agency (MPCA) or the local unit of government.

2) On-site sewage treatment systems must be located on the most suitable areas of the development.

3) Public water and sewage service must be used where available, as determined by the local unit of government.

4) The potential person capacity of a dwelling shall be used to determine the potential gallons generated which in turn shall dictate the appropriate system(s) that should be utilized by the proposed development. Local and state standards and regulations apply and should be consulted.

5) All new units must utilize water conserving plumbing fixtures and have water meters installed and accessible which serve all sewage generating appliances.
6) No occupancy of any unit or use of any commercial structure of any planned unit development shall be allowed until the approved sewage disposal system is in place and fully operational.

3.3.5 Plan Approval

At the time of application, planning, and scheduled development the proposed facility shall be under unified control or ownership. The applicant will provide a detailed development plan to the local government, which must include a description of the following:

1) **The property under consideration, including property boundaries, countours, on-site features, roads, lakes, rivers, wetlands, rock outcroppings, wooded areas, and other relevant features.**

2) **Building elevations, location on site, proposed uses, number of units, and commercial operations.**

3) **A concept statement describing the project.**

4) **Parking areas and driveways for both residences and commercial activities, vehicle loading/unloading areas, proposed public road entrances, and projected traffic generation of the proposed development.**

5) **Proposed phasing of the final development.**

6) **Description of how the project will operate after completion.**

7) **Nature of proposed ownership after completion.**

8) **Proposed fire protection.**

9) **Proposed homeowners association agreement, where applicable.**

10) **Detailed landscape plan that shows existing vegetation, proposed alteration, new plantings and landscaping which is consistent with shoreland alteration guidelines.**

11) **Recreational space location and use.**

12) **Adequate water sources and water supply system plans.**

13) **Proposed sewage treatment system plans.**

14) **Storm water runoff plans (construction and operation).**

15) **Erosion control plan for shoreline, where applicable.**

16) **Erosion control plan for site (construction and operation).**

17) **Evidence of application for appropriate permits, state and federal.**

18) **Evidence of availability of necessary public utilities.**

19) **Proposed financial plans and necessary performance bonds or escrow agreements to protect the local unit of government's financial liability for site restoration, landscaping, erosion control measures, and sewage treatment systems.**

The proposed development plan will demonstrate that the development will conform with adjacent development and be screened from the lake, adjacent roads, and adjacent properties. Andy other information deemed to be necessary by the local unit of government will be provided by the applicant. The local unit of government may require plan modifications or require special conditions or performance standards as a part of its approval of the project.

3.4 WASTEWATER TREATMENT SYSTEMS

3.4.1 Introduction

The 1988 North Shore Management Plan recognized that sanitary systems were an important issue but did not offer substantial policy guidance for dealing with the issue. The original plan contained the following statement: "There are many issues relating to sanitary systems and water supply along the North Shore, however, most are beyond the scope of this version of the Shoreland Management Plan." Following that statement was a summary of existing systems and treatment options coupled with technical information about state regulations pertaining to sanitary systems.

It has been argued that the lack of a cohesive policy by the NSMB toward wastewater planning has been one of primary missed opportunities for the NSMB. The NSMB update will change this by charting a policy course that would allow the NSMB to provide shorewide leadership in facilitating discussion and action on wastewater treatment issues. The NSMB is stating that these issues are not outside the scope of the NSMP. The NSMB, as an existing Joint Powers Board, will serve as a mechanism for the North Shore to speak to these issues in a unified voice.

There has been a realization nationwide that decisions made regarding wastewater infrastructure can have consequences for land use. Planning for sewage treatment systems cannot be done without considering the effects that new systems may have on future growth of an area.

In Section 2.4, the discussion will focus major concepts in wastewater treatment, changes in the statewide regulatory framework, and the status of existing wastewater treatment systems on the North Shore.

3.4.2 Major Concepts/Issues in Wastewater Treatment

1) *Centralized Systems vs. Decentralized Systems and the question of Growth Management*

Centralized systems are considered to be a system where wastewater is collected from individual dwelling units or businesses and sent to a central facility where it is treated. According to the U.S. Environmental Protection Agency, a decentralized system is characterized by the absence of central wastewater collection and treatment. Decentralized systems include conventional onsite systems, cluster systems (a group of homes and businesses served by one decentralized system), and alternative wastewater treatment technologies. Please see the Appendix for more information on these systems.

By their nature, centralized systems can allow higher density growth due to the simple fact that centralized treatment eliminates the need for treatment facilities on individual lots. In the case of the North Shore, areas of substandard soil conditions can make siting

of on-site systems quite difficult. Larger tracts of land may be required in order for a single property owner to find adequate space for an on-site system.

Therefore, future density becomes a key issue when an area relatively rural in nature builds a connection to an existing centralized system to solve, for example, a situation where septic systems are failing and causing environmental degradation. The connection may alleviate the septic issue but now a situation has been created where there is potential for substantially higher density in the areas served by new connection.

In addition, advances in on-site system technology are making it possible for some on-site systems to be located on smaller lots. In the past, the land needed for adequate on-site systems could be used as a method of controlling density. These new technologies have the potential for significantly reducing the role that on-site systems requirements have in controlling density.

These issues make land use planning even more important. The link between wastewater treatment and land use planning should be made early on in any planning process, long before any construction of new systems takes place. On the North Shore, an example of proactive planning took place prior to construction of the North Shore Sanitary District connection to the Western Lake Superior Sanitary District system. The North Shore Land Use Plan, completed in late 2001, was required by the State prior to funding due to concerns about management of growth after construction. Through the planning process, a number of jurisdictions along the new sewer line elected to keep their density at previously established levels. Castle Danger is another example where land use planning was part of the wastewater management planning process.

1) Managed On-Site Systems

The EPA and MPCA are supportive of this model to address areas where failing septic systems and/or environmental conditions are a problem and where a connection to a centralized system is not feasible due to cost, growth concerns, etc. The EPA has provided national guidelines that consist of five model programs that could be used to achieve better management of on-site systems. This continuum of management begins with a program to inventory systems and increase awareness of wastewater issues. The final model programs on the continuum call for a responsible management entity to be created to operate and maintain a system or to manage and own the system. In this scenario, the homeowner pays a monthly fee for maintenance of their on-site system. The maintenance could be done by a public entity or by a private contractor selected by a public entity.

A great deal of work has already gone into studying this topic. In April 2002, a report was published for the Iron Range Resources and Rehabilitation Agency and the Northern Minnesota Consortium of Counties entitled Model Code Framework for Performance Management of Onsite/Cluster Systems. This report (produced by NRRI, Ayres Associates, and St. Louis County) summarizes the EPA guidelines and provides a framework to follow in order to facilitate the development of any of the five models.

2) Performance Code for On-Site Systems

In addition to the framework provided in the report mentioned above, the report also contains a model performance code for on-site systems. In addition, there are other groups in the state who are trying to create as detailed a performance code as possible for use by local staff. The idea behind a performance code is the belief that the existing Chapter 7080 standards that regulate onsite systems in Minnesota are too prescriptive. There is not enough flexibility provided in the standards to allow for the unique site conditions faced in northeastern Minnesota. At this date, no local units of government in the North Shore Management Planning Area have officially adopted a performance code.

3.4.3 Changes in the Existing Statewide Regulatory Framework

Since the adoption of the NSMP in 1988, there have been a number of key changes or proposed changes in the state regulatory framework for on-site systems, which is referred to as Chapter 7080.

In addition, the state is encouraging the use of new cooperative approaches to decentralized wastewater treatment while also proposing significant changes in the scoring system than ranks wastewater projects seeking loans from the State.

CHANGES TO CHAPTER 7080

Chapter 7080 has been revised twice since 1988 to reflect changes to Minnesota state statutes. The highlights of the changes are the following:

- On-site systems designed to treat more than 10,000 gallons per day per development, and discharging to sub-surface needs permitting by the PCA.
- Any system utilizing surface disposal needs permitting by the PCA.
- Collector system language in Plan is obsolete—omit.
- County setbacks should be equal to or greater than state requirements.

WATER QUALITY COOPERATIVE AREA-WIDE SDS PERMITS

This concept, introduced during the 1997 session of the Legislature, established guiding principles for the establishment of area-wide permits for alternative discharging systems. The goal was to give communities another option to consider when deciding on wastewater system options and management. Two pilot projects are underway where area-wide permits have been issued by the MPCA: the Upper Mississippi River basin and the Rainy River basin.

In order to facilitate development of a system of managed on-sites, a water quality cooperative is created. State statute describes this as “an association of person organized under Minnesota Statute Chapter 308A to install own, manage, and control individual sewage treatment systems (ISTS) or alternative discharging sewage systems (ADSS) and provide water-quality treatment and management services within a defined geographic area” (from Minn. Stat 115.58).

PROPOSED CHANGES TO PROJECT PRIORITY RANKING SYSTEM

The MPCA currently has the charge of scoring and ranking proposed wastewater construction projects for loans through the State Revolving Fund (SRF). The result of this ranking is the Project Priority List (PPL). Over the past few years, increasing demand for loans has necessitated a funding cutoff, or minimum number of points for a project to eligible for funding. In the future, however, it is likely the cutoff will need to be raised in order to ensure that high-priority projects are funded. With this in mind, the point system must be reviewed to ensure it accurately represents the state's priorities.

One of the issues with the current point system is that it does not consider the age or condition of a system. This may not give enough priority to preserving existing municipal wastewater assets.

The current system also does not consider whether a community needs to expand due to growth or upgrade due to the need to meet tougher effluent limits. Finally, there is concern about projects in unsewered areas extending beyond what is necessary to correct environmental or public health.

With this in mind, recommendations for the 2004 legislative session will include a revision of principles for ranking the PPL. Projects that address significant health hazards will remain a high priority. In addition, municipalities with stressed existing systems should have access to funds. Finally, projects in unsewered areas should be consistent in scope with the environmental issue being addressed.

Following this principle, a corrective action alternative selection hierarchy will be established for projects proposed in an unsewered area due to failing individual on-site treatment systems (ISTS). This hierarchy requires the following to be considered prior to any consideration of connection to an existing centralized system:

1) Replacement of failed ISTS with new ISTS with centralized management
2) Decentralized wastewater systems that combine local failed ISTS into a multi-household system with centralized management. (Water Pollution Control Revolving Fund Improvements, MPCA, February 2003)

It seems clear from reading this that projects with limited hookups proposed to connect to a centralized system will be at a competitive disadvantage under the new system. In essence, the state is saying that the "big pipe" solution will be the last one considered for unsewered areas.

3.4.4 Status of Existing Wastewater Systems

Since the adoption of the NSMP in 1988, a number of construction and planning projects have taken place. There has been development of a number of small sanitary districts along the North Shore that are in various stages of progress toward connection to a centralized or decentralized system.

The following is a summary of the status of key issues regarding MPCA permitted or proposed public facilities on the North Shore:

• Duluth/North Shore Sanitary District:
    • Phase 1-(Lester River to Lake County line) – currently constructing a sewer line with collection to the Western Lake Superior Sanitary District (WLSSD)
    • Phase 2-This phase will take the existing Knife River sewer plant off-line and connect its customers to the new sewer line being constructed in Phase I. This project has received partial funding through a grant and is on the project priority list.
• Knife River/Larsmont Sanitary District – The project has been placed on the project priority list. The unsewered area from Knife River to the western limits of Two Harbors would be sewered with collection to WLSSD through the Duluth/NSSD line that is currently under construction.
• Two Harbors Wastewater Treatment Facility – The City has been notified by the MPCA that they must address the infiltration and inflow problems with the system. The city is discussing the construction of holding ponds to address the issue. The City of Duluth is dealing with a similar issue.
    • Silver Creek Township:
    • Castle Danger Phase 1-Currently in operation
    • Castle Danger Phase 2- (Castle Danger Church to Lafayette Bluff)-Project is in the planning stages
• Stewart River- (Two Harbors City limits to Silver Creek Cliff) Project is on the Project Priority List. The proposal would call for collection to an existing system.
• Beaver Bay Wastewater Treatment Facility – An expansion of the system is planned with the addition of new ponds.
• Tofte and Schroeder Sanitary District– Proposal for collection system is on the Project Priority List. A number of issues have placed progress on hold.
• Grand Marais Wastewater Treatment Facility-Work will take place this summer to alleviate infiltration and inflow problems with the system

3.4.5 Policy Considerations for the NSMB

There are a number of policies the NSMB could consider for the future. All of these options will require a collaboration with local officials, wastewater experts, and citizens who have already put a great deal of time and effort into North Shore wastewater issues.

These policy options allow the NSMB to passively support or to actively lead in addressing wastewater issues. To some degree, some of these things (more specifically the performance code ideas) are already underway. The NSMB will avoid duplication of effort and work with existing information whenever possible. The priorities among these options are underlined and in bold. The NSMB will take action to support these priorities.

1) Take no active role in North Shore wastewater issues. This is the current situation.

2) Encourage all local comprehensive plans to contain sections detailing the linkage between wastewater planning and land use planning. Plans should indicate areas for future expansion of centralized systems.
3) Support an inventory of on-site system and the building of awareness of maintenance needs for on-site systems. A task force, along with a study, could determine if higher management levels are necessary. If higher management levels are needed, the options beginning with #6 become more realistic:
4) Encourage the adoption of a performance code for on-site systems by individual counties.
5) Work with local officials and others with expertise in on-site systems to review existing model codes and create a detailed model performance code for the North Shore Management Planning Area.
6) Encourage the issuance of an Area-wide permit for the Lake Superior Basin.
7) Play a leadership role in gaining support and sponsor the issuance of an area-wide permit for the Lake Superior Basin.
8) Encourage the idea of managed on-site systems along the North Shore.
9) With or without the issuance of an area-wide permit, assist in the creation and/or become the water quality cooperative for the North Shore.
10) Support the creation of a responsible management entity to operate and maintain a network of managed on-site systems.
11) Become the responsible management entity to operate and maintain a network of managed on-site systems.
12) Support the creation of a responsible management entity to own and maintain a network of managed on-site systems.
13) Become the responsible management entity to own and maintain a network of managed on-site systems.

3.5 SHORELAND ALTERATIONS

3.5.1 Introduction

This section attempts to represent increased efforts in the past 15 years managing wetlands and in encouraging quality stormwater management.

The passage of the Minnesota Wetland Conservation Act (WCA) was a significant event in wetland management. Local units of government are responsible for implementing the standards contained in WCA. Some counties have done separate wetland management plans in addition to adding detailed language regarding wetlands to their zoning ordinances.

There has also been substantial focus on stormwater management since 1988. This section of the plan now contains a specific goal, objectives and policies regarding stormwater management. In addition, a set of Best Management Practices for stormwater management is included in Appendix F as a guide for local units of government.

It should be noted, additional map data on many of the following objectives can only be accessed via the online format of this plan.

3.5.2 Shoreland Alteration Goal, Objectives and Policies

Goal

To maintain the natural character of the North Shore as much as possible and minimize soil erosion while allowing for permitted development under the North Shore Management Plan. Alterations of vegetation and topography will be regulated to prevent erosion to public waters, fix nutrients, preserve shoreland aesthetics, preserve historic values, prevent bank slumping, preserve corridor for movement of wildlife, protect fish and wildlife habitat, conserve cultural resources and to preserve the scenic and aesthetic character of the shoreland. These Best Management Practices for shoreland alterations will protect the water quality of Lake Superior and will therefore sustain the economic values in the corridor.

Objective 1: Vegetation Management

To manage vegetation according to applicable statutes with regard to maintaining critical areas, limiting clear cuts, allowing for some selective removal for view purposes, and providing appropriate screening of views from the lake perspective.

To maintain natural vegetative cover in so far as possible, the following policies shall apply:

Policies

a) A vegetation management plan will be required for total vegetation removal of over 10,000 square feet or 25% of lot area, whichever is lesser.

b) Vegetation shall be maintained on bluffs, steep slopes, and within the shore impact zone (the area within 50 feet of the vegetation line) in order to maintain stable soil conditions.

c) Removal of vegetation shall be limited so as to screen structures, clear cuts, parked vehicles, or other facilities from public roads and Lake Superior. Selective removal of vegetation shall be allowed to provide a reasonable view of the Lake from individual residences with an emphasis on avoiding removal in the shore impact zone. The shore impact zone is defined as the area within 50 feet of the vegetation line.

d) All proposed clearcutting, shall be reviewed and approved by the local unit of government and shall be carried out consistent with this plan. Clearcutting in the shore impact zone is not allowed.

e) Vegetation shall be preserved as much as possible along North Shore streams to provide for shade coverage, thereby maintaining lower stream temperatures.

f) Private forest management including pruning, trimming, and planting of vegetation shall be encouraged through consultation with the DNR, Extension Service, or other appropriate agencies.

g) Private driveways shall blend into the existing terrain as much as possible and public utility lines to private landowners shall be buried if at all possible.

h) Significant public view corridors from public rights of way to Lake Superior or unique uphill features should be identified and vegetation removal encouraged to enhance these views. A plan for vegetation alterations for each should be developed and clear cutting is specifically discouraged for this purpose.

i) The NSMB will encourage a project to produce a model ordinance that will create vegetation removal and screening standards, with a focus on quantifying the standards and defining appropriate vegetation types for revegetation when necessary. This project will need to balance the need for local units to have flexibility with the need for a shorewide exchange of ideas regarding vegetation management techniques.

j) Local units of government should provide landowners information on how to make preservation of vegetation part of the covenants for newly platted lots.

Objective 2: Wetlands

To maintain and protect Minnesota's wetlands and the benefits they provide through local administration and enforcement of the Minnesota Wetland Conservation Act.

Policies

a) Anyone proposing to drain, fill, or excavate a wetland must first try to avoid disturbing the wetland.
b) Any impacts to wetlands must be minimized as much as possible.
c) Any lost wetland acres, functions, and values must be replaced according to the wetland management strategies employed by local units of government under the auspices of the WCA.
d) Wetlands shall be identified on site development plans.
e) Wetlands on the North Shore should be defined, identified, and inventoried and offered special consideration in determining their functional value. These wetlands may be small to be noted on existing maps.
f) Raise the awareness of natural resource management options that are permitted strategies for wetland mitigation

Objective 3: Storm Water Management

Minimize the impact of stormwater runoff through professionally designed storm water management plans.

Policies

a) Stormwater management plans shall be required for the following types of development

i) Whenever lot coverage by impervious surfaces is proposed to be 25 percent or more

ii) Planned Unit Development

b) Stormwater management plans should meet the following criteria:

i) All plans shall be approved by professional engineer licensed by the state of Minnesota

ii) Designed to ensure that there is no post-construction increase in the peak rate or volume of stormwater runoff

c) Local units of government should ask for assistance as needed from appropriate parties in reviewing storm water management plans. If not already in place, formal agreements should be created to facilitate such partnerships.

d) Utilize Best Management Practices to control post-development stormwater runoff quantity and quality.

Any increase in surface runoff resulting from new development or redevelopment within the North Shore Management Area shall be controlled so that post-development stormwater runoff quantity and quality do not exceed pre-development conditions. Stormwater management can be accomplished through the application of best management practices aimed at maintaining post-development runoff at pre-development levels.

Best Management Practices can be defined as physical, structural, and/or land management practices that, when used singly, or in combination, prevent or reduce pollution of water. Stormwater quality and quantity BMPs include source control, runoff treatment, and streambank erosion control. Source control BMPs aim to *prevent* pollution from occurring. Examples include using mulches to cover disturbed soils, re-seeding disturbed vegetation, enclosing outside storage areas, and other practices that prevent soil and other pollutants from being transported by runoff. Runoff treatment attempts to remove sediment and other pollutants from runoff once transport has begun. Runoff treatment BMPs include facilities that remove pollutants by gravity settling of suspended solids, filtration, biological uptake, and soil adsorption. Streambank erosion control BMPs typically control the rate, frequency and duration of stormwater runoff releases. Examples of runoff treatment and streambank erosion control BMPs include detention & retention ponds, biofiltration swales, infiltration ponds & trenches and dry vaults.

It should be noted that it is generally less expensive to prevent pollution of runoff using source control BMPs than it is to treat runoff once it has become polluted. However, since source controls cannot prevent all impacts, a combination of measures will always be needed. Sound watershed management requires that both structural and nonstructural measures be employed to mitigate negative impacts on stormwater runoff. For detailed information on suggested BMP's for water quantity treatment and water quality treatment, see the Appendix F.

Objective 4: Erosion Control

To maintain natural topography and minimize soil erosion, the following policies shall apply. An erosion and sediment control plan shall be required under the following circumstances:

a) For land disturbances exceeding 1,000 square feet or 100 cubic yards

b) For fill exceeding 1,000 cubic yards

c) For any shoreland alteration exceeding 50 cubic yards within the structure setback area. Shoreland alterations done in connection with work authorized by a building or sewage disposal permit shall be exempt from the erosion control plan requirements.

Policies

a) Erosion and sediment control plans shall be reviewed by the local Soil and Water Conservation District and approved by the local zoning office prior to the start of land alteration work.
b) Alterations must be designed and conducted in a manner that insures that only the smallest amount of bare ground is exposed for the shortest time possible.
c) Mulches or similar materials must be used, where necessary, for temporary bare soil coverage and a permanent vegetative cover must be established as soon as possible.
d) Methods to minimize soil erosion and to trap sediment before they reach any surface water feature must be used. Such methods shall be in place before development occurs.
e) Altered areas must be stabilized to acceptable erosion control standards consistent with Field Office Technical Guides of the local Soil and Water Conservation Districts and the U.S. Soil Conservation Service.
f) Fill or excavated material must be stabilized to prevent erosion and slope failure.
g) Fill or excavated material must not be placed on steep slopes, except as designed by qualified professionals.
h) Approved permanent erosion control practices should be maintained.
i) Any development that disturbs one acre or more of land and smaller sites that are part of a larger development disturbing one or more acre of land must obtain a combined National Pollutant Discharge Elimination System/State Disposal System permit from the Minnesota Pollution Control Agency.

Objective 5: Shoreline Alteration

Alterations below the Ordinary High Water Level of lakes and streams shall follow accepted practices. Any alterations shall be first permitted by the responsible government entity, which may be the DNR, Army Corps of Engineers or local unit of government.

Objective 6: Shoreland Restoration

To encourage restoration of disturbed areas along the North Shore where feasible.

Policies

a) Utilize existing Soil and Water Conservation District Programs
b) Encourage new programs to beautify Minnesota's North Shore.
c) Develop partnership by working with the Minnesota Lake Superior Coastal Program, the Lake Superior Action and Management Plan, the Save Lake Superior Association and other public and private entities concerned with the protection and enhancement of the Lake Superior Coastal area.

3.6 EROSION HAZARD AREAS

3.6.1 Introduction

There has been a concerted effort in the last 25 years to address the shoreline erosion problems on the North Shore. Local units of government have completed a number of erosion control projects. In addition, agencies such as the Board of Water and Soil Resources have provided technical assistance to property owners with erosion problems on private lands.

The North Shore Management Plan provided the foundation upon which erosion hazard maps were created for individual local units of government. The intent of this section of the plan update is to continue this role for the NSMB by encouraging the distribution of information.

3.6.2 Goal, Objectives and Policies

Goal

To protect public and private property and protect public interest and safety by guiding development in areas prone to excessive shoreline erosion.

Objective 1

To promote awareness and understanding of shoreline erosion, lake levels, and natural shoreline processes.

Policies

a) The North Shore Management Board should encourage the development and distribution of informational materials about shoreline erosion, lake levels, and natural shoreline processes.

   In July 2001, BWSR, with assistance from Community GIS, Inc., released the GIS Database for Minnesota's Lake Superior Shoreline. This is a detailed set of topographic maps of the North Shore that contains four map layers overlaid on the topographic maps. The layers measure surface geology erodibility, shoreline erosion potential, slope, and fisheries habitat data. This is a valuable tool that could be enhanced further if parcel maps for the North Shore are added as a layer.

b) The North Shore Management Board should serve as a liaison to facilitate the distribution, and evaluation of educational material about shoreline erosion, lake levels, and natural shoreline processes

c) The North Shore Management Board should serve as a liaison working with:
   - Minnesota Department of Natural Resources
   - International Joint Commission
   - Environmental Protection Agency, Great Lakes Region Office
   - Natural Resources Conservation Service
   - U.S. Army Corps of Engineers
   - Natural Resources Research Institute
   - Minnesota Department of Transportation
   - National Oceanic and Atmospheric Administration

To facilitate the collection, storage, and cataloguing of information pertaining to shoreline erosion, lake levels, and natural shoreline processes. A central repository should be designated that will distribute information to the libraries for Minnesota's North Shore area.

Objective 2

To define and identify Erosion Hazard Areas.

Policies

a) Erosion Hazard Areas shall be defined as those areas of Lake Superior's North Shore where the long term average annual rate of recession is one foot or greater per year.
b) Erosion Hazard Areas as presently defined and identified may be refined at a later date by the North Shore Management Board based upon further research and new information.

Objective 3

To designate special provisions for Erosion Hazard Areas.

Policies

a) Erosion Hazard Areas will be identified in the zoning ordinances of local units of government. The standards for erosion hazard areas shall be noted through the use of an overlay district or through special provisions in the zoning ordinance.

b) At the time of permitting and/or sale of a property within an Erosion Hazard Area, there will be a covenant recorded against the property that states that it is in an Erosion Hazard Area and notes that there any be future restrictions subject to local ordinances.

c) At the time of permitting, areas defined as Erosion Hazard Areas by the North Shore Management Board should have an onsite inspection, as determined by the local unit of government, to inform the landowner of erosion susceptibility.

d) The burden of proof concerning the suitability of land for the proposed development shall be borne by the project proponent. Accordingly, a site development plan shall be required and approved by the zoning officer prior to all new construction in Erosion Hazard Areas. The site development plan shall include a description of:

- Surface runoff including roof drains
- Subsurface runoff
- Vegetation removal including proposed landscaping
- Proposed sewage treatment systems
- Topography of site
- Structure and driveway location
- Potential bluff toe protection
- Slope alterations
- Other pertinent information as requested

e) The site development plan for Erosion Hazard Areas shall include setback and shoreline erosion control recommendations, and follow shoreland alteration guidelines.

f) Structure setbacks in Erosion Hazard Areas:

1) Structures and soil absorption areas shall be setback the annual erosion rate times 50 plus 25 feet (to allow for structure relocation) from the top edge of the eroding bluff. Where slumping is evident, the setback shall be measured from the uppermost shear zone (point at which the soil separates and slumping begins). In the absence of an established long-term erosion rate, the setback shall be 125 feet.

2) The structure setback and the location of the soil absorption areas can be modified by variance if the landowner provides technical data proving a

different recession rate or that the erosion hazard, although correctly estimated, can be mitigated by structural protection. The setback, however, shall not be reduced to less than the setback standards detailed in the zoning standards portion of this chapter.

3.6.3 Erosion Hazard Maps

Erosion Hazard Areas within the North Shore planning area were shown on the Shoreland Management Area maps included in the original plan. The scale of those maps, however, only provides a general guide to the erosion hazard areas on the shore. It has been the responsibility of local units of government to use those maps as a baseline for establishing erosion hazard maps at a scale that is more useful for site-specific planning and analysis. Local units of government will continue to use the maps they have devised for official determination of erosion hazard areas.

Only those areas deemed to be of high potential for erosion were put on the maps in the 1988 NSMP. Expect in rare cases, this was limited to the areas were high clay banks border the lake. Areas of erosion where the long-term erosion rate appeared to be less than the criterion of one foot per year were not mapped. Clearly, there are places outside of the Erosion Hazard Areas shown on the maps where erosion is a problem. However, mapping was limited to those areas where the Erosion Hazard Area policies apply.

The Erosion Hazard Area subcommittee used the following process to identify the Erosion Hazard Areas. First, a detailed soils map from the Coastal Zone Management study was transferred onto a Minnesota Department of Transportation strip ma of the North Shore. Then, 199 surveys from a 1986 shoreline erosion survey were transferred to the map. Surveys indicating high erosion rates were tagged for further analysis. Fifty sites were revisited and measurements were made to see how far the erosion had progressed since 1986. From this information, it was determined that many of the erosion problems reported in 1986 were attributed to the extremely highwater level and severe storms of the period. Losses of cobble beaches, collapse of sea caves and the erosion of rocky shorelines were identified as being outside Erosion Hazard Areas. However, areas of high clay banks continued to show signs of failure despite the two intervening years of relatively low, calm water. These are the areas identified as Erosion Hazard Areas on the maps.

The more critical areas of clay banks were examined from the water. The area from French River to Split Rock River was covered by boat and pictures were taken of potential Erosion Hazard Areas. Field notes, photos, and the 1986 and 1988 videotapes of the shoreline were then used to set the approximate boundaries.

The identification of Erosion Hazard Areas is an ongoing process. As stated previously, the North Shore Management Board should play a role in gathering, compiling, and supporting the shorewide use of data on erosion hazard areas. The 2016 update of this plan, provide an erodibility index interactive map in the online version of the plan. While this data can be helpful for planning purposes, it is not detailed enough for construction.

Chapter 4:
Future Land Use Goals, Objectives and Actions

CHAPTER 4: FUTURE LAND USE AND COASTAL RESOURCES GOALS, OBJECTIVES AND ACTIONS

4.1 PURPOSE AND AUTHORITY

The 1988 NSMP, in addition to shoreland management standards, provided a Shoreland Use Guide Plan. This section of the plan created Shoreland Management Areas, which consisted of the following categories: Protected Resource, Residential, Commercial-Rural, Commercial-Urban, Resort-Commercial, and Industrial. Each of these categories contained definitions, goals, and policies for each of these sections. The categories were then placed on Shoreland Management Area maps.

An updated copy of these maps is included in Appendix G of this document. These maps identify development cluster areas which include the incorporated communities, commercial rural and resort commercial areas. For these areas the updated plan promotes increased residential density and the location of services. The maps also identify protected areas and special resources.

The 1988 NSMP stated that local units of government should consider the maps and the relevant policies when making land use decisions. The maps and the guide plan were not, however, intended to replace local zoning ordinances. The local units of government are responsible for the implementation of the North Shore Shoreland Standards. The NSMB does not serve as a shorewide zoning board with authority to veto or overturn the decisions of local units of government.

The Shoreland Management Area maps have been included in this document and are intended to provide a general idea of the current land uses on the North Shore. These maps do not serve as a zoning map for the North Shore. By adopting the shoreland management standards by text and/or setting up shoreland overlay districts, NSMB members have already taken steps toward shorewide consistency in land use decisions.

The Local Units of Government are encouraged to use these maps as a starting point in their land use discussions and where appropriate refine and or change desired land uses for their area. The Goals, Objectives and Actions identified in this plan are, in part, intended to provide a framework and starting point for discussion at the local level regarding the desired future land use for an area.

The goals and objectives are centered around the following issue areas: Residential Development, Non-Residential Development, Natural Resources, Lake Superior, Community Character and Design, and Public Infrastructure. In addition, Actions will be associated with these goals that will provide a framework for future NSMB activities and that will offer a framework of issue areas to consider when developing land use plans at the local level. The NSMB believes that a plan that sets up specific action steps will result in a NSMB that is more proactive and provides better service to its members.

4.2 RESIDENTIAL DEVELOPMENT

Goal: **Residential development density should be structured so higher-density development is clustered around existing nodes of development. Areas of low, medium, and high-density future development should be clearly delineated in the comprehensive plans of NSMB members.**

Objective: New residential development along the shoreline should be designed in order to preserve natural features and minimize impacts.

Actions: *Review and revise Planned Unit Development (PUD) standards and subdivision regulations.*

Gather information on innovative subdivision and PUD techniques and provide the information to NSMB members.

Actions: *In order to create more flexibility in dealing with density issues, create zoning ordinances that utilize allocated densities (DU/acre) or maximum net density (DU/buildable acre).*

Identify funding opportunities to assist members in crafting model ordinances that address this issue.

Actions: *Create a residential Transfer and/or Purchase of Development Rights (TDR/PDR) on the North Shore.*

Identify funding to facilitate a process where a Transfer and/or Purchase of Development Rights policy document and model ordinance is created. The TDR and PDR process can be used to send development away from sensitive areas to receiver sites more appropriate for development.

Actions: *Identify prime areas within communities for residential infill where infrastructure is already available. Direct development toward these areas prior to extending infrastructure to serve new areas*.

Work with local units of government to identify high priority areas where lower-density development is desired.

Objective: The future land use goals in faster-growing unincorporated areas should be given high priority.

Actions: *Support the existing Area Plans underway along the North Shore and partner with local units of government to identify key areas for future Area Plans.*

The NSMB should assist local units of government in seeking funding to produce area plans.

Objective: Future residential development should provide for a mixture of housing types.

Actions: *Review zoning techniques that offer incentives for construction of multiple housing types as part of new development.*

4.3 NON-RESIDENTIAL DEVELOPMENT

Goal: **Concentrate future high-density non-residential development near existing community centers and infrastructure. New development should reflect the character and scale of current North Shore communities.**

Objective: Support redevelopment and/or infill of existing commercial and industrial areas prior to expansion of commercial and industrial zoning.

Actions: *Communities should identify and prioritize areas for redevelopment and infill.*

Actions: *Support clustering of non-residential development. Investigate zoning techniques that offer incentives to direct non-residential growth toward these identified areas.*

Actions: *Create a Non-Residential Transfer of Development Rights process on the North Shore.*

These actions can be done in conjunction with work on residential areas. This once again reinforces the support of clusters of development. Long stretches of linear development are not considered desirable.

Objective: Local zoning ordinances should reflect the notion that some residential and non-residential uses are compatible and may contribute to the character of the North Shore.

Actions: *Create mixed-use zoning options for higher-density areas. Reinforce these notions in areas that already contain mixed-use opportunities.*

Objective: The future land use goals in faster-growing unincorporated areas should be given high priority.

Actions: *Continue to encourage the existing Area Plans underway along the North Shore and partner with local units of government to identify key areas for future Area Plans.*

Objective: New non-residential development at a scale that is compatible with existing community characteristics.

Actions: *Utilize zoning techniques that would limit the square footage of certain non-residential uses in areas that demonstrate the small-town community character of the North Shore.*

Actions: *Identify areas where larger-scale non-residential developments are appropriate in each community.*

Communities may desire development but have concerns about the scale of development that is proposed. The NSMB can provide information on tools to encourage development that meets the needs of a community.

4.4 LAKE SUPERIOR

Goal: **Protect the Lake Superior ecosystem by limiting environmental threats and risks from development.**

Objective: Promote and assist with implementation of practices outlined in '1 watershed 1 plan' developed by Lake and Cook Counties.

Actions: *Work with state agencies, local land use officials, and citizens to implement improvements identified in the plan to protect Lake Superior water quality.*

Objective: Promote management strategies that address point and non-point pollution.

Actions: *Work with state agencies, local land use officials, and citizens to create a document of shorewide Best Management Practices that reduce point and non-point pollution.*

Objective: Efficient implementation of NPDES Phase II standards

Actions: *The NSMB should follow and disseminate information on NPDES issues and other federal and state mandates relating to storm water and wastewater management issues.*

Objective: Clarify roles and responsibilities of federal, state, and local agencies that have jurisdiction over issues that relate to Lake Superior.

Actions: *Sponsor forums where SWCD, County Water Planners, MPCA, DNR, and local land use officials gather to discuss the interrelationship of water and land use. The goal here is to create a dialogue prior to issues becoming a crisis. The initial priority for these discussions is to determine how the NSMB can effectively use the information contained in the Lake Superior Action Management Plan (LAMP)*

Objective: Develop a shorewide plan to address erosion hazard areas

Actions: *Work with SWCD, BWSR, and LUG's to create a list that prioritizes areas where erosion control is needed and work collectively to gain funding for these projects.*

Actions: *Support the use of the GIS Database for Minnesota's Lake Superior Shoreline. This document can be a useful planning tool for local land use officials. In addition, it should be used to determine if there is a need for revision of the erosion hazard maps.*

Objective: Structures on the water should not increase erosion, degrade conditions along the shore, or negatively impact adjacent properties.

Actions: *The NSMB should receive notification of large-scale water-oriented projects proposed by individual property owners and federal, state, and local agencies. The NSMB will comment on these projects if they feel they are not consistent with the NSMP.*

Actions: *Develop a policy document that analyzes the possibility for local units of government to implement regulations for near-shore activities. Guiding principles could be created for the construction and location of docks, mooring spaces, marinas, etc.*

Changes in state law that took effect in October 2002 reduced the amount of permits the DNR processes for docks. The DNR now only requires a protected waters permit for commercial marinas and docks eight feet or more in width. There are a number of areas in Minnesota where local units of government have created their own rules. Go to: http://www.dnr.state.mn.us/waters/watermgmt_section/pwpermits/docks_rules_changes.html for links to some of these examples.

4.5 NATURAL RESOURCES

Goal: **Maintain the unique character of the North Shore by preserving and enhancing natural resources.**

Objective: Identify important scenic, natural, and historic resources and provide strategies for protecting and preserving these resources

Action: *Form a working group to review the Lake Superior Action Management Plan. This group will work with the MPCA to identify strategies on how to best utilize the information and suggested actions outlined in the Basin Plan.*

Action: *Gain information from citizens on areas that are valued as scenic resources. Map these scenic resources and identify ways to enhance these resources.*

Action: *Maintain a dialogue with fisheries and wildlife managers to stay informed on issues of wildlife management and exotic species.*

Action: *Coordinate maintenance and development of overlay maps (wetlands, soils, slopes, erosion hazard areas, public lands) that identify areas where development is constricted. In some cases, portions of this data may already exist.*

Action: *Create a shorewide policy document on vegetation management. Gain information on existing efforts by local units of government and state agencies in order to build the framework for this policy.*

Objective: Improve coordination of wetland protection and preservation strategies between local units of government.

Action: *Work with SWCD's and county water planners to ensure that current information on wetland policy are available.*

Action: *Assist in fostering a dialogue between local units of government on the implementation of wetland policy. The following issues should be explored:*

1) Wetland functions and values in current ordinances and the unique geology of the North Shore
2) WCA sequencing standards applicability to the North Shore
3) Difficulty in wetland mitigation on the North Shore due to lack of wetlands to restore
4) Possibilities for flexibility in mitigation credit (preserving shoreland areas, fencing white cedar regeneration).

Action: *Review existing wetland inventories on the North Shore. Identify areas where unique wetlands may not be identified and create maps indicating these areas.*

Objective: Provide landowners with information regarding management of natural resources as they go through the permitting process.

Action: *The NSMB will pursue grants and/or speakers who could offer workshops for citizens, contractors, and interested others. Partnerships will be formed with existing agencies and non-profit organizations that provide such information. Key focus areas will be vegetation management and shoreline erosion.*

Objective: Review options for increasing compliance with environmental regulations.

Action: *Work with local units of government to develop a model contractor licensing program that could be put in place by local units of government. This program would ensure that quality erosion and sediment control techniques are learned and implemented.*

Action: *Analyze the feasibility of local units of government obtaining the ability to issue an administrative penalty order for violations.*

4.6 PUBLIC INFRASTRUCTURE

Goal: **Infrastructure improvements should first address environmental concerns, and should direct growth near existing nodes of commercial/residential growth.**

Objective: Begin a shorewide dialogue on wastewater management issues. The land use implications of new and improved wastewater systems should be a common theme of this dialogue.

Action: *The NSMB should facilitate a process where a discussion takes place on the current state of wastewater treatment on the North Shore. Inventory what is in place along the North Shore in terms of centralized, cluster, and individual systems. Evaluate what decisions have already been made and the implications of those decisions.*

Action: *Facilitate a shorewide discussion on the different wastewater treatment options available along the North Shore.*

Action: *Facilitate a discussion to determine how individual sanitary districts can work together to devise common strategies for management of systems.*

Action: *Facilitate a discussion on the feasibility of organizational structures that could be created for individual septic systems. These are commonly referred as managed on-site systems. Identify current projects in Minnesota that can be used as case studies.*

Action: *Engage the Minnesota Pollution Control Agency in the discussion of appropriate wastewater management systems.*

Action: *Find a case study to use to facilitate a discussion on wastewater infrastructure on the North Shore. There should be a focus on the land use implications of wastewater infrastructure.*

4.7 COMMUNITY CHARACTER AND DESIGN

Goal: **Preserve the existing character identified by North Shore communities.**

Objective: Identify community character (scenic, cultural, historic, architectural, etc.) for community nodes and for "rural" areas.

Action: *Create a framework that identifies common characteristics shared by communities along the North Shore. The NSMB should identify existing work done by the North Shore Scenic Drive Council and create a partnership with this organization.*

Action: *Gain consensus through community forums on the characteristics of individual communities that are most valued. Review existing plans for evidence of existing efforts at gaining this consensus. Convene community forums if necessary.*

Objective: Promote community character within Comprehensive Plans and zoning ordinances

Action: *Provide guiding principles and model ordinances for communities that desire design standards. These standards may include the following areas or design elements; historic districts and structures, colors, height, landscaping, and signage.*

Actions: *Create a design manual for individuals to refer to when going through the permitting process.*

Objective: Pursue revitalization of residential and commercial areas that enhance historical and community character.

Actions: *Assist communities in gaining community consensus on minimum standards for maintenance of structures and the enforcement of these standards.*

Actions: *Support communities who pursue funding from the sources such as the Small Cities Development Program in order to repair aging housing stock and revitalize downtown areas.*

Objective: Development on the ridgeline of the Lake Superior Highlands should blend in with the landscape.

Actions: *Develop guiding principles and a model ordinance to allow for ridgeline development that blends in with the natural landscape.*

Objective: Attractive community gateways that make a statement about the character of each community

Actions: *Gateway planning should be an integral part of comprehensive plans.*

Objective: Interact with state, and federal organizations and agencies that support these objectives.

Actions: *Local units of government and the North Shore Management Board should participate in and look for partnerships with the Department of Natural Resources and the Department of Transportation.*

Objective: Plan financially to complete a minor review of the plan every 5 years by the board and a full update of the document is to be completed every 10 years.

Appendix A:
Maps

Map 1.1
Water Features
Along the North Shore

Cook

Lake

Saint Louis

Hollow Rock Creek
Red Rock Creek
Reservation River
Farquhar Creek
Carlson Creek
Flute Reed River
Myhr Creek
Brule River
Kadunce Creek
Kimball Creek
Durfee Creek
Devil Track River
Fall River
Cut Face Creek
Cascade River
Indian Camp Creek
Spruce Creek
Jonvick Creek
Alfred Creek
Poplar River
Rollins Creek
Onion River
Leveaux Creek
Carlton Creek
Temperance River
Cross River
Two Island River
Caribou River
Manitou River
Little Marais River
Baptism River
Palisade Creek
Beaver River
Split Rock River
Gooseberry River
Crow Creek
Encampment River
Silver Creek
Stewart River
Skunk Creek
Knife River
Little Sucker River
Big Sucker Creek
Schmidt Creek
French River
Talmadge River
Lester River

12
16
61
8
4
2
1
7
8
61
15
2
61

N
W
E
S

Map Features

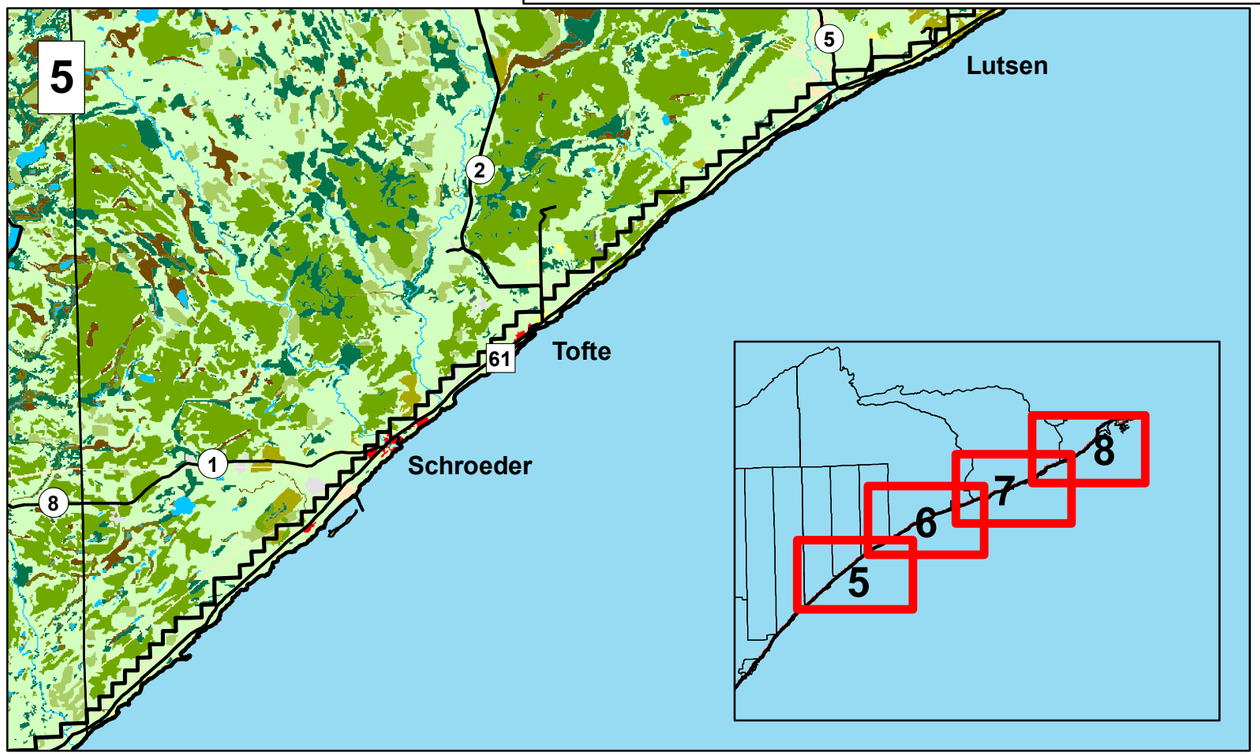
- North Shore Rivers
- Lakes
- mn_county_boundaries
- Minor Water Sheds

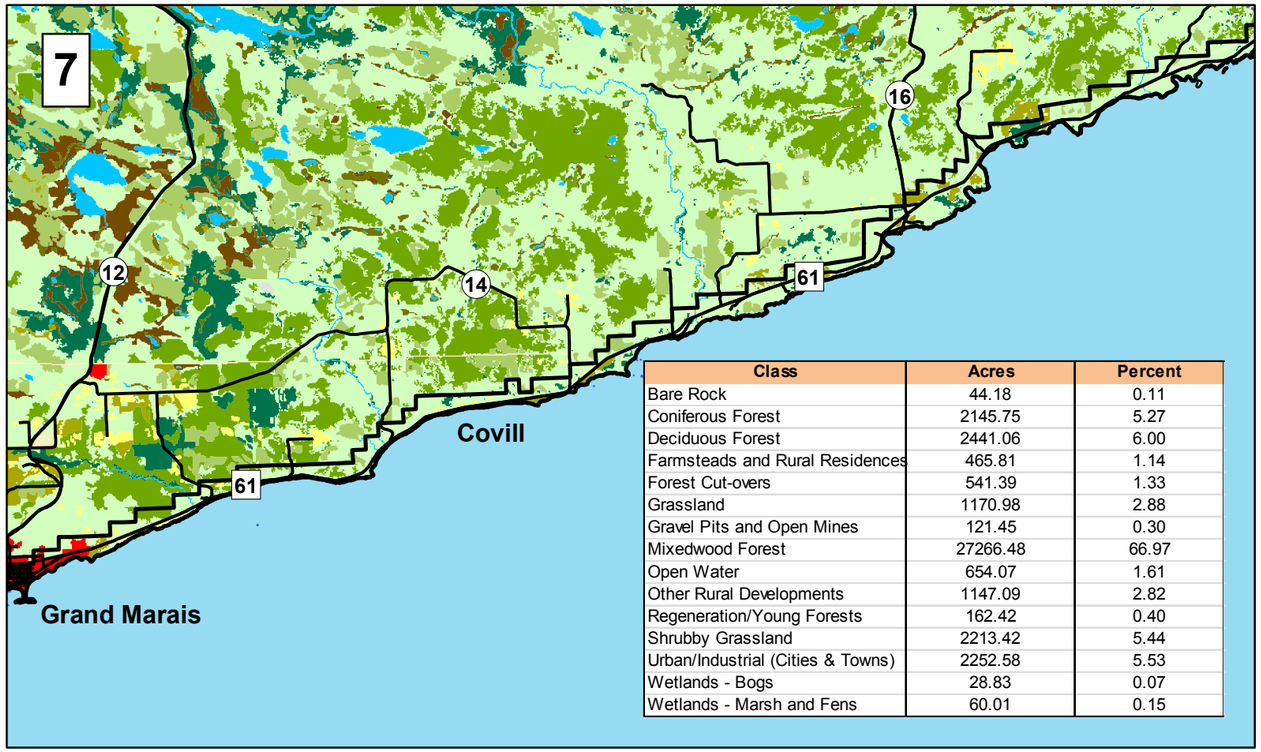
Major Watersheds

- Lake Superior
- Rainy River
- Major Roads
- Minor Civil Division (MCD's)

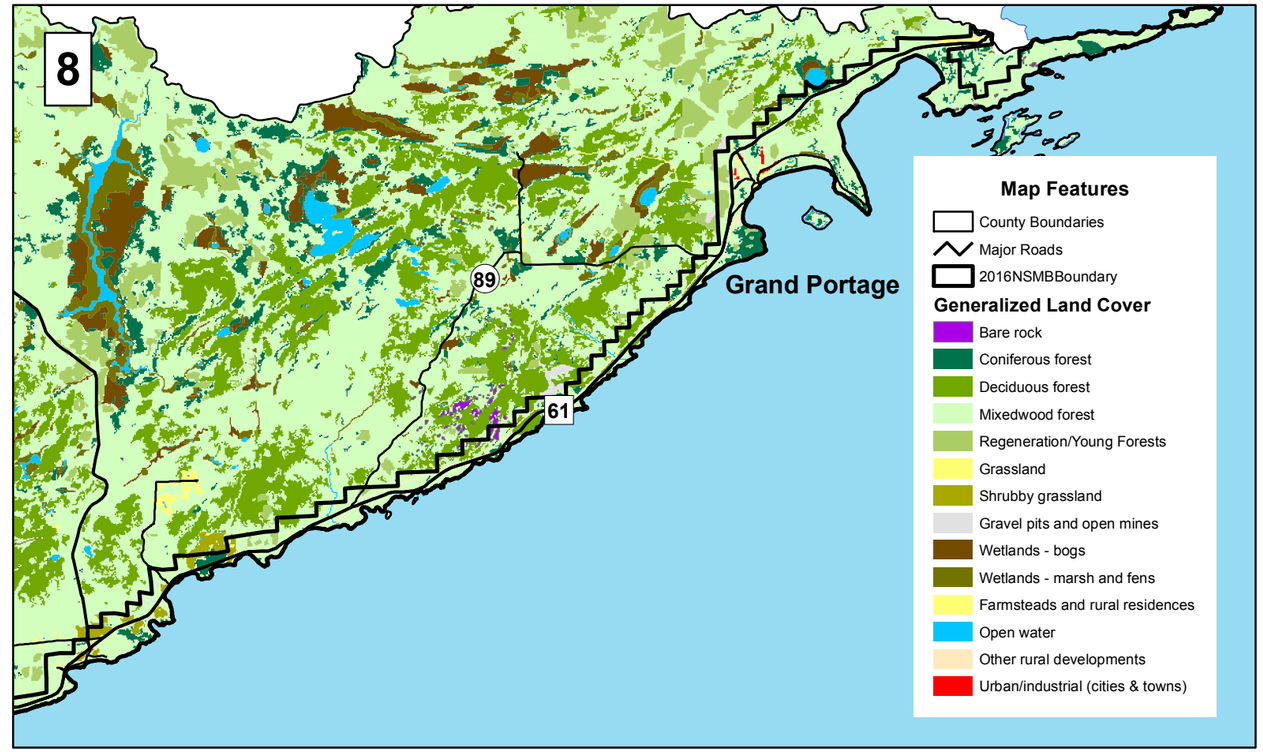
3 1.5 0 3 6 9 12
Miles

Map 1.2A Generalized Land Use/Land Cover East Section

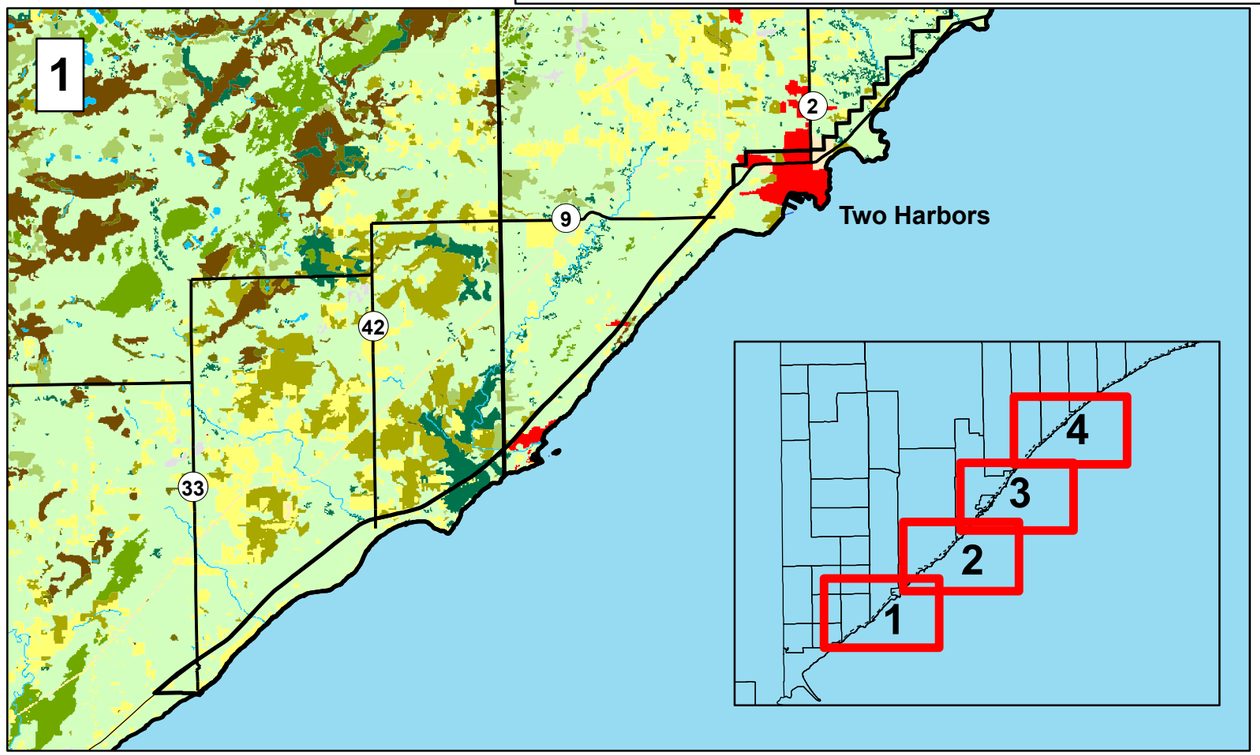


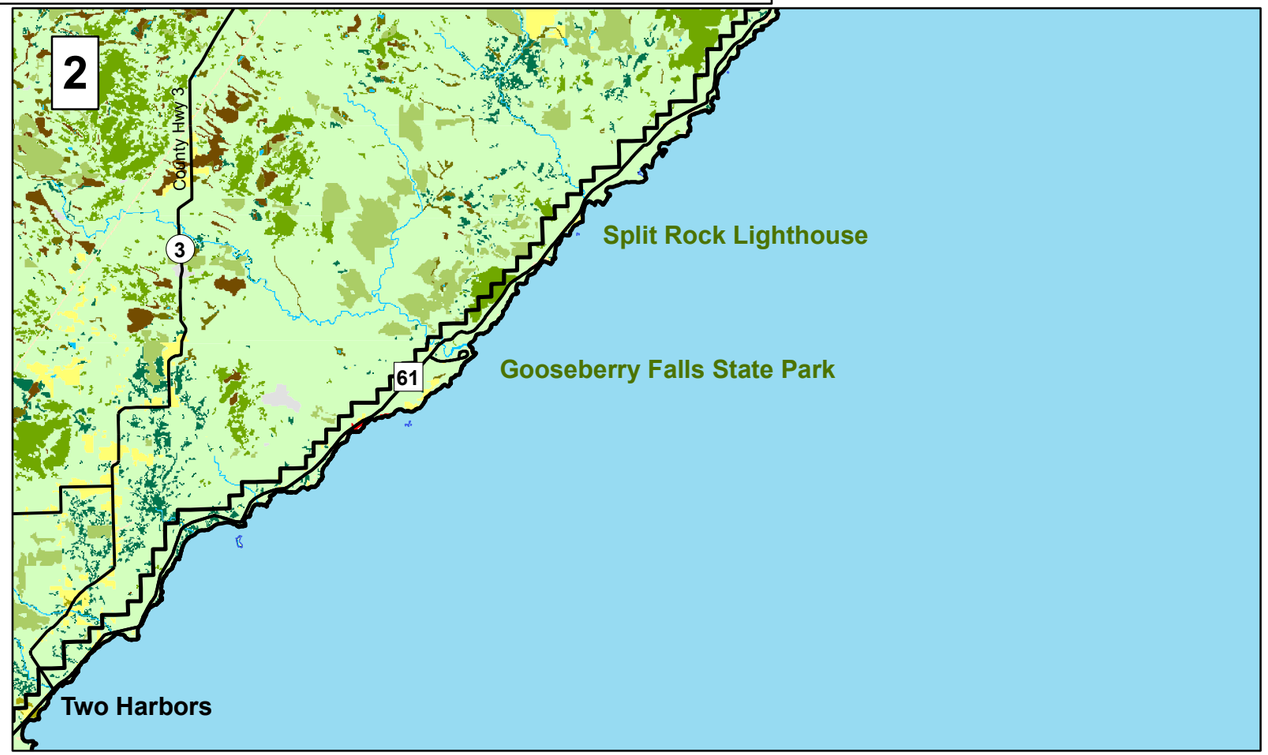


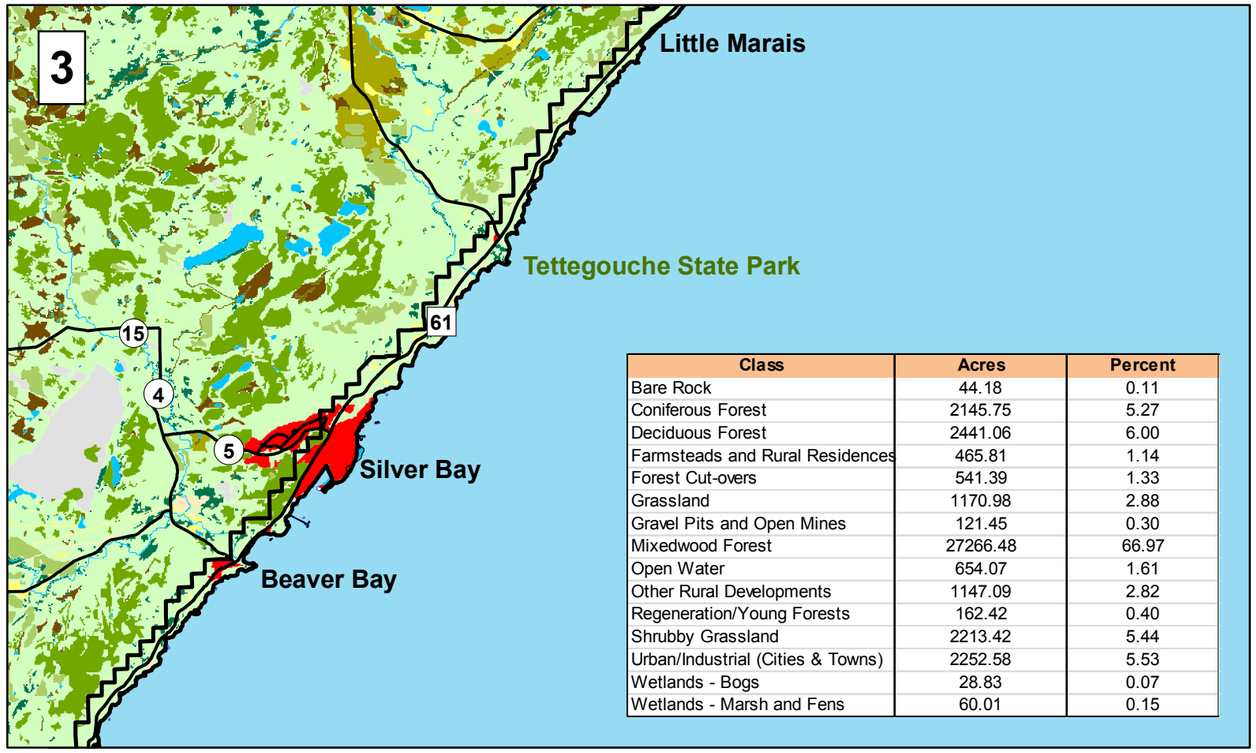
Class	Acres	Percent
Bare Rock	44.18	0.11
Coniferous Forest	2145.75	5.27
Deciduous Forest	2441.06	6.00
Farmsteads and Rural Residences	465.81	1.14
Forest Cut-overs	541.39	1.33
Grassland	1170.98	2.88
Gravel Pits and Open Mines	121.45	0.30
Mixedwood Forest	27266.48	66.97
Open Water	654.07	1.61
Other Rural Developments	1147.09	2.82
Regeneration/Young Forests	162.42	0.40
Shrubby Grassland	2213.42	5.44
Urban/Industrial (Cities & Towns)	2252.58	5.53
Wetlands - Bogs	28.83	0.07
Wetlands - Marsh and Fens	60.01	0.15



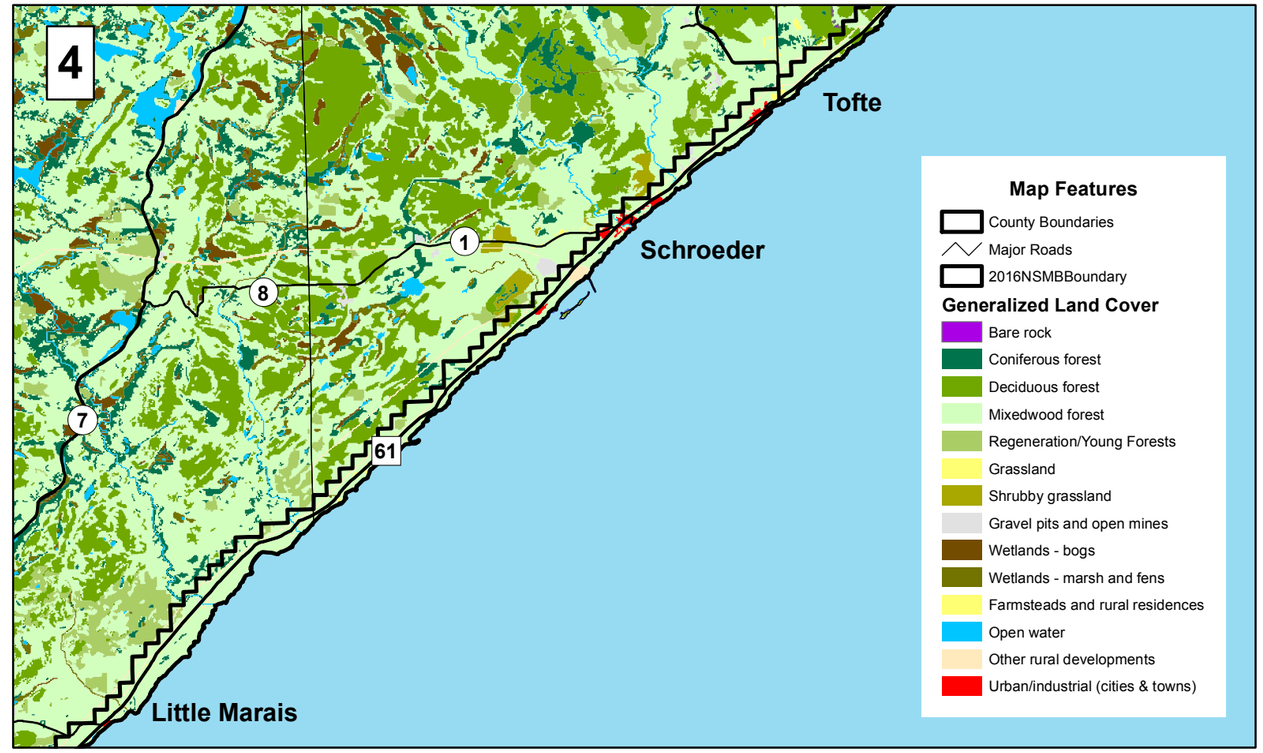
Map 1.2B Generalized Land Use/Land Cover West Section



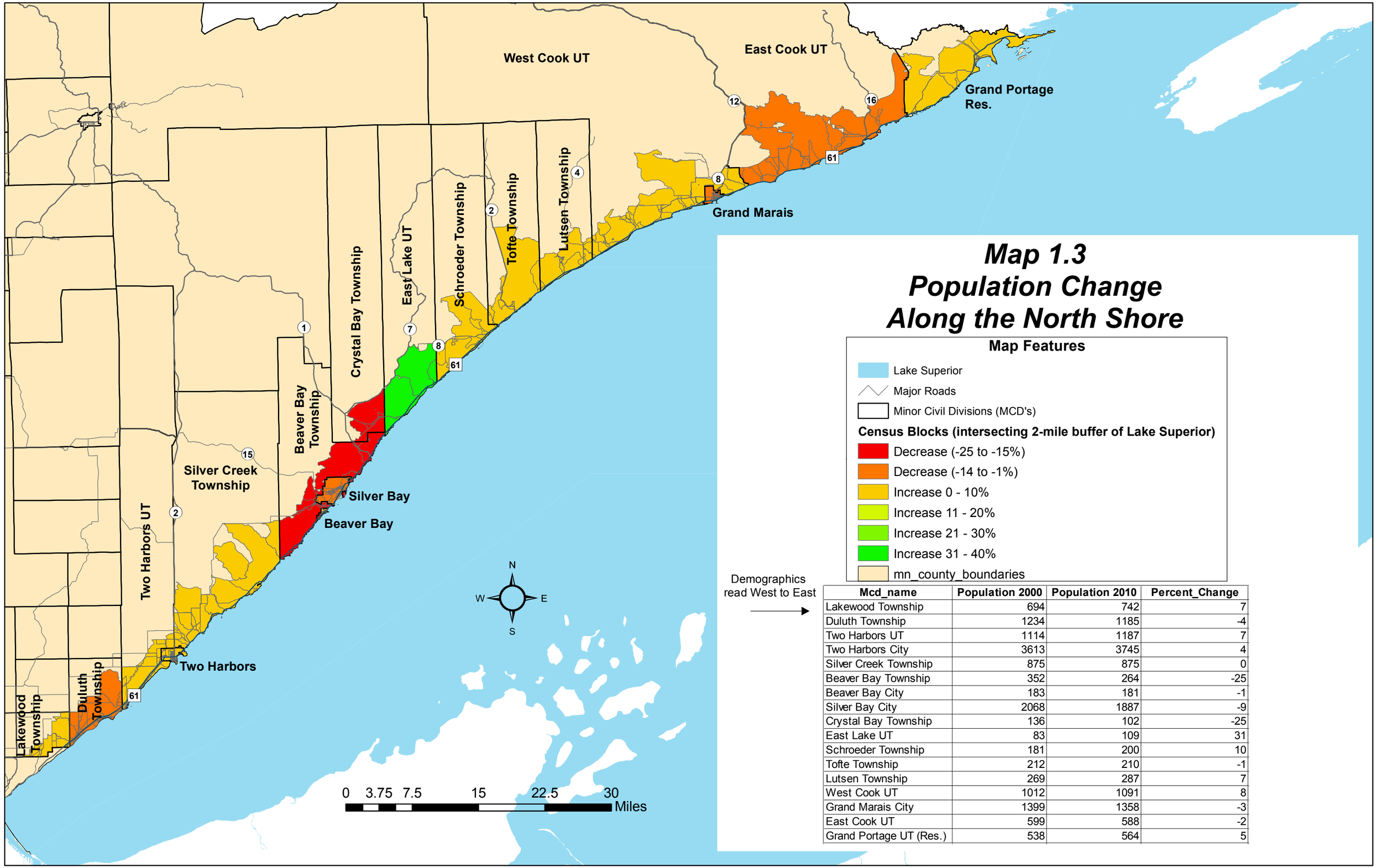




Class	Acres	Percent
Bare Rock	44.18	0.11
Coniferous Forest	2145.75	5.27
Deciduous Forest	2441.06	6.00
Farmsteads and Rural Residences	465.81	1.14
Forest Cut-overs	541.39	1.33
Grassland	1170.98	2.88
Gravel Pits and Open Mines	121.45	0.30
Mixedwood Forest	27266.48	66.97
Open Water	654.07	1.61
Other Rural Developments	1147.09	2.82
Regeneration/Young Forests	162.42	0.40
Shrubby Grassland	2213.42	5.44
Urban/Industrial (Cities & Towns)	2252.58	5.53
Wetlands - Bogs	28.83	0.07
Wetlands - Marsh and Fens	60.01	0.15



Map 1.3
Population Change
Along the North Shore



Map Features

- Lake Superior
- Major Roads
- Minor Civil Divisions (MCD's)

Census Blocks (intersecting 2-mile buffer of Lake Superior)

- Decrease (-25 to -15%)
- Decrease (-14 to -1%)
- Increase 0 - 10%
- Increase 11 - 20%
- Increase 21 - 30%
- Increase 31 - 40%
- mn_county_boundaries

Demographics read West to East →

Mcd_name	Population 2000	Population 2010	Percent_Change
Lakewood Township	694	742	7
Duluth Township	1234	1185	-4
Two Harbors UT	1114	1187	7
Two Harbors City	3613	3745	4
Silver Creek Township	875	875	0
Beaver Bay Township	352	264	-25
Beaver Bay City	183	181	-1
Silver Bay City	2068	1887	-9
Crystal Bay Township	136	102	-25
East Lake UT	83	109	31
Schroeder Township	181	200	10
Tofte Township	212	210	-1
Lutsen Township	269	287	7
West Cook UT	1012	1091	8
Grand Marais City	1399	1358	-3
East Cook UT	599	588	-2
Grand Portage UT (Res.)	538	564	5

Appendix B:
North Shore Management Plan
Survey and Results

North Shore Management Plan Survey

Section 1 - This section asks about your property on or near the North Shore of Lake Superior.

1. Does your property have shoreline frontage on Lake Superior? (Check only one response)

_____ Yes _____ No

2. Please indicate on the attached map the approximate location of your property.

3. Are you a seasonal or full-time resident on or near the North Shore?

_____ Seasonal _____ Full-time

Section 2 - This section asks about your general impressions of the North Shore of Lake Superior.

4. To what extent do you consider each of the following to be a problem on the North Shore of Lake Superior? (Circle the number that best describes how serious you find each issue.)

Issue	Not a problem	A slight problem	A moderate problem	A serious problem	A very serious problem	Don't know
Overall water quality	1	2	3	4	5	0
Lake water pollution due to faulty/substandard septic systems	1	2	3	4	5	0
Lake water pollution due to runoff from homes, cabins, resorts and other development	1	2	3	4	5	0
Lake water pollution due to run off from roads	1	2	3	4	5	0
Well water contamination due to failing septic systems	1	2	3	4	5	0
Pollution coming into the lake from elsewhere in the watershed	1	2	3	4	5	0
Lakeshore erosion	1	2	3	4	5	0
Vegetation removal by property owners	1	2	3	4	5	0
Declining fish habitat	1	2	3	4	5	0
Declining wildlife habitat	1	2	3	4	5	0
Declining aquatic bird habitat	1	2	3	4	5	0
Loss of wetland areas	1	2	3	4	5	0
Visual impact **from road** of development in the Highway 61 corridor	1	2	3	4	5	0
Visual impact **from lake** of development in the Highway 61 corridor	1	2	3	4	5	0
Visual impact of wireless communications facilities (towers)	1	2	3	4	5	0
Development along the ridgeline	1	2	3	4	5	0

Question 4 Continued.

Issue	Not a problem	A slight problem	A moderate problem	A serious problem	A very serious problem	Don't know

Safety in relation to the number of vehicle access points along Highway 61	1	2	3	4	5	0
Amount of commercial signage along the Highway 61 corridor	1	2	3	4	5	0
General appearance of commercial signage along the Highway 61 corridor	1	2	3	4	5	0
Other – Please describe						

5. For the problems in Question 4 that you considered to be moderate, serious, or very serious, provide more details below about each problem(s):

Problem:_____

Problem:_____

Problem:_____

(If more space is needed, attach a separate page)

6. Over the past five years, would you say the overall quality of life along the North Shore of Lake Superior is: (Check one)

_____ Getting better
_____ About the same
_____ Getting worse

7. Over the past five years, what, if anything, has become particularly better about living on the North Shore?

_____

_____

8. Over the past five years, what, if anything, has become particularly worse about living on the North Shore?

_____

_____

9. Write several words or phrases that express why you value living on or near the North Shore of Lake Superior.

_____

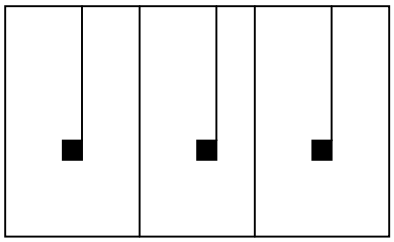
_____

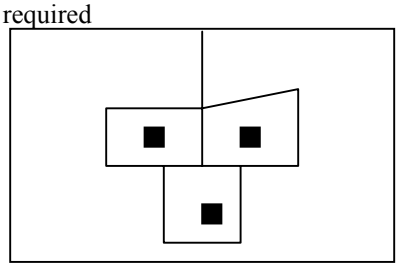
10. How could the quality of life be improved on the North Shore?

_____

_____

11. The following is a list of current and possible future development scenarios along the North Shore of Lake Superior? (Circle the number that best describes your support of each development pattern.)

Development Patterns	Strongly support	Support	Neither support nor oppose	Oppose	Strongly oppose
Commercial or residential multiple unit/high density development is an appropriate type of development anywhere on the North Shore as long as adequate wastewater treatment can be provided	1	2	3	4	5
Commercial or residential multiple unit/high density development is an appropriate type of development only in areas near existing high-density residential and commercial areas	1	2	3	4	5
Commercial or residential multiple unit/high density development in some parts of Lake Superior is appropriate only if this would be offset by other parts of the lakeshore remaining undeveloped or developed in lower densities than currently permitted	1	2	3	4	5
Linear low-density residential development along the lakeshore with similar lot sizes and minimum lot frontages 	1	2	3	4	5
Development Patterns	**Strongly support**	**Support**	**Neither support nor oppose**	**Oppose**	**Strongly oppose**

Residential growth based on a number of units per acre with less emphasis on minimum lot size and a smaller minimum frontage required 	1	2	3	4	5
Maintain the current level of public land on Lake Superior	1	2	3	4	5
Increase the amount of lakeshore in public ownership	1	2	3	4	5
Encourage private preservation of open space	1	2	3	4	5

12. What are your feelings towards the following action steps that the NSMB could pursue in addressing particular issues along the North Shore? For example, the NSMB recently provided guiding principles on wireless tower development to local units of government. Similar activities could be done for a variety of issues.

Action Steps	Strongly support	Support	Neither support nor oppose	Oppose	Strongly oppose
Guidelines for ridgeline development	1	2	3	4	5
Guidelines for signage in the Highway 61 corridor	1	2	3	4	5
Guidelines for using zoning to encourage development in areas already served by utilities and wastewater systems	1	2	3	4	5

Please describe any other issues you would like to see the NSMB address in the near future?_____

_____

_____

_____

13. If necessary, please expand upon your thoughts on how future growth should be managed along North Shore.

_____

_____

_____

14. Sewage disposal is an issue currently undergoing a great deal of study along the North Shore. What do you believe is the best long-term solution for dealing with this issue? (You may check more than one)

___ Conventional individual lot on-site systems are adequate to address future wastewater needs of lower-density areas

____ On-site systems are adequate, but the newest types of technology should be used.

____ As much as possible, groups of residences should be part of a cluster system.

____ Development of sewer lines to serve higher-density areas should be examined.
____ Development of sewer lines along the entire North Shore should be investigated.
____ Composting Systems
____ Depending on the site and situation, all of these options may be appropriate. There is not one solution to the question of sewage disposal on the North Shore.
____ No opinion/Not familiar enough with these options to make an informed choice.

Comments:_____

_____

Thank you for your input.

The revision of the North Shore Management Plan is funded in part through the following sources:

- ***Shoreland Grant from the Minnesota Board of Water and Soil Resources***
- ***Grant from the Minnesota Department of Natural Resources-Waters and Minnesota's Lake Superior Coastal Program through the Coastal Zone Management program administered by the National Oceanographic and Atmospheric Administration through the Office of Ocean and Coastal Resource Management.***
- ***Member governments of the North Shore Management Board have also assisting in funding the revision of the North Shore Management Plan.***

The plan is expected to be completed in Summer 2003.

Please return survey in the enclosed envelope.

Mail to:

Arrowhead Regional Development Commission (ARDC)
221 W. First Street
Duluth, MN 55802

- **Question 1:** Does your property have shore line frontage on Lake Superior?

Response	Total	Percent
Yes	77	37.9
No	121	59.6
Missing	5	2.5
Totals	**203**	**100%**

- **Question 2:** Please indicate the approximate location of your property:

Response	Total	Percent
Duluth Area	25	12.3
Knife River/Two Harbors	33	16.3
Silver Bay/Beaver Bay	39	19.2
Lutsen/Tofte/Schroeder	54	26.6
Grand Marais/Grand Portage	45	22.2
Missing	7	3.5
Totals	**203**	**100%**

- **Question 3:** Are you a seasonal or full-time resident near the North Shore?

Response	Total	Percent
Seasonal	32	15.8
Full-Time	162	79.8
Missing	9	4.5
Totals	**203**	**100%**

- **Question 4:** To what extent do you consider each of the following to be a problem on the North Shore of Lake Superior?

	Not a problem	Slight	Moderate	Serious	Very serious	Don't know	Missing	Total
Overall water quality	34.0	22.7	22.2	10.3	5.9	4.4	0.5	203
Lake water pollution due to faulty/substandard septic system	15.8%	17.7	25.6	14.8	15.8	9.4	1.0	203
Lake water pollution due to runoff from homes, cabins, resorts.	19.2	21.7	26.6	15.3	9.4	7.4	0.5	203
Lake water pollution due to run off from roads	18.7	26.1	24.1	14.8	5.9	7.9	2.5	203
Well water contamination due to failing septics	21.7	19.7	17.2	8.4	10.3	20.2	2.5	203
Pollution entering lake from watershed	15.3	19.7	22.2	9.9	10.8	21.2	1.0	203
Lakeshore erosion	19.2	27.6	22.2	17.7	6.9	4.9	1.5	203
Vegetation removal by property owners	25.1	17.7	22.7	14.8	7.9	7.9	3.9	203
Declining fish habitat	16.3	17.2	22.7	19.7	9.9	11.8	2.5	203
Declining wildlife habitat	22.2	18.7	22.7	13.8	10.8	8.9	3.0	203
Declining aquatic bird habitat	20.7	19.7	20.7	15.8	9.9	10.8	2.5	203
Loss of wetland areas	25.1	14.8	13.8	16.7	15.8	11.3	3.0	203
Visual impact from road of development of TH 61 corridor	24.6	19.7	23.2	15.3	14.3	2.0	1.0	203
Visual impact from lake of development of TH 61 corridor	24.6	18.7	15.8	14.8	10.8	13.3	2.0	203
Visual impact of wireless communications facilities	41.9	21.7	12.8	9.4	9.9	3.9	0.5	203
Development along the ridgeline	28.6	20.2	18.2	11.3	10.8	8.9	2.0	203
Safety in relation to the number of vehicle access points along TH 61	16.3	18.2	25.6	24.1	12.3	2.5	1.0	203
Amount of commercial signage along TH 61	22.7	22.7	25.1	15.3	12.8	1.0	0.5	203
General appearance of commercial signage along TH 61	24.1	23.6	25.6	12.8	9.9	1.0	3.0	203

- **Question 5:** For problems in question 4 that you considered to be moderate, serious, or very serious, provide more details below about each problem(s):

- Business Entrances/Betty's Pies
- Pollution
- Unsafe 61
- No Cell Phone Towers
- Multiple drive entrances
- Highway Access
- Betty's Pies/entrance
- Small shoulders
- Water quality
- Reality signage unattractive
- Signs should not cause distraction
- Get rid of signs
- Exhaust from MN Power
- More homes/driveways
- Wireless towers
- Wetlands
- Signs need repainting
- Signage
- Duluth raw sewage
- Widen Hwy 61
- Overbuilt condos/homes
- Water pollution
- More hwy enforcement
- Septic regulations need revisions
- Spring runoff from road salt
- Too much truck traffic
- Stop development
- Visual impacts
- Road chemicals
- Turn lanes
- Visual effects
- Only one rest area
- Lake pollution
- Sewer system needed
- Water pollution
- TH 61 is dangerous
- Mercury in water
- Duluth needs waste improvements
- Hwy 61 accidents
- Towers/ridge development
- Silt Buildup
- Over development
- Declining habitat
- Air Quality
- Scenic easement should be est.
- Declining bird habitat
- Dense development
- Vegetation removal
- Litter
- Hwy 61 safety
- Low cost housing
- Septic pollution
- Ridgeline Development eyesore
- Driveways on corners
- All suburban sprawl issues apply
- Communication towers not necessary
- Pollution of well water
- Too many signs
- Septic systems are major problem
- Right of way needs mowing
- Development along ridge
- Too many signs
- Development problems
- Erosion
- Clean right of way
- Clean air
- Protect ground water
- Marked increase in number and size of lakeshore lots
- Highway salting
- Better septic systems
- Water quality
- Vehicle access
- Lakeshore erosion
- Road salt kills vegetation
- Truck traffic-should be more lake shipping
- Commercial signage
- Billboards
- Declining habitats
- Lakes with public access should be stocked
- Proximity of RR and Superior St
- Septics are failing
- Vehicle access at Betty's Pies
- Mound septic systems
- Getting too commercial
- Storm water erosion
- Size and nature of signs
- Power plant smog
- Job prospects
- Development is advantageous to economy
- Tighter septic rules
- Less towers
- Visual pollution
- Row houses
- Ship inspections
- Truck Traffic
- Ugly Signage
- Erosion
- Runoff
- Access to TH 61 dangerous
- Billboards
- Resorts/septics
- More traffic
- Traffic
- Loss of trees
- More passing lanes
- Water quality
- No comm. signage
- Commercialization
- Signage too large
- Sprawl
- Less disturbance for spawning fish
- Sewer runoff in Duluth
- Fish decline
- Road conditions
- Visual impacts form lake
- Not conforming to setback distance
- Too many signs
- Highway 61 improvements needed
- Continual development/wildlife
- Too dense
- Duluth pollutes water
- Light pollution
- Visual
- Habitat
- Ridge line development
- Tourists inattentive
- Community sewer needed
- No commercial signage necessary
- Less towers
- Highway Drainage
- Decline in fishing
- No more signs
- Commercial development
- Lax supervision on commercial compliance
- Loss of trees
- Poor development
- Quality of life
- Trashy areas
- Little public input on development

- **Question 6:** Over the past five years, would you say the overall quality of life along the North Shore of Lake Superior is:

Response	Total	Percent
Getting better	37	18.2
About the same	90	44.3
Getting worse	55	27.1
Missing	21	20.3
Totals	**203**	**100%**

- **Question 7:** Over the past five years, what, if anything, has become particularly better about living on the North Shore?

- Fixed the highway
- large development
- Improved TH 61
- Highway Improvement
- More entertainment/food
- Things are the same
- Income has increased
- Not as much litter
- TV reception satellite
- Property value
- Better accessibility/more shopping eating choices
- More public access
- Utilities/road
- Climate/ people
- Climate/ people
- Better hiking/ski
- More wildlife
- Road improvements
- Road improvements
- Picnic areas, rest areas
- Nothing
- More accessibility/facilities
- Better road
- New golf course
- Phone/internet
- Road/phone
- Better roads
- Organized efforts to protect environment
- Wilderness outlook
- Environmental conscious
- Refuge at Silver Bay
- Wildlife
- Road improvements
- Area has escaped sprawl
- Tasteful commercial establishments
- Development of trail
- Emergency services
- Shorter driving time
- Economy improving
- Lake protection
- Old building replacement
- Road by Beaver Bay
- More culture/restaurants
- Gitchi Gami Trail/ sewer lines along shore
- Home grown businesses
- Rest areas
- Development
- Nothing
- Emergency service
- Exhausted quality of community
- Highway upgrade
- DSS lets remote homeowners join the rest of the world
- Access to better stores
- Awareness of environmental issues
- Litter in TH
- New school facilities
- DSS TV and internet access
- Less time to get to Duluth
- Housing/road
- Road safety
- Road conditions
- Access to technology
- Proposed sewer good
- safety of highway/Castle Danger septic system
- Access to facilities
- TH 61Safety
- Better restaurants
- Medical service
- Tourists
- Recreational improvements
- Better roads/septic systems

- **Question 8:** Over the past five years, what, if anything, has become particularly worse about living on the North Shore?

- Traffic
- Rising taxes
- Truck Traffic
- Sewer plant smell at BP
- Increase Traffic
- Too much traffic/development
- Increased year round residents/push for commercial development
- Too much government control
- Water quality
- Pollution from septics
- Jet ski/loud boats
- Population base is changing
- Over development
- TH 61
- Unfriendly neighbors
- Commercial development
- Roads
- Loss of rustic feel
- Population loss
- Too many people
- Large development
- 4 lane highway needed
- Resort and Condo Building
- TH 61 traffic
- Traffic
- Pollution/septics
- Disrespectful people
- Bad drivers
- More traffic
- Too many environmentalists
- Hwy 61 traffic
- Limited retail/grocery
- Too much truck traffic
- development/traffic
- So few employees
- Proposed McQuade harbor
- Poor road
- Visual development
- Traffic speed
- Trucks
- Speeding trucks
- Water in GM marina is foul
- More congestion
- Traffic density
- Taxation
- Rumble strips
- Increasing housing
- High density development units
- Threat of Wal-Mart
- Development of inland lakes
- Urban sprawl
- More traffic
- Rising property values
- More commercial sites
- urban sprawl
- Taxes too high
- Special event traffic control
- People trying to develop small pieces of property
- Route TH 61 around Two Harbors
- Outsiders raising property values
- Unbalance between older and younger
- Development on lake side of 61
- Outsiders restricting recreational and business use of our area
- More people/more development
- Commercial development
- Traffic/snow removal
- Crime not knowing neighbors
- Hwy 61/ limited cell coverage
- Taxes/regulations/truck traffic
- DNR bad shore resource protection
- Shopping/grocery
- Lack of snow
- Efforts of some to strangle development
- light pollution from Superior Shores
- Tourism
- Slow pace of 61
- Traffic
- Signage/condos
- Trespassers on property
- Traffic density
- Taxation
- Taxes/rumble strips
- Less wild forest
- Congestion/land prices
- Two Harbors is an eyesore
- Traffic noise/ wave riders
- Increased bikers/ inline skaters
- Lack of zoning
- Traffic in summer
- More congested
- Real estate prices/ traffic
- ATV's
- High truck traffic
- Limited education opportunities
- Scattered commercial development
- Increase in pollution
- Not enough jobs/affordable housing
- More people
- Lots of development pressure
- Very limited use at State Parks
- Schroeder has lost several businesses

- **Question 9:** Write several words or phrases that express why you value living on or near the North Shore of Lake Superior:

- safe/clean
- proximity of wilderness
- Privacy
- Climate, public lands, recreation
- Climate
- Beauty
- Quiet/Beauty
- Beauty
- Everything you need/ good life/ good recreation
- The Lake
- Beauty/safety
- Beauty/Climate
- Good EMT services
- Clean/quiet
- Heritage
- Climate
- Privacy/quiet
- Lake/wilderness
- Unique area
- Lake view
- Clean air/water
- Lake
- Beauty/Weather
- Lake/nature
- Community spirit
- Nature/beauty
- Relax by shore
- Lake Superior/Climate
- Rural/quiet
- Scenic/Climate
- Born here
- Simple/quiet
- Wildlife/Lake Superior
- Quiet/quaint
- Charm
- Calming
- Character of the land
- Lake Superior/wilderness
- Beauty/nature
- Quality of air and water
- Beauty/solitude
- Rural/beautiful
- Trails/ forest/ climate
- Peaceful/Beauty
- Clean air
- Remote
- Immersion on the natural world
- Better then anywhere in Midwest
- Pristine/majestic
- Big water
- Climate
- Quiet
- Good fishing
- Climate
- Employment/water/air
- Open space
- Beauty/lake
- Forests
- Free of big city
- Beauty/clean air
- Kid can play outside without my worrying
- Quality of life/neighbors
- Get away
- Peaceful/good community
- Beauty/peaceful
- Quiet/safe/beauty
- Lack of pollution
- Access to lake
- Shores/woodlands
- Climate
- Clean
- Clean air
- Rural
- Privacy

➢ **Question 10:** How could the quality of life be improved on the North Shore?

- Discourage large-scale development
- adequate wages, affordable housing
- Public Transit
- Control commercial development/trucks
- Development rules
- Affordable Housing
- Less people/development
- Control development
- I don't think it can be
- More full time positions
- Keeping it clean
- Addition of a Marina
- Hospital care between Two Harbors and Grand Marais
- Water Quality/sewer system
- Promote more family values
- Need four-lane traffic
- More animal habitat
- Preservation
- Traffic/Hwy 61
- Build four lanes
- A richer economy
- Lower speeds
- Limit access to private shoreline by resort guests
- four-lane highway needed
- Traffic on 61
- Spraying for bugs
- Protection of wilderness
- Enforcement of building codes
- Public sewage/expanding highway
- Education
- Better health care facilities
- Bug control
- Control truck traffic
- Roads/bug control
- Eliminate truck traffic
- Less traffic/less signage
- Limit development
- Better shops/less travel
- Wages/diversity
- Stop development
- Limit development/signage/erosion
- Nicer picnic sites
- Minimize business development
- More conifer trees needed
- More cell towers needed
- More boat launches
- More internet service/cell service
- Slow traffic on London Road
- Service provided to residents instead of visitors
- Minimize high impact development/off road vehicles
- Reduce commercial venues
- Better medical facilities
- Schools
- Better communications
- Lack of young middle class
- Slow down
- Too many tourists
- Better car phones
- Cease development
- Uniform zoning
- traffic management/ job opportunities
- Hwy 61 upgrade
- More jobs for locals
- Selective to new development
- Less development
- Shopping/mass transit
- Improve highway
- Better crowd control during events
- Towers for cell phone coverage
- Affordable housing
- limit growth
- Build a sewer line
- Limit uncontrolled development
- Individual responsibility for septic systems
- Keep businesses away from lake side
- More sanitary districts
- Preserve green space
- Shore in Hovland/eating establishments
- More attention paid to sustainability
- Educate people about private property
- Control growth/traffic
- Truck traffic
- Keep a natural environment
- Close Taconite Harbor Power Plant
- Shoreline development be cautious
- Reroute truck traffic
- Make property owners upgrade own septic systems/ keep developers out
- Restrict motor craft/ ATV's
- Another safe harbor
- knit together diverse elements
- Teach people how to respect land more
- Better traffic control
- Stronger enforcement of zoning laws
- Restrictions on personal development
- Traffic/enforcement
- Get through traffic off hwy 61
- Sewer lines from Two Harbors to Silver Creek
- less population over ridge
- less government intervention
- Finish up the highway
- Limit type of vehicles on TH 61; less trucks
- Better planning and zoning

➢ Question 10 (continued)

- Control growth/traffic
- Truck traffic
- Keep a natural environment
- Preservation
- More school money
- Less cities immigration
- More environmental studies
- Better land management by DNR
- More sustainable growth
- No more commercial/high density development
- More rest-stops w/ public restrooms
- Better forest management
- Thoughtful land use planning
- Lack of employment
- Find alternative energy source
- Too many people from the Cities
- Do not allow urban sprawl
- Water/sewer
- Emergency services
- Restrict commercial development
- Improve water quality
- Education for property owners
- Preservation
- Keep public and private lands available
- More stores/24-hour food service
- Improve TH 61
- Signage
- Everyday needs of residents need to grow w/ development
- Regulate development

➢ **Question 11:** Please describe your support of each development scenarios along the North Shore of Lake Superior:

	Strongly Support	Support	Neutral	Oppose	Strongly Oppose	Missing	Total
Commercial or residential multiple unit/high density development is appropriate anywhere on the North Shore as long as adequate wastewater treatment can be provided	5.9	12.8	14.3	27.6	36.0	3.5	203
Commercial or residential multiple unit/high density development is appropriate only in areas near existing high-density residential and commercial areas	12.3	29.1%	26.1	13.3	15.8	3.4	203
Commercial or residential multiple unit/high density development is appropriate only if this would be offset by other parts of the lakeshore remaining undeveloped	19.7	22.2	23.6	17.6%	11.5%	3.4	203
Linear low-density residential development along the lakeshore with similar lot sizes and minimum lot frontages	13.3	26.6	26.6	15.8	12.3	5.4	203
Residential growth based on a number of units per acre with less emphasis on minimum lot size and a smaller minimum frontage required	7.9	16.3	27.1	24.1	13.8	10.9	203
Maintain the current level of public land on Lake Superior	33.5	36.0	13.3	4.9	2.0	10.3	203
Increase the amount of lakeshore in public ownership	28.1	16.3	23.6	15.8	10.8	5.4	203
Encourage private preservation of open space	42.9	27.1	14.8	3.0	3.4	8.9	203

➢ **Question 12:** What are your feelings towards the following action steps that the NSMB could pursue in addressing particular issues along the North Shore?

	Strongly Support	Support	Neutral	Oppose	Strongly Oppose	Missing	Total
Guidelines for ridgeline development	40.9	30.5	13.3	6.9	2.0	6.4	203
Guidelines for signage in the TH 61 corridor	45.3	33.0	9.9	4.9	0.0	6.9	203
Guidelines for using zoning to encourage development in areas already served by utilities and wastewater	30.5	35.0	16.3	6.4	1.5	10.3	203

- **Question 12a:** Please describe any other issues you would like to see the NSMB address in the near future:

  - Practice what you preach
  - Loss of control if zoning around septics
  - Road construction hours
  - Energy efficient homes
  - Stream habitat
  - Septic and well checks
  - More passing lanes
  - User tax/sewer line
  - Hwy 61 needs improvements
  - Sewage issue/waste management
  - Truck regulations
  - Composting toilets
  - Low income housing
  - Sprawl
  - Restriction on campers/passing
  - Control growth/traffic
  - Bike trail needed from T.H. to Duluth
  - Uniform densities/lot sizes
  - Lack of quality groundwater
  - Emergency services
  - Support sewer line
  - Regulations need enforcement
  - Keep cleaning up junk areas
  - Light pollution
  - Emergency service
  - Protect property owners rights
  - Economic development/Hwy 61
  - New sewer will support small lot sizes
  - Address light pollution
  - Planned access roads before development
  - Low paying jobs
  - Private preservation through incentives
  - Strict guidelines
  - More school money
  - Discharge into lake from private businesses
  - Air quality on local system
  - Wireless towers

- **Question 13:** If necessary, please expand upon your thoughts on how future growth should be managed along the North Shore:

- wilderness/less development & population
- Personal Docks
- Citizen involvement in future development
- Roads in conjunction with development
- As pristine as possible
- Less development
- Preserve the beauty
- Maintain recycling program
- More public input
- Manage future growth
- Maintain uniqueness/encourage variety activities
- Growth must stop
- User tax/sewer line
- NSMB adds another layer of bureaucracy
- Cook Co. zoning
- Mound systems fail
- Preservation
- Local government involvement
- New arrivals are the problem
- Maintain one acre lot size
- Development is a privilege
- Try to keep growth around cities
- Each community should work on their own plan for development
- Growth destroying uniqueness
- Lots of public and private land
- Sustainable growth
- Control density
- Limited commercial opportunities
- Endless growth is unsustainable
- Too much service based jobs; need mfg.
- Don't allow hungry developers to ruin residents lives
- Limit growth to individual home ownership
- Plenty of roads and trails already exist/no more
- Public consensus to plan and develop
- All development needs to be looked at from the lake too
- Expansion will be detrimental
- Protect lakeshore
- No commercial development
- Access to individual driveways difficult
- Government purchased land
- Use common sense
- Larger lot sizes for new construction
- Less government
- Preservation
- Less is more
- Too many large billboards
- Locally
- Limit growth
- The trail system should become one multi-use trail
- Adapt zoning laws
- NSMB more proactive in guiding communities towards best management practices
- People to build on smaller lots
- NSMB code should prevail throughout North Shore
- Limit commercial development aimed at tourism
- Restrict growth
- No Wal-Mart
- Cluster growth along existing housing

- **Question 14:** What do you believe is the best long-term solution for dealing with sewage disposal? (Respondents could select more than one option)

Option	Frequency
Depending on the site and situation, all of these options may be appropriate	**103**
Development of sewer lines to serve higher-density areas should be examined	**129**
On-site systems are adequate, but the newest types of technology should be used	**70**
As much as possible, groups of residences should be part of a cluster system	**156**
Composting Systems	**42**
Conventional individual lot on-site systems are adequate to address future wastewater needs of lower-density areas	**167**
Development of sewer lines along the entire North Shore should be investigated	**32**
No opinion	**14**

Appendix C:
Operating Procedures

NORTH SHORE MANAGEMENT BOARD
CAC, TAC, Local Land Use Staff, and NSMB Staff
OPERATING PROCEDURES

CITIZENS ADVISORY COMMITTEE

NOTE: The role of the Citizens Advisory Committee will be determined by the budget available to the NSMB and the yearly work plan they choose to undertake. The following procedures for the CAC are based upon the assumption that there is funding available for them to meet on a semi-regular basis.

GOALS AND OBJECTIVES

The objectives of this Committee are:

(1) Act as a coordinating body for planning activities as directed by NSMB.

(2) Keep- abreast of resource uses and issues associated with the North Shore.

(3) Foster and facilitate citizen input on matters that have potential impacts for the North Shore of Lake Superior.

(4) Serve as a liaison between the NSMB and member units of government. The CAC is responsible for assisting NSMB members in keeping local units of government informed of NSMB activities.

ELECTION OF OFFICERS:

Chair: The Chair of the Committee shall be elected by the membership at the January Citizens Advisory Committee meeting. The Chair's term shall be two years. If the Chair needs to resign, the Vice-chair will assume the remainder of the Chair's term and then may serve his/her two-year term starting the following January.

Vice Chair: The vice chair will be elected at the same time as the chair and will serve for a 2 year term.

TERMS OF SERVICE

CAC Appointments: All terms shall be for a period of three (3) years, with approximately one-third of the members being elected each year. A full membership shall consist of 14 members.

Representation: The Citizens Advisory Committee will try to include members to make up a broad representation of public and private interest groups.

An ad hoc review committee will be established at the direction of the NSMB for the purpose of reviewing, recruiting, and recommending new applicants. Also, at the request of the NSMB, any vacancies on the committee will be advertised in the local newspapers. After new members are appointed, a press release will be mailed out notifying the public of the new members.

COMMITTEE OPERATIONS

Meeting Schedule and Notices: This Committee shall meet quarterly, or as necessary, to complete tasks as assigned by the North Shore Management Board. Regular meetings will be the first Thursday of each month and the Chair shall direct staff to prepare and send out meeting notices one week prior to the meeting indicating date, time, place, etc.

Minutes: Complete and accurate minutes from each meeting of this Committee shall be maintained. Copies of said minutes shall be transmitted not later than five (5) days prior to the next regular meeting to each member of this Committee by mailing a copy of such minutes to each of said members.

Meeting Quorum: A majority of the membership of this Committee shall constitute a quorum at a business meeting for the purpose of carrying on the activities of this Committee.

Decision Making: Any act or other business of this Committee may be enacted, constituted or approved by a majority of the committee members present at any meeting Robert's Rules of Order (Revised) shall govern the procedures of meetings of the Committee and in all matters not otherwise stated. If a meeting is opened with a quorum, it shall remain so even if the quorum is lost during the meeting.

Reports, Recommendations: A member of the CAC (which rotates monthly) should report the committee's progress on planning activities and other matters as appropriate to the North Shore Management Board. **When the CAC feels an issue should be addressed by the NSMB, the following procedure shall be followed**:

1) **A resolution supporting the action is passed by the CAC.**
2) **Staff prepares a brief report for the NSMB that outlines the issue and details possible ways to address the issue.**
3) **After approving the report, the CAC transmits the report to the NSMB for consideration.**
4) **Any further action on the issue shall be directed by the NSMB.**

Treatment of Absences: In the event a member of the Committee is absent for three consecutive meetings, the Staff of the Committee shall report such absences to the Chair of the Committee who shall cause the matter of such absences to be placed upon the agenda for the next meeting of the Committee for such action as the Committee deems advisable. Committee members should contact staff when they cannot attend a meeting. Excused absences will be listed in the minutes and indicated on the sign up sheet for that particular meeting. Three consecutive absences without good cause (as determined by the Committee) shall be sufficient reason for the Committee to find a vacancy exists in the term and membership held by the member involved.

Yearly Work Plan: In October of each calendar year, a group of Citizens Advisory Committee members and NSMB shall meet to form a work plan for the upcoming calendar year. This plan shall be presented to the NSMB at their October meeting.

TECHNICAL ADVISORY COMMITTEE

GOALS AND OBJECTIVES

The objectives of this Committee are:

(1) Provide technical assistance, as needed, to the NSMB.

(2) Facilitate an ongoing dialogue on issues that arise that are of importance to the North Shore of Lake Superior.

STRUCTURE OF COMMITTEE:

REPRESENTATION: Members of the committee shall consist of local land use and zoning officials from member units of governments. In addition, state and federal agency personnel who have responsibilities related to land use on the North Shore shall be invited to participate.

COMMITTEE OPERATIONS

MEETING SCHEDULES AND NOTICES: This Committee shall meet twice per year, or as necessary in order to facilitate discussion and ensure the greatest degree of cooperation and consistency possible in North Shore land use policies.. Meetings shall generally be held on the second Thursday in March and September. Staff shall prepare and send out meeting notices one week prior to the meeting indicating date, time, place, etc.

MINUTES: Complete and accurate minutes from each regular meeting of this Committee shall be maintained. Copies of said minutes shall be transmitted not later than five (5) days prior to the next regular meeting to each member of this Committee by mailing a copy of such minutes to each of said members.

TASK FORCES: At the direction of the NSMB, members of the TAC and/or technical experts in specific areas will be asked to serve on Task forces that address

particular issues along the North Shore. These task forces will generally last for three to six months and require up to six meetings.

REPORTS: When preparing reports, NSMB staff may ask members of the TAC for data and technical assistance.

YEARLY WORK PLAN: In October of each calendar year, a group of CAC, TAC, and NSMB shall meet to form a work plan for the upcoming calendar year. This plan shall be presented to the NSMB at their October meeting.

DISCLAIMER

No action or statement by the CAC or TAC shall be taken **or made on behalf of the North Shore Management Board without the approval of the NSMB. The TAC and CAC** shall not attempt to bind or alter the power and authority of the North Shore Management Board, the State of Minnesota, the federal government or any agency thereof. Further, no such action shall attempt to bind any individual, private industry or company, or any unit or agency of local government participating on or in any committee function.

These operating procedures can be amended from time to time by action of the committee.

LAND USE STAFF FROM NSMB COMMUNITIES

NOTIFICATION: Land use staff shall forward applications for the following land use activities to NSMB staff. Proposals outside the North Shore Management Area but have relevance to the North Shore also should be forwarded. Staff will then forward the information to interested parties and to the NSMB.

a) Conditional Uses

b) Variances

c) Planned Unit Developments

d) Wireless Communications Facilities

e) Ordinance Amendments that have significance to the North Shore

f) Plats

TECHNICAL ADVISORY COMMITTEE: One member of the land use staff from each NSMB community shall serve on the Technical Advisory Committee. This person will attend the bi-annual TAC meetings and also be available to serve on Task Forces as necessary.

NSMB STAFF

FACILITATION: Staff will prepare agendas and minutes for all NSMB, CAC, TAC, and Task Force meetings.

LAND USE INFORMATION: Staff is responsible for providing NSMB communities and the NSMB with information on land use applications within the NSM Planning area in a timely fashion. If directed, staff also is responsible for summarizing these applications to the NSMB.

GRANT WRITING: At the direction of the NSMB, staff will prepare all grant applications for NSMB projects.

LAND USE DATA REVIEW: Staff will complete the monthly land use reports and other documents requested by the NSMB in a timely fashion.

WEB SITE MAINTENANCE: Staff is responsible for maintenance of the web site should this project be completed.

CLEARINGHOUSE: Staff is responsible for ensuring that current land use data, maps, and ordinances are available for other NSMB member communities and interested citizens.

Appendix D:
Joint Powers Agreement

JOINT POWERS AGREEMENT

AGREEMENT BETWEEN THE COUNTIES OF COOK, LAKE, AND ST. LOUIS; THE CITIES OF BEAVER BAY, GRAND MARAIS, SILVER BAY, AND TWO HARBORS; AND THE TOWNS OF DULUTH, LAKEWOOD AND SILVER CREEK TO ESTABLISH A JOINT POWERS BOARD.

SECTION I – ESTABLISHMENT

Pursuant to the authority contained in M.S.A. 471.59, it is hereby resolved that Cook, Lake, and St. Louis Counties; the Cities of Beaver Bay, Grand Marais, Silver Bay, Two Harbors, and Duluth; and the Towns of Duluth, Lakewood and Silver Creek; do hereby establish a joint powers board hereinafter referred to as the North Shore Management Board.

SECTION II – PURPOSE

The purpose of the North Shore Management Board shall be to formulate and update a management plan for the North Shore of Lake Superior that supports the development of strategies for environmental protection and orderly growth of the North Shore of Lake Superior. This management responsibility is jointly shared by the counties, cities, and towns exercising land use control and jurisdiction over certain public and private lands within this corridor. Management responsibility will be accomplished through adoption of a comprehensive management plan that will provide the foundation for strong local official controls and policy decisions within the boundaries of the member units of government.

SECTION III – ORGANIZATION

A. Membership – The membership of the North Shore Management Board shall be composed of one elected official appointed by each respective county board, city council and towns board that exercise zoning authority along the North Shore of Lake Superior from the Lester River in the City of Duluth to the western limits of the Grand Portage Indian Reservation. Presently, this includes Cook, Lake, and St. Louis Counties, the Cities of Beaver Bay, Grand Marais, Silver Bay, Two Harbors, and Duluth; and the Towns of Duluth, Lakewood, and Silver Creek. Each entity may identify an alternate, which has to be an elected official of the same governing body.

   Withdrawal of Membership: Each member may withdraw from the North Shore Management Board and should do so in writing stating the date when the withdrawal is effective, with the minimum of a thirty days notice. The administration of the shoreland management standards for their jurisdiction will then come under the jurisdiction of the Department of Natural Resources.

Revoking of membership: Membership may be revoked if a member has missed three consecutive meetings without excuse and or if agreed upon financial responsibilities have not been met, by a majority vote of the remaining members.

B. Term of Office – The term of office will run concurrently with each member's term on their respective county board, city council, or township board. The chair shall serve a term of office of one (1) year.

C. Officers – The officers of the board shall consist of a chair, vice-chair, and a secretary/treasurer. The chair, vice-chair and secretary/treasurer shall be selected by a majority vote of the board members.

1. Chair: It shall be the duty of the Chair to preside over all meetings of the North Shore Management Board. They shall have the power to call special meetings at reasonable times with appropriate public notice when it is deemed such a meeting is necessary to conduct the business of the North Shore Management Board.

2. Vice-Chair: It shall be the duty of the Vice-Chair to preside over the meetings of the North Shore Management Board in the absence of the Chair. The term of office of the Vice-Chair shall run concurrently with the Chair.

3. Secretary/Treasurer: It shall be the duty of the Secretary/Treasurer to keep or designate a person to assist in keeping a record of all proceedings of the North Shore Management Board, to provide for the proper receipt and disbursement of funds, and to perform all other duties normally assigned to the Secretary/Treasurer of a deliberative body. The term of office shall run concurrently with the Chair.

D. Voting – Each member of the North Shore Management Board shall have one (1) vote. Alternates will have voting privileges in the absence of the member.

E. Rules of Order – All North Shore Management Board meetings will operate under Robert's Rules of Order.

SECTION IV – MEETINGS

A. The North Shore Management Board shall meet in regular session on the Fourth Thursday of each month, or at another schedule as set by the NSMB.

B. The meetings may be alternately held in each county courthouse, city hall, town hall or other accepted meeting facility of member units of government. The rotation of meetings is to be set by the Chair.

C. Special meetings may be held under the circumstances outlined in Section III(C)(1).

D. A quorum shall consist of a majority attendance of board members or their alternates.

SECTION V – DUTIES AND RESPONSIBILITIES

A. The North Shore Management Board shall have the power to designate one member's contracting rule.

B. Funding of the North Shore Management Board may take place through a combination of contributions by the member entities and grants.

C. The North Shore Management Board shall have the power to contract for services, using the contracting standards of one member's contracting rule, in the manner prescribed by law, that are required and necessary to prepare, update, and maintain a comprehensive plan for management of the North Shore of Lake Superior (North Shore Management Plan) within the boundaries of the member units of government from the Lester River in the City of Duluth to the Pigeon River in Cook County.

D. Pursuant to Minnesota Rules, Chapter 6120.2800, Subpart 1a, the North Shore Management Plan shall contain the minimum standards and criteria for the subdivision, use, and development of the shoreland of Lake Superior.

E. The North Shore Management Board shall have the power to contract for services, using the contracting standards of the designated of one member's contracting rule, in the manner prescribed by law, that assist the North Shore Management Board in reaching the goals identified in the North Shore Management Plan. These services may include, but are not limited to, reports, plans, and studies.

F. The North Shore Management Board shall have the power to sponsor or partner with local units of government, other governmental agencies, or non-governmental organizations in organizing, supporting, or participating in conferences, training, and other activities that promote the exchange of information that could assist the North Shore Management Board in fulfilling its goals.

G. The North Shore Management Board will have the power to develop and recommend a schedule for plan implementation by member units of government and to provide assistance in those instances where common administration of plan elements is appropriate and approved by member units of government. This could include general technical assistance, certain zoning oversight responsibilities, and continued operation of the Citizens and Technical Advisory Committees, among others.

H. The North Shore Management Board will have the responsibility to initiate and maintain liaisons with governmental agencies necessary to complete a comprehensive plan for the North Shore of Lake Superior within the member government jurisdictions.

I. The North Shore Management Board will have the power to appoint advisory committees and conduct such public meetings and hearings as are necessary to provide full public review

and participation in the preparation, update, and maintenance of the North Shore Management Plan and other projects conducted by the North Shore Management Board.

J. The North Shore Management Board will have the responsibility to create formal operating procedures and bylaws that allow for efficient organizational structure with clear responsibilities for members of the North Shore Management Board and for members of advisory committees to the North Shore Management Board.

K. The North Shore Management Board will have the responsibility of serving as a clearinghouse of land use information along the North Shore and will create a system where member units of government will have easy access to this information.

L. The North Shore Management Board will also have responsibility to arrange for the independent audit of its expenditures and disbursements, consistent with state law.

M. Exercise of these powers and duties will require a majority of the North Shore Management Board voting members.

SECTION VI - DISPOSITION OF ASSETS

All assets shall be distributed on a pro-rated basis based on the contributions of each entity at the time of dissolution of the North Shore Management Board.

SECTION VII – AMENDMENTS

Amendments to this agreement will require a majority of all voting members present supported by a resolution of approval from each unit of government represented by the same voting member present. Amendments will be required to be announced one month in advance of the meeting date at which the amendment will be discussed. If not all voting members are present; two readings will be required in order to pass the amendment. Said resolution is to be signed by the chair of the governing body.

SECTION VIII – EFFECTIVE DATE

Effective Date: This agreement shall take effect and be in force upon and after the date of the last member unit who has signed below.

Expiration Date: The North Shore Management Board will be dissolved if the members decide to no longer assume the roles and responsibilities as identified in the Memorandum of Understanding between the North Shore Management Board and the Department of Natural Resources.

SECTION IX – AUTHORIZATION

IN WITNESS THEREOF, the respective units of government by resolution duly adopted by its government body(s), causes this agreement to be signed by its designee and attested to all on the day and year signed:

For: **Cook County**

By: _____

Witness: _____

Date: 7-19-04

For: **City of Silver Bay**

By: _____

Witness: _____

Date: 6-22-04

For: **Lake County**

By: _____

Witness: _____

Date: 6-25-04

For: **City of Two Harbors**

By: _____

Witness: _____

Date: 7/20/04

For: **St. Louis County**

By: _____

Witness: _____

Date: 08/03/04

For: **Duluth Township**

By: _____

Witness: _____

Date: 6-29-04

For: **City of Beaver Bay**

By: _____

Witness: _____

Date: 6/22/04

For: **Lakewood Township**

By: _____

Witness: _____

Date: 6-22-04

For: **City of Grand Marais**

By: _____

Witness: _____

Date: 7-13-04

For: **Silver Creek Township**

By: _____

Witness: _____

Date: 6-22-04

Appendix E:
Memorandum of Understanding

MEMORANDUM OF UNDERSTANDING BETWEEN THE NORTH SHORE MANAGEMENT BOARD AND THE DEPARTMENT OF NATURAL RESOURCES

Pertaining to the Coordination, Cooperation and Responsibilities Relating to the Development and Implementation of the North Shore Management Plan

I. GOAL

The Minnesota Department of Natural Resources (MDNR) and the North Shore Management Board (NSMB) agree that Minnesota's North Shore is a special place deserving special attention. The NSMB, established to direct development of a North Shore Management Plan, has certain responsibilities and the MDNR, with the legislated responsibility for development of shoreland management standards, have certain responsibilities in accomplishing the formulation and implementation of a North Shore Management Plan. The goal of this Memorandum of Understanding is to the degree possible, define these specific responsibilities in support of common objectives, interests and statutory requirements; to ensure timely identification and resolution of differences; and to enhance communication and coordination.

II. OBJECTIVE

1. To develop a management plan which is locally initiated and supported and incorporates citizen and broad interest group participation.
2. To develop a management plan that reflects the uniqueness of Lake Superior, its distinctive shoreland characteristics and its various land use and water-related issues.
3. To develop a management plan that is consistent with the legislative policies of M.S. 103F.201 which states: To provide guidance for the wise development of shorelands of public waters and thus preserve and enhance the quality of surface water, preserve the economic and environmental values of the shorelands and provide for wise utilization of water and related resources of the state.
4. To develop management standards for the subdivision, use and development of shorelands, as set forth in M.S. 103F.211, Subd. 1, which include but are not limited to the following:

(a) the area of a lot and length of water frontage suitable for a building site;

(b) the placement of structures in relation to shorelines and roads;

(c) the placement and construction of sanitary and waste disposal facilities;

(d) designation of types of land uses;

(e) changes in bottom contours of adjacent public waters;

(f) preservation of natural shorelands through the restriction of land uses and

(g) variances from minimum standards.

5. To consider the existing shoreland management rules, local ordinances, and the shoreland advisory committee recommended rule changes as guidelines in developing specific management plan provisions.

6. To use applicable state policies and rules of MPCA, MDH, etc. as guidelines in evaluating and formulating specific management plan provisions.

7. To achieve elements of the management plan in a consensus manner.

III. IMPLEMENTATION

The NSMB and the MDNR fully support the concepts of cooperation and coordination and are committed to the development and implementation of the North Shore Management Plan. In carrying out the goals and objectives of the MOU, the DNR and NSMB agree as follows:

The DNR:

(a) will formally participate on the Technical Advisory Committee through the Area and Regional Hydrologists assigned to the North Shore;

(b) will coordinate DNR interdisciplinary input to the plan through frequent communication with other divisions within the DNR;

(c) will immediately bring to the attention of the NSMB proposals which the DNR believe are inconsistent with legislated policies, or strongly oppose from a sound shoreland management perspective;

(d) will in good faith negotiate differences towards finding a consensus of these items;

(e) will provide information and data relating to need, justification, and experience on specific items;

(f) will adopt the final standards as set forth in M.S. 103F.211, Subd. 1;

(g) will provide input and technical assistance in the implementation of the shoreland ordinances of the NSMB local units of government that are based on this plan. This includes the provision of data and information as needed for sound decision-making.

(h) will participate in future revisions of the plan;

(i) will absorb the functions/role/responsibility of the NSMB as identified in this Memorandum of Understanding in the event that the NSMB dissolves;

The NSMB:

(a) will guide and direct the formulation of the North Shore Management Plan consistent with the goals and objectives of this MOU;

(b) will direct all committees and task forces involved in plan preparation and implementation in a consensus approach.

(c) will annually monitor the performance of NSMB local units of governments in the application of their land use ordinances for consistency and/or compliance with the policies of the NSMP.

(d) will provide input on future revisions of land use ordinances by local units of government to ensure continued compliance with the plan.

IV. MODIFICATIONS, TERMINATION, AND EXPIRATION

This Memorandum of Understanding shall be effective upon the signature of both the parties and remain in effect until terminated, amended or reissued. The DNR and NSMB may terminate this MOU, with cause, by 30-day written notification to the other party.

Attest:

NSMB Chair — Date

MnDNR Regional Hydrologist — Date 2/4/05

Appendix F:
Stormwater Quality and Quantity
Best Management Practices

Guidelines for Stormwater Quality and Quantity Best Management Practices

Any increase in surface runoff resulting from new development or redevelopment within the North Shore Management Area should be controlled so that post-development stormwater runoff quantity and quality do not exceed pre-development conditions. Stormwater management can be accomplished through the application of best management practices aimed at maintaining post-development runoff at pre-development levels.

Best Management Practices can be defined as physical, structural, and/or land management practices that, when used singly, or in combination, prevent or reduce pollution of water. Stormwater quality and quantity BMPs include source control**,** runoff treatment, and streambank erosion control. Source control BMPs aim to *prevent* pollution from occurring. Examples include using mulches to cover disturbed soils, re-seeding disturbed vegetation, enclosing outside storage areas, and other practices that prevent soil and other pollutants from being transported by runoff. Runoff treatment attempts to remove sediment and other pollutants from runoff once transport has begun. Runoff treatment BMPs include facilities that remove pollutants by gravity settling of suspended solids, filtration, biological uptake, and soil adsorption. Streambank erosion control BMPs typically control the rate, frequency and duration of stormwater runoff releases. Examples of runoff treatment and streambank erosion control BMPs include detention & retention ponds, biofiltration swales, infiltration ponds & trenches and dry vaults.

It should be noted that it is generally less expensive to prevent pollution of runoff using source control BMPs than it is to treat runoff once it has become polluted. However, since source controls cannot prevent all impacts, a combination of measures will always be needed. Sound watershed management requires that both structural and nonstructural measures be employed to mitigate negative impacts on stormwater runoff.

WATER QUANTITY TREATMENT

Stormwater management BMPs for water quantity control should be designed to maintain post-development runoff peak rate and total volume at pre-development levels. Peak rates and volumes of runoff leaving the post-development site should not exceed the capacity of receiving drainage conveyance facilities, increase the potential for streambank erosion, or add significant volume to an off-site closed depression. On-site runoff quantity control facilities should be provided to limit such peak runoff rates and volumes as outlined below:

1. Peak rate control
   To prevent downstream flooding, the post-development peak stormwater discharge rates for the 2, 10 and 100-year, 24-hour duration storm events should not exceed the pre-development peak stormwater runoff rates for the same design storm events.

2. Streambank erosion control
   In addition to controlling the peak runoff rate from a developed site so that the capacity of existing drainage conveyance systems is not exceeded, runoff quantity control is also needed to prevent erosion of channels and adverse impacts to downstream aquatic habitat.

   Open channels tend to be most impacted by an increase in the frequency and/or duration of exposure to "bank full" flow conditions during less intense but more frequent storm events. Stormwater detention facilities have the potential to create just such a condition. To reduce the peak runoff rate during storm events, these facilities increase the frequency and prolong the period during which flows are released at design flow rates. Design flow rates are less than post-development peak runoff rates, but generally are greater than "bank full" flow rates. As a result, downstream channels typically experience "bank full" conditions more frequently and for significantly longer durations than before development. Since the total volume of runoff, and the resulting increase in the duration of downstream peak flow, cannot be reduced, detention systems should be designed so that, during lesser storm events, the release rate is lowered to less than "bank full" flow rates.

   Current available research indicates that the pre-development peak runoff rate from the 2-year, 24-hour storm represents "bank full" flow conditions. Therefore, to approximate this condition, where stormwater discharges directly or indirectly to open channels or streams, the post-development peak stormwater discharge rate from a developed site should not exceed fifty percent (50%) of the pre-development peak runoff rate for the 2-year, 24-hour storm event.

3. Volume control
   In some cases, rate control from the developed site may not adequately protect downstream properties due to inadequate capacity in the receiving drainage course, or due to the existence of a receiving closed depression. In such cases, developed runoff may need to be retained on-site in an infiltration facility so as to avoid discharge to downstream properties. Where retention facilities are required, the design storm shall be the 100-year, 24-hour storm, and the pond shall have a maximum drawdown time of 48 hours.

WATER QUALITY TREATMENT

Studies have shown that relatively small storms (high frequency, low intensity) account for a considerable proportion of total rainfall. Additionally, smaller storms may tend to produce runoff with higher concentrations of some pollutants because of a "first flush" effect following dry spells. For these reasons, the 2-year, 24-hour storm (which equals 2.6" in Duluth) has been chosen as the water quality design storm for the North Shore Management Area.

New development should achieve, by design or by performance, either:

1. After construction and permanent site stablization, the average annual total suspended solids (TSS) load should be reduced by 80%. This measure is based on

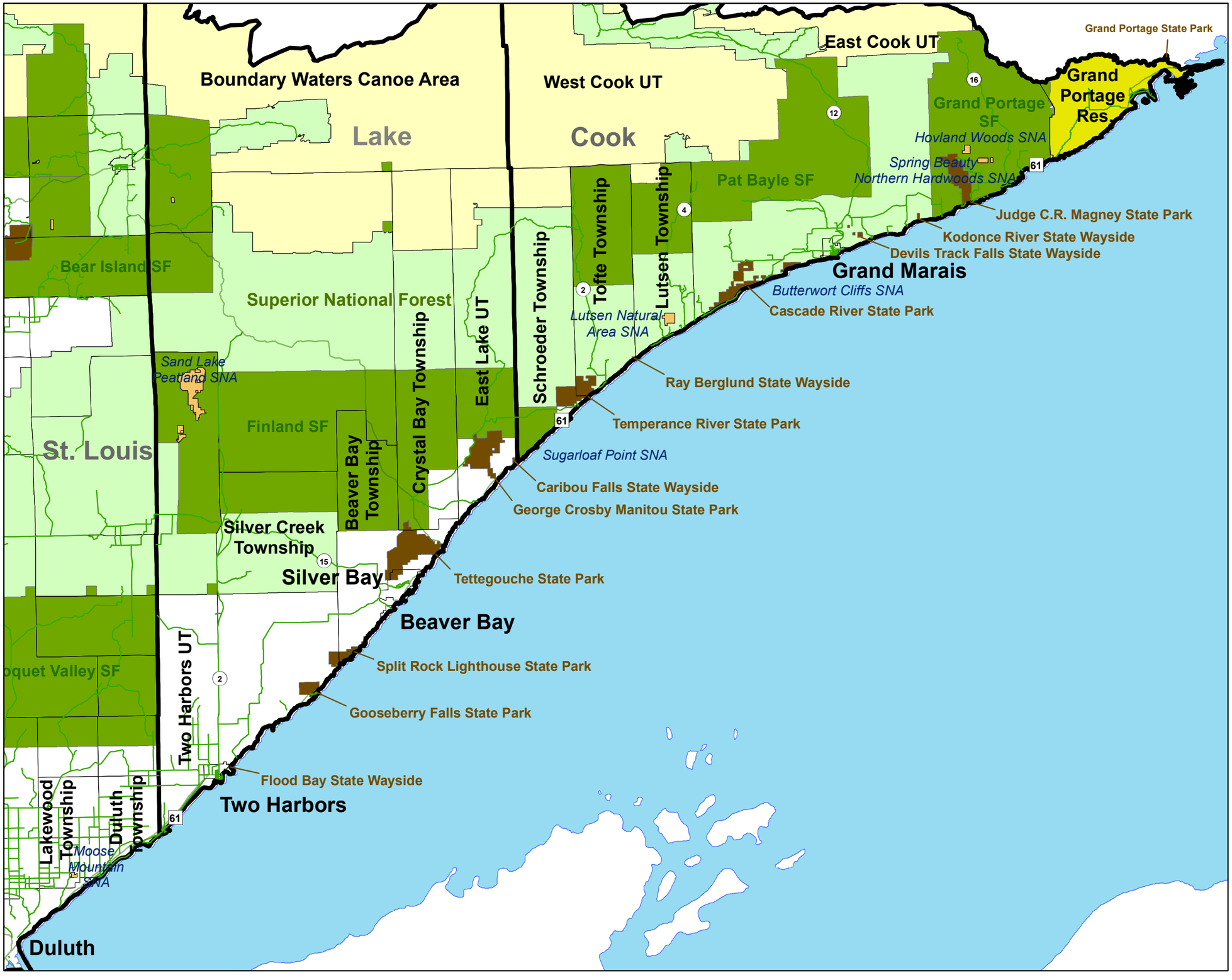
the average annual TSS loadings from all storms less than or equal to the water quality design storm. TSS loadings from storms greater than the 2-year, 24-hour storm are not expected to be included in the calculation of average annual TSS loads. Or,

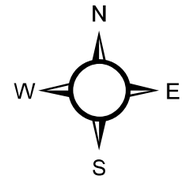
2. Maintain post-development average annual TSS loads at measurements no greater than pre-development levels.

Because systems designed for a 2-year, 24-hour runoff do not have the capacity to handle larger, less frequent, higher intensity runoff events, water quality BMPs should include bypass conveyance systems to route large runoff flows to the water quantity treatment BMPs.

Appendix G:
Shoreland Management Areas Maps

Map 1.4 North Shore Land Administration





Map Features

- Major Roads
- mn_county_boundaries
- Minor Civil Division (MCD's)
- Scientific and Natural Area
- State Park and Waysides
- State Forest
- National Forest
- Reservation
- Boundary Waters Canoe Area
- Lake Superior

0 2 4 8 12 16 Miles