



Coastal Program Enhancement Study

309 Assessments & Strategies

FY 2001 - 2005

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Introduction

This Assessments and Strategies for Coastal Program Enhancements is based upon the July 25, 2000, Final Section 309 Guidance from the Office of Ocean and Coastal Resource Management and covers the fiscal years 2001 - 2005 for its strategy plan. Minnesota's Lake Superior Coastal Program began in 1999. This is the first Assessment and Strategy that has been prepared for Minnesota's program.

As indicated in the Final Environmental Impact Statement for Minnesota's Lake Superior Coastal Program (May, 1999), it is a networked program administered through already existing authorities within state and federal rules and regulations. For this reason, the program enhancement study seeks ways to "coordinate, simplify and streamline planning, processes, and permitting" that occur within the Coastal area (excerpt from FEIS) without creating new rules or layers of government.

As a new program, Minnesota's Coastal Program Enhancement Study began by looking at 309 studies of other states and territories for guidance. There, it was noted that nearly all the other coastal programs have identified cumulative and secondary impacts (CSI) as an area of high priority for coastal program enhancements. Because Minnesota's land use decisions rest primarily with local governmental units (LGUs) through their planning and zoning authorities, this study utilized meetings and a survey of LGUs to guide the assessments for CSI. The strategies will concentrate on which state programs can be used to address CSI.

In northeastern Minnesota, the LGUs enjoy a close working relationship with the Soil and Water Conservation Districts (SWCDs), and Local Water Planners. These were included in the assessment meetings with LGUs. Other agencies like the Board of Water and Soil Resources (BWSR), Minnesota Department of Natural Resources (DNR), Pollution Control Agency (PCA), Natural Resource Conservation Service and the University of Minnesota's Extension Service and Minnesota Sea Grant also provide support services to LGUs and were included in the assessment meetings. These meetings helped to shape the assessments of a number of enhancement areas besides CSI, in particular, wetlands, ocean (lake) resources, and coastal hazards. This plan will look for ways to support state programs in these areas.

Midway through the assessments, it seemed that four merited the ranking of high priority and subsequent strategies: cumulative and secondary impacts, coastal hazards, wetlands, and public access. However, since the authority for addressing the first three all rests with local governmental units as part of cumulative and secondary impacts, this report recognizes only two high priority enhancement areas: cumulative and secondary impacts and public access. In a sense, even public access could be considered under cumulative and secondary impacts. However, while some of the decision making authority in public access does lie at the local governmental unit level, the authorities, planning and funding are more complex, warranting their own separate strategy.

Public Participation

Because it is a networked program, Minnesota's Lake Superior Coastal Program is dependent upon the communications and interactions of all of its parts, the various state agencies, local units of government and support organizations that contribute to its well being and the make-up of its networked programs. For this reason, public participation is also an important component as it helps to provide the connecting link (the general public) upon which all of these programs are ultimately responsible and accountable.

A series of eight meetings took place during the assessment stage of the report. These were focused upon local units of government and their citizen activists, local support agencies like the Soil and Water Conservation Districts (SWCDs), research institutes and coalitions. See Appendix A for summaries of these meetings.

Three of these meetings were with coalitions of larger groups: the Lake Superior Association of Soil and Water Districts (a coalition of the four coastal counties), The Arrowhead Water Quality Team (a coalition of many groups within a six county area of NE Minnesota dedicated to the enhancement of the Arrowhead Region's water resources), and the Pollution Control Agency (PCA) Programmatic Work Group (a coalition of state agencies, local governmental units, support organizations like the SWCDs, non-profit organizations and citizen activists concerned about the region's water quality).

There were two meetings with the Programmatic Work Group (PWG)—one near the beginning of the assessment period and one closer to its end—to discuss the goals and then, later, the results of the assessments. In many instances, people at the PWG were also at some of the other meetings.

Because DNR Waters' Coastal Team (staff who work directly with the Coastal Program) are ongoing participants on the PWG and involved with PCA in the joint development of the 6217 Nonpoint Source Program for the Coastal area, they decided to include the draft report of the Coastal Program Enhancement Study in the eight public meetings that were held in January - February, 2001, which were designed to inform the public about ongoing work on the Lake Superior Basin Plan and solicit their input on water resource values and needs. Publicity for these workshops was quite broad, with distribution by both electronic and mail to a list of over 1000 potential participants, the PCA's newsletter, "Expanding Basin Views," and by follow-up letters to the 31 Local Governmental Units (LGUs) within the Coastal area.

A letter and survey form along with fact sheet were also sent to the LGUs near the beginning of the assessment period, and were used as a basis for the follow-up meetings. Results of the survey are found in Appendix B.

Minnesota's Lake Superior Coastal Program Assessments

I. Public Access

Section 309 Programmatic Objectives

- I. Improve public access through regulatory, statutory, and legal systems.
- II. Acquire, improve, and maintain public access sites to meet current and future demand through the use of innovative funding and acquisition techniques.
- III. Develop or enhance a Coastal Public Access Management Plan which takes into account the provision of public access to all users of coastal areas of recreational, historical, aesthetic, ecological, and cultural value.
- IV. Minimize potential adverse impacts of public access on coastal resources and private property rights through appropriate protection measures.

Resource Characterization

For this section, public access is interpreted to include recreation. Minnesota's coastal area encompasses the North Shore of Lake Superior. From Jay Cooke State Park to the Canadian Border, it is an area of distinct beauty and breath-taking vistas. Much of Trunk Highway 61 is now an established All American Road and National Scenic Byway. At the state level, it is known as the North Shore Scenic Byway. From it, smaller roads and trails branch off into the interior while others provide access to the shore and water-related activities. Four of these are also state scenic byways (Gunflint Trail, Rushing Rapids Parkway, Veterans Evergreen Memorial Drive and Skyline Parkway). Apart from the regional center of Duluth, coastal development is confined mainly to a few small towns and nodes of development along Highway 61. Aspects of development are more thoroughly addressed in the section on Cumulative and Secondary Effects. For this section, public access is interpreted to include recreation, and cultural and historical resources. By including recreation areas like campgrounds, marinas, safe harbors and wildlife management areas, there is a better assessment of not only the "how" of public access, but, equally important, its "why." Minnesota's North Shore attracts a large number of people for a wide variety of reasons. Although cultural points may be included in this attraction (Duluth's harbor, the charm of the coastal communities, the ore docks, Split Rock Lighthouse and the new Great Lakes Aquarium), there is a sense of wildness to both the lake and shoreland that goes beyond words which must be experienced to be appreciated. This is recognized by both visitors and residents of the shore. "Soft access" or the ability for a family to enjoy a favorite picnic or berry picking site is just as important or more than the major parks, trails and harbors which serve the coastal area's needs. Careful balancing of these needs will be an important element in future coastal development.

1. Extent of public access.

Information in the following table was obtained from the Minnesota Coastal Management Program Final EIS (May, 1999), and the Temperance River State Park and Cross River State Management Plan (August, 2000), and from DNR Trails & Waterways.

Access Type	Extent (# of sites and/or # of miles or acres)
State/County/Local parks	9 state parks, 6 state waysides, various local parks
Public Beaches & Picnic Areas	>50 public picnic grounds 20 private picnic grounds & beaches 3 public beaches
Public Boat Ramps	44 (11 on Lake Superior), 1 protected access (Twin Points)
Scenic Vistas	Numerous along Scenic Highway 61
State or Local Designated Rights-of-Way	Access to lake is provided via established parks, waysides, and where highway right-of-way extends to beach. Highway pull-offs at numerous streams also provide access to beach and upland trails.
Fishing Piers and access to shore fishing	4 public fishing piers (Duluth), 1 fishing access (French River). Access also available through above pull-offs, waysides, etc.
Coastal Trails	40 mi. Gitchi Gami Bike Trail (in development) 40 mi. Lake Superior Water Trail (to extend to Canadian border) 489 mi. hiking trails (incl. Superior Hiking Trail) 53 mi. horseback trails 409 mi. cross-country ski trails 665 mi. snowmobile trails (incl. North Shore State Trail)
Disabled Access/Boardwalks	Available in State Parks and Waysides (ramps, walkways, trails) and established fishing piers and accesses. Noteworthy examples: Grand Portage and Gooseberry Falls State Parks
Other: Campgrounds	14 private, 2 municipal, 7 state park, 2 state forest, 5 USFS
Marinas	9 (Harbor Cove, Lakehead, Spirit Lake, one by the DECC, Voyageurs, Grand Portage (6 private), Knife River, Silver Bay, Grand Marais (3 public)
Safe Harbors (besides marinas)	2
Scientific & Natural Areas	7 (2 additional proposed)
State Wildlife Management Areas	5

2. *Briefly characterize the demand for public access.*

The demand for public access to Lake Superior is strong for many reasons including recreational boating, fishing, scuba diving, sea kayaking and lake observation. General demand for public access (both lake and shoreland) is highest at the Duluth end, but is growing at all points along the shore, as evidenced by the full campgrounds in the state parks during the summer tourist season. Expansion in outdoor recreation is also evident in the growing number of winter campers and trail users. Acting through a legislative initiative, DNR Trails & Waterways is examining the possibility of Off Highway Vehicle (OHV) trails within the coastal area to meet the growing needs of this emerging form of recreation. This has caused some concern in Cook County. Another emerging use involves the placement of wrecks on the lake bottom for recreational diving.

3. *Identify any significant impediments to providing adequate access, including conflicts with other resource management objectives.* Natural impediments to improving access to both the lake and inland areas are the steep topography, erosion hazard areas, bedrock cliffs, old growth timber (cedar), powerful wave action, very cold water and lack of natural harbors. These add to the costs, particularly, in the development of new safe harbors and ancillary services (water supply and treatment). Public ownership of interior lands is high (90% in Cook County, chiefly, the Superior National Forest), whereas 90% of the coastal area is privately owned. This has created a local political climate which carefully considers any further loss of private lands. Future expansion of public access (both parks and harbors) depends upon costs and public/political approval. Through their management plans, existing state parks seek to meet the growing public demand by increasing park capacities. Highway 61 can be an incentive for providing new accesses along its route. Highway improvement is carefully planned to improve safety and access while maintaining the unique scenic character. The potential for conflicts between motorized and non-motorized uses and access, coupled with a majority of private land ownership along the shore constitute significant impediments to providing adequate access within the coastal area.

Management Characterization

1. *Within each of the management categories below, identify changes since the last assessment. This applies to both positive and negative changes.* Because Minnesota entered coastal management in 1999, the term “recent changes” is meant to include the last two years.

Management Category	Recent Changes		
Statutory, Regulatory, Legal Systems	significant	<u>moderate</u>	none
Acquisition Programs	<u>significant</u>	moderate	none
Comprehensive Access Planning (including GIS and Databases)	significant	<u>moderate</u>	none (Gitchi-Gami plan and OHV plan)
Operation & Maintenance Programs	significant	<u>moderate</u>	none
Innovative Funding Techniques	<u>significant</u>	moderate	none
Public Education and Outreach	<u>significant</u>	moderate	none
Other: <u>None</u>	significant	moderate	<u>none</u>

2. *For categories with changes that are identified as significant or moderate provide the following information for each change:* Minnesota’s Lake Superior Coastal Program began in 1999. Its subsequent first round of coastal grants has already provided significant progress in the areas of land acquisition programs, innovative funding techniques, and public education and outreach. In addition, progress is underway to develop an interpretive plan for the Scenic Byway from Duluth to Two Harbors. With the construction of the safe harbor at Silver Bay, Minnesota DNR assumed responsibility for its operation and maintenance. A similar proposal has been made for DNR to assume operation and maintenance of the existing county marina at Knife

River. Responsibility for public marinas and protected accesses on the North Shore is a new function for DNR's Trails & Waterways.

Conclusion

1. *Identify major gaps in addressing the programmatic objectives for this enhancement area.*

Because of the large variety of public access needs and provisions within the coastal area (everything from Scenic Byways down through local roads, trails, safe harbors, offshore diving, cultural resources and local picnic areas), there are also a large number of agencies and groups involved. These complicate the physical and social impediments identified earlier. The issue of public access as described in this section would clearly benefit from a more integrated approach by its many interests and players.

2. *What priority was this area and what priority is it now, in the view of the coastal program?*

Last Assessment (N/A)

This Assessment

High ___

High X

Medium ___

Medium ___

Low ___

Low ___

3. *Briefly justify the proposed priority.*

While the primarily privately owned and rugged shoreline of Lake Superior tends to limit public access, there appear to be an increase in value conflicts between motorized and non-motorized uses. In addition, some prefer no further development of the coastal area, while others seek to provide recreational and economic opportunities to support visitors to the area.

A lengthy planning effort which includes a public participation component and support from local units of government for development of a harbor of refuge at McQuade Road recently saw critical support withdrawn over issues that included a conflict of potential uses for the site. Off Highway Vehical Trail planning, as authorized by the Minnesota State Legislature, has drawn opposition and concern from residents in Cook County. Creating additional access to Lake Superior could mean a potential conflict between kayakers and personal watercraft. Each of these examples highlights the growing concerns from different user groups who seek access to Minnesota's coastal resources for recreation. Snowmobile trail access has recently been closed by concerned private landowners, which further limits access to state lands and trails.

Additionally, a variety of funding sources tend to drive access issues. Boat and snowmobile licenses and gasoline taxes provide revenue streams for the creation and maintenance of trails and water access. Other public demands for access to lands and waters are attained through a variety of underfunded and private nonprofit funded sources for activities like hiking, biking and kayaking. This increases the conflicts among the various user groups. In addition, there is a lack of consensus of some state programs for how these issues should be addressed, with an unclear plan for the future.

II. Coastal Hazards

Section 309 Programmatic Objectives

- I. Direct future public and private development and redevelopment away from hazardous areas, including the high hazard areas delineated as FEMA V-zones and areas vulnerable to inundation from sea and Great Lakes level rise.
- II. Preserve and restore the protective functions of natural shorelines features such as beaches, dunes, and wetlands.
- III. Prevent or minimize threats to existing populations and property from both episodic and chronic coastal hazards.

Coastal Hazards Characterization

Lake Superior's large size and associated storms and wave runups provide the major forces which act upon the coast. In addition, the area's steep slopes, fragile soils and bedrock contribute to flash floods in its tributary streams that in the past have wiped out roads, bridges and even whole hillsides. The lacustrine red clay soils in Carlton, St. Louis and Lake Counties are particularly prone to erosion and slumping, and are a major source of sediment to the lake. Minnesota Point, a large baymouth bar in Duluth, is subject to dune erosion and flooding during high lake levels. Episodic erosion of low lying cobble beaches occurs farther north.

1. *Characterize the general level of risk in your state from the following coastal hazards:*

Hazard	High Risk	Medium Risk	Low Risk
Hurricane/Typhoons			X
Flooding			X
Storm Surge		X	
Episodic Erosion	X		
Chronic Erosion		X	
Sea/Lake Level Rise		X	
Subsidence			X
Earthquakes			X
Tsunamis			X
Other (Dune Erosion)		X	

2. *If the level of risk or state of knowledge about any of these hazards has changed since the last assessment, please explain. Also, identify any ongoing or planned efforts to develop quantitative measures for this issue area.*

Low stage of current lake levels has reduced the episodic erosion which occurred during the record high stage in the 1980's. At that time, the high stage corresponded with a period of increased rainfall and

storm activity over the entire basin. Saturated clay banks coupled with increased overland and stream flow, high water levels, storm surge and wave action all combined to raise the level of concern for at risk structures and properties in all four of the coastal counties. As this period corresponded with the development of the North Shore Management Plan (1988), considerable work went into the development and identification of erosion hazard areas (areas where the long term average annual recession rate exceeds one foot per year).

3. *Summarize the risks from inappropriate development in the state, e.g., life and property at risk, publicly funded infrastructure at risk, resources at risk.*

By adopting the North Shore Management Plan standards for erosion hazard zones into local zoning ordinances, new construction has been set farther back and there has been an increase in public knowledge and acceptance of these hazard zones. In addition, through grants, loans, and cooperative actions with other agencies, the coastal SWCDs (particularly, Lake County) have been effective at protecting the more serious coastal erosion hazard areas (see summary of meeting notes in Appendix A). The BWSR Lakeshore Engineer in Duluth provides needed technical support on coastal projects, as do the DNR Area Hydrologists.

Management Characterization

1. In the table below, indicate changes to the State hazards protection programs since last assessment. (This covers the last two years since Minnesota entered the program in 1999.)

Mechanism	Changes since Last Assessment		
Building restriction	Significant	Moderate	<u>None</u>
Repair/rebuilding restrictions	Significant	Moderate	<u>None</u>
Restrict “hard” shoreline protection structures	Significant	Moderate	<u>None</u>
Restrict renovation of shoreline protection structure.	Significant	Moderate	<u>None</u>
Beach/dune protection	Significant	Moderate	<u>None</u>
Permit compliance program	Significant	Moderate	<u>None</u>
Inlet management plans	Significant	Moderate	<u>None</u>
SAMPs	Significant	Moderate	<u>None</u>
Local hazards mitigation planning	Significant	Moderate	<u>None</u>
Innovative procedures for dealing with takings	Significant	Moderate	<u>None</u>
Methodologies for determining setbacks	Significant	Moderate	<u>None</u>
Disclosure requirements	Significant	Moderate	<u>None</u>
Publicly funded infrastructure restrictions	Significant	Moderate	<u>None</u>

Public Education and Outreach	Significant	<u>Moderate</u>	None
Other <u>Lake Superior Shoreline Protection Program</u>	Significant	<u>Moderate</u>	None

2. For categories with changes that are identified as significant or moderate provide the following information for each change:

- Identify the change & whether it was a 309 change
(If not a 309 change, please specify funding source)
- Briefly summarize the change
- Characterize the effect of the change

The increase in public education and outreach is tied to the Lake Superior Shoreline Protection Program which is funded through a Clean Water Partnership (CWP) grant. The three coastal counties (St. Louis, Lake, Cook) provide low interest loans and technical services through the SWCDs and BWSR Lakeshore Engineer for controlling erosion within the Lake Superior watershed. The program has been effective in Lake and Cook Counties where a request has been made for additional CWP funds. (A portion of the money is also set aside for loans to upgrade failed septic systems within the same area). The success of this program is due to both the recognition of a need as well as effective outreach/education by SWCD staff in helping to publicize and work with those who stand to benefit from the loans. A limitation to its greater success is the high cost that is required for some of the erosion control projects (availability of large rock for rip rap, hauling rates, etc.).

3. Discuss significant impediments to meeting the 309 programmatic objectives; e.g., lack of data, lack of technology, lack of funding, legal defensibility, inadequate policies, etc...

Although significant progress has been made over the last ten years in helping to address the major coastal hazards on Lake Superior, more is needed. The current low water period tends to foster an air of complacency that may change when Lake Superior enters its next high water cycle of increased storms and coastal erosion. Data and benchmarks established during the 1980's should be re-examined and set so that the coastal hazard areas and their associated recession rates can be more accurately defined. There is a significant lack of current data to assist in this effort. The use of GIS and GPS technology can make this an effective tool for local zoning administrators in managing their erosion hazard areas. Without good data, there may be a lessening of the public's acceptance of the hazard areas, especially, during periods of relatively low erosion and storm activity.

Conclusion

1. *Identify major gaps in addressing the programmatic objectives for this enhancement area.*

There is a need to re-examine and update recession rates within erosion hazard areas and put the information into GIS format so that it can be included in local comprehensive planning, updated zoning ordinances and public education/information. Analysis should be extended to include the identification of high erosion areas on the streams that lie within the coastal area.

2. *What priority was this area and what priority is it now, in the view of the coastal program?*

Last Assessment (N/A)

High ___

Medium ___

Low ___

This Assessment

High ___

Medium X

Low ___

3. *Briefly justify the proposed priority ranking.*

Much has been done over the last ten years to help educate and protect coastal property owners from shoreline erosion. However, there is a need to re-examine both the ordinances and the tools (established recession rates, etc.) and refine standards, based on new assessments and established base line data. With the use of GIS and GPS technology, both the awareness (education) and management (local zoning controls) of erosion hazard areas can be enhanced.

While first priority must be to the Lake Superior coastline itself, a second lies in the identification and management of inland erosion areas along its many streams. Where red clay is found, problems of slump and bank erosion can be severe. While this is a natural process, its impact is also evident upon Lake Superior's water quality (sediment laden streams and bank erosion color the off shore area red after storm events). Bank erosion and slope failure are a concern to local property owners (risk to structure and property), trout stream managers and fisherfolk (impacts to water quality and habitat), and, ultimately, the quality of Lake Superior itself. Strategies to address these needs are included with the section on cumulative and secondary impacts.

III. Ocean (Lake) Resources

Section 309 Programmatic Objectives

- I. Develop and enhance regulatory, planning, and intra-governmental coordination mechanisms to provide meaningful governmental coordination mechanisms to provide meaningful state participation in ocean resource management and decision-making processes.
- II. Where necessary and appropriate, develop a comprehensive ocean resource management plan that provides for the balanced use and development of ocean resources, coordination of existing authorities, and minimization of use conflicts. These plans should consider, where appropriate, the effects of activities and uses on threatened and endangered species and their critical habitats.

Resource Characterization

Minnesota's Lake Superior Fishery and its associated trout streams and migratory fish are singled out because of their state, national and international value. Other associated resources (water supply/water quality) are not singled out, but are of equal value. Chief among these is Minnesota's firm resolution against inter basin transfer of waters that is shared by all the other Great Lakes states.

1. *In the table below, characterize ocean resources and uses of state concern and specify existing and future threats or use conflicts.*

Resource or Use	Threat or Conflict	Degree of Threat (H/M/L)	Anticipated Threat or Conflict
Lake Superior Fisheries	Complex	M	Complex

2. *Describe any changes in the resources or relative threat to the resources since the last assessment. (Based on last two years since Minnesota entered the program in 1999).*

Research continues to assess the changes taking place in Lake Superior fish populations. There is concern for exotic species (zebra mussels, ruffe, spiny tailed water flea, sea lamprey) and their effects. These and the complexities of other changes within both the human and natural systems make fisheries management a continual challenge. DNR Fisheries is an active participant on the Great Lakes Fishery Commission. Within the state, citizen participation has been used to develop the Fisheries Management Plan for the Minnesota Waters of Lake Superior (1995).

Management Characterization

1. In the table below, identify state ocean/lake management programs and initiatives developed since the last assessment (no prior assessment since coastal program began in 1999).

Program	Status	Funding Source (309 or Other)
Statewide comprehensive ocean management statute	Yes Developing <u>No</u>	Other
Statewide comprehensive ocean management plan	Yes Developing <u>No</u>	Other
Single purpose statutes related to ocean resources	Yes Developing <u>No</u>	Other
Statewide ocean resources planning/working groups	Yes Developing <u>No</u>	Other
Regional ocean resources planning efforts	Yes Developing <u>No</u>	Other
Ocean resources mapping or information system	Yes Developing <u>No</u>	Other
Dredged material management planning	Yes <u>Developing</u> No	Other
Habitat research, assessment, monitoring	<u>Yes</u> Developing No	Other
Public education and outreach efforts	<u>Yes</u> Developing No	Other
Other <u>None</u>	Yes Developing <u>No</u>	None

2. For the changes identified above, briefly summarize the exact change and its effects.

References to some of the above (like a comprehensive fisheries management plan) were accomplished before 1999. Work is ongoing for the development of a dredge material management plan for the Duluth/Superior Harbor. Habitat research, assessment and monitoring are ongoing parts of Lake Superior fisheries management. Public education and outreach involving citizen participation on fisheries management issues are ongoing through both local and statewide fishing roundtables.

Conclusion

1. *Identify major gaps in meeting the programmatic objectives for this enhancement area.*

None.

2. *What priority was this area and what priority is it now, in the view of the coastal program?*

Last Assessment N/A

High ___

Medium ___

Low ___

This Assessment

High ___

Medium X

Low ___

3. *Briefly justify the proposed priority ranking.*

Lake Superior fisheries and its associated trout streams provide both quality and unique recreational opportunities to the fishing public. Public support and interest is high in seeing these resources maintained. Section 309 money for program enhancement is not required.

Local anglers and angling groups recognize and support watershed management efforts because of their direct link to a healthy anadromous Lake Superior fishery. The overall quality of inland trout streams and near-shore coastal waters would benefit from increased watershed management and stewardship efforts similar to those currently in place on the Knife, Flute Reed and Nemadji Rivers (supported by the SWCDs). More coordinated, integrated interagency efforts in watershed management are needed. Strategies to address this need are included in the section on cumulative and secondary impacts.

IV. Wetlands

Section 309 Programmatic Objectives

- I. Protect and preserve existing levels of wetlands, as measured by acreage and functions, from direct, indirect and cumulative adverse impacts, by developing or improving regulatory programs.
- II. Increase acres and associated functions (e.g., fish and wildlife habitat, water quality protection, flood protection) of restored or wetlands, including restoration and monitoring of habitat for threatened and endangered species.²
- III. Utilize non-regulatory and innovative techniques to provide for the protection and acquisition of coastal wetlands.
- IV. Develop and improve wetlands creation programs as the lowest priority.

Resource Characterization

All four of the coastal counties have over 80% of their original wetlands remaining: Carlton, 93.3%; Cook, 100%; Lake 97.5%; St. Louis, 93.9%, as compared with much of the southwestern and western part of Minnesota where less than 50% of the pre-settlement wetlands remain (Anderson and Craig, 1984). When compared to its total land mass, 34.4% of Carlton County is covered by wetlands; 15.8% of Cook, 24.8% of Lake and 30.8% of St. Louis County. Although approximate values and county-wide figures, they do show the high percentage of remaining wetlands and the large proportion of land in northeastern Minnesota that is covered by wetlands. When looked at from a basin perspective, 24% of the Lake Superior - North Basin and 19% of the Lake Superior - South Basin are wetlands. These basins drain directly to Lake Superior through numerous small to medium-sized rivers and streams. Other basins farther inland which also drain to Lake Superior have higher percentages of wetlands (St. Louis River, 43%; Cloquet River, 38%). The difference reflects the steep slopes, shallow soils and bedrock outcrops in the Lake Superior basins which are located within the coastal area and limit the development of natural wetlands.

Minnesota's Wetlands Conservation Act (WCA) was approved in 1991 and fully enacted in 1994. It is administered by the Board of Water and Soil Resources (BWSR) and managed by local governmental units. At its heart lies the goal of achieving no further net loss of wetlands through a sequencing of steps to first avoid, and then minimize or replace impacted wetlands. Annual reports on wetlands protection under the act began in 1994. In 1998 (latest reported data), the reports shifted to the Local Government Annual Reporting System (LARS). As indicated in the current report, there is some discrepancy in the shift from paper to electronic reports, but future reports should be more accurate and better able to determine trends. BSWR has received a Coastal Program Grant to assess environmental permits including those involving wetlands (WCA) in the coastal area. Minnesota In the 2000 legislative session, S.F. 83 transferred some of this authority to BWSR's WCA. The impact of this change in the coastal area is not significant:

five Type 3-5 wetlands were transferred in Carlton County; two in St. Louis County; one in Lake County and none in Cook County. There are 3 wetlands in St. Louis County's and 16 in Cook County's coastal area that remain under DNR permit authority with none remaining in either Lake or Carlton Counties.

Essentially, those wetlands that remain under DNR authority in the coastal area are small named lakes having a DNR shoreland management classification where local shoreland management ordinances are in effect. Over the next two years, BWSR and DNR will be developing formal rules to deal with the changes required by S.F. 83. These could result in program changes in the coastal area.

A review of the 1998 LARS data shows that all four of the coastal counties had their greatest workload in Type 6 wetlands (scrub swamp). All four counties also reported that most of the projects involved < 0.2 acres of wetland. This is similar to statewide results. Total acres impacted by wetlands activity in the four counties were 29.56 acres avoided, 7 acres minimized and 24.97 acres replaced.

1. *Extent of coastal wetlands.*

Wetlands Type	Extent (acres & year of data)	Trends (acres/year)
Tidal	0	
Non-tidal	0	
Freshwater	1,220,786 (1996 DNR in BID)*	~neutral
Other _____		
Publicly Acquired Wetlands	0	
Restored Wetlands	24.97	~neutral

If information is not available to fill in the above table, provide a qualitative description of wetlands status and trends based on the best available information. Also, identify any ongoing or planned efforts to develop quantitative measures for this issue area.

*Lake Superior Basin Information Document, PCA, 1997:

The number listed includes all the watersheds in the Lake Superior Basin. Within the North Shore Watershed, over 65% of the wetlands are bogs (Type 8), 174,864 acres, followed by open deep water marsh (Type 5), 65,001 acres, and shrub swamp (Type 6), 38,809 acres. This is the area most closely associated to Lake Superior. The actual number of wetlands lying within the coastal boundary was not determined.

2. *Direct and indirect threats to coastal wetlands, both natural and man-made.*

Threat	Significance		
Development/fill	high	medium	<u>low</u>
Erosion	high	medium	<u>low</u>
Pollution	high	medium	<u>low</u>
Channelization	high	medium	<u>low</u>
Nuisance or exotic species	high	medium	<u>low</u>
Freshwater Input	high	medium	<u>low</u>

For threats that are identified as high or medium, provide the following information:

- Characterize the scope of the threat
- Describe recent trends
- Identify impediments to addressing the threat

Current threat to Minnesota’s coastal wetlands is deemed to be low, based on LARS reporting information submitted by each of the coastal counties and personal interviews (See Appendix A). LARS data is only general to each county and does not show actual locations. Personal interview with the zoning inspector for Lake County indicated that most of his wetlands inspections were outside the coastal area and involved minor fill for driveway construction. He indicated only 2 - 3 wetlands inspections/year within the coastal area. As Lake County reported the highest number of inspections among the coastal counties in LARS (320 in 1998), it is safe to assume that other counties have similar results. Greater impacts can be expected in higher populated areas like the City of Duluth and surrounding communities. Both the Cities of Duluth and Hermantown have long standing wetlands ordinances. The City of Duluth is beginning work on a new comprehensive plan and has received 306 funds money to update its wetlands inventory. Both St. Louis and Lake Counties developed comprehensive wetlands protection and management plans in 1999, enabling them to adapt the standards of the Wetlands Conservation Act to fit within local zoning authority. For example, Lake County uses functional wetlands analysis to determine its wetlands impacts and has combined its wetlands, erosion and vegetation control into one permit inspection. Initiated by seed money from the county local water plan, the Lake County Land Use Department now budgets \$15,000/year for enforcement of this ordinance.

Balanced against these positive trends is the threat of new development that many see as imminent within the coastal area. This will be more thoroughly developed in the section on cumulative and secondary impacts. Because of the large amount of wetlands still remaining in the area, it will become increasingly difficult to avoid impacts as more development moves in. One impediment to addressing this threat is that the large number of remaining wetlands may mask their true value and appreciation among the public and local decision makers. Better maps which show functional wetlands values are needed in order to avoid future conflicts. For example,

wetlands adjacent to trout streams often contribute to maintaining base flows and cool temperatures necessary to the fish. Stormwater retention and flood control are other natural functions that many wetlands provide. Information and education are both needed to move wetlands protection away from strictly bureaucratic requirements to those involving public acceptance and stewardship.

Management Characterization

Within each of the management categories below, identify changes since the last assessment. This applies to both positive and negative changes. Further information on the management categories can be found in the 309 guidance dated May 31, 1991. (Changes since 1999.)

Management Category	Changes since last assessment
Regulatory Programs	significant <u>moderate</u> none
Wetlands Protection Standards	significant <u>moderate</u> none
Assessment Methodologies	significant <u>moderate</u> none
Impact Analysis	significant moderate <u>none</u>
Restoration/Enhancement Programs	significant moderate <u>none</u>
SAMPs	significant moderate <u>none</u>
Education/Outreach	significant moderate <u>none</u>
Wetlands Creation Programs	significant moderate <u>none</u>
Acquisition Programs	significant moderate <u>none</u>
Other _____	significant moderate <u>none</u>

For categories with changes that are identified as significant or moderate provide the following information for each change:

- Identify the change & whether it was a 309 change
(If not a 309 change, please specify funding source)
- Briefly summarize the change
- Characterize the effect of the change

Changes in the regulatory programs affected by S.F. 83 have resulted in temporary rules to govern wetland protection until more formal rules can be promulgated. Statewide assessment methodologies for functional values are under review, but still uncertain in outcome. There is a potential role for the Minnesota’s Coastal Program to assist in the implementation of S.F. 83 once further guidance is available.

Conclusion

1. *Identify major gaps in addressing the programmatic objectives for this enhancement area.*

Improved mapping of wetlands on GIS layers, as the City of Duluth currently plans, is needed so that their relationship to trout streams and other natural and human resource values can be better understood and weighted. Those with high priority should be recognized in local wetland and watershed management initiatives.

2. *What priority was this area and what priority is it now, in the view of the coastal program?*

Last Assessment N/A

High ___

Medium ___

Low ___

This Assessment

High ___

Medium X

Low ___

3. *Briefly justify the proposed priority.*

Although the current threat to wetlands in the coastal area is not high, the potential impact to wetlands and related water resources (trout streams, storm water protection, erosion control, etc.) will only increase with more development. For this reason, basic wetlands mapping, comprehensive wetlands and watershed management plans and public education are all needed to enhance the understanding and protection of this valuable resource. These elements are included in the strategies for cumulative and secondary impacts.

V. Cumulative and Secondary Impacts

Section 309 Programmatic Objectives

- I. Develop, revise or enhance procedures or policies to provide cumulative and secondary impact controls.

Resource Characterization

The Final EIS for Minnesota's Lake Superior Coastal Program (May, 1999), noted that the watershed bordering Lake Superior is 95% forest and 18% wetland. When expanded to include the full watershed, these numbers are 89% and 31%. Within the coastal area, there are also 136 miles of migratory trout waters and 62 designated trout streams. Their existence is dependent upon their relationship to both Lake Superior and the good forest cover and adjacent wetlands which help to sustain the cool, clear water needed for the fishery. As development proceeds, great care must be taken to ensure that the natural infrastructure of soils, vegetation and wetlands which sustain these high resource waters is not disturbed.

The combination of a healthy, growing economy, new patterns for work (e-commerce, etc.) and the attractions of the coastal area mean that it is just a matter of time before the area is more fully developed. Already, this is taking places in areas adjacent Duluth and in other areas along the shore. Sample indicators taken from Minnesota's Lake Superior Coastal Program Final EIS show that the price per foot of shoreline increased from \$200 to ~\$600/foot from 1982 to 1995. There has also been an increase in the number of building permits and associated property values from 68 permits (total value of \$2.7 million) to 76 permits (total value of \$6.0 million). Cook County has experienced the highest growth (24.2%) in the period from 1990 to 1996. There are plans to extend a sewer line eastward from Duluth in St. Louis County to the Lake County line. This will eliminate the problem of failed septic systems that is common in this area of heavy red clay soils, but will open up the area to more intensive development. A 306 grant has been made to assist in the planning that is needed.

The Section 303(d) list of impaired waters in the Pollution Control Agency's 1997 Lake Superior Basin Information Document show eight impaired streams from Duluth to Two Harbors. More recent data show elevated levels of phosphorus and nitrogen in some of the same streams. These suggest that adjacent land development may already be impacting stream water quality.

1. *Identify areas in the coastal zone where rapid growth or changes in land use require improved management of CSI. Provide the following information for each area:*

- type of growth or change in land use (i.e., residential, industrial, etc...)
- rate of growth or change in land use
- types of CSIs

Most of the growth in the coastal area is either residential or commercial (associated with the tourist trade). Interviews with local units of government and an associated survey (see Appendices A, B) indicated a general awareness of the issue of growth. Many are in the process of updating or developing comprehensive plans, stormwater management plans and associated ordinances. Some of the cumulative and secondary impacts they identified included the issue of

road placement, stormwater management, subdivision design, ridgeline development, location of towers, and the need for natural resource information and interpretation in making local land use decisions. A survey of Lake County property owners showed that 73% lived within five miles of Lake Superior (i.e. within the coastal area). Twelve percent of those answering the survey indicated they worked in Duluth or St. Louis County. This suggests that issues of sprawl (growing distance between home and place of work) is also a factor.

The City of Duluth’s Housing Needs Assessment (1998) tracked building permits within Duluth and adjacent cities and townships. It noted an out-migration similar to what is found in other metropolitan areas. For the period 1991 to 1997, Duluth had a growth rate of 1.3%. In comparison, the adjacent townships of Lakewood, Duluth and Canosia experienced approximately 20% growth in their number of households.

2. Identify areas in the coastal zone (by type or location) which possess sensitive coastal resources (e.g., wetlands, waterbodies, fish and wildlife habitats, threatened and endangered species and their critical habitats) and require a greater degree of protection from the cumulative or secondary impacts of growth and development.

Area	CSI Threats/Sensitive Coastal Resources
Duluth to Two Harbors	residential development/ clay soils, impact to streams, lake
Western Cook County	residential/commercial development/steep slopes, vegetation, streams, lake
Entire area along coast	ridgeline development, forest fragmentation, fragile soils, streams, lake

Management Characterization

1. Identify significant changes in the state ability to address CSI since the last assessment (i.e., new regulations, guidance, manuals, etc...). Provide the following information for each change:

- Identify the change & whether it was a 309 change
(If not a 309 change, please specify funding source)
- Briefly summarize the change
- Characterize the effect of the change

The major change since Minnesota entered the coastal program in 1999 is the availability to provide coastal program grants to help address the issues of growth that the area is facing. In the first round of grant applications, eight included some elements of planning.

Conclusion

1. *Identify significant gaps in addressing the programmatic objectives for this enhancement area (i.e., inadequate authority, data gaps, inadequate analytical methods, lack of public acceptance).*

Minnesota's coastal area stands at the brink of rapid new development. As noted, the coastal communities outside of Duluth are expanding at a rate much greater than the core city. The proposed expansion of a sewer line to Lake County will add to the development pressure. Coastal property values and numbers of building permits have both risen rapidly in recent years. As a result, the long-established nature of the coast is changing from its scattered clusters of small commercial ventures and isolated houses to larger, more intense forms of development. Small cabins are being replaced by larger homes and commercial developments. Development is also beginning to creep inland from the shore to the slopes and ridgeline above it. Many local communities recognize that such development needs to be controlled if they are to preserve the delicate social and natural resource values that are the coastal area's prime attributes. In this sense, the rapid development that they face is not unlike the issue of sprawl facing the more densely populated areas of the state. It is not so much a program gap as it is a shortage of time that local communities have in being able to adequately address the development issues that they face.

2. *What priority was this area and what priority is it now, in the view of the coastal program?*

<u>Last Assessment</u>	N/A	<u>This Assessment</u>
High	___	High <u>X</u>
Medium	___	Medium ___
Low	___	Low ___

3. *Briefly justify the proposed priority.*

From the City of Duluth down to the smallest organized township, local land use decision makers are faced with the challenges of managing growth and preserving their resource base. Numerous planning efforts are already underway to deal with some of the consequences of new development. Many local governmental units are involved in upgrading their comprehensive plans and associated zoning ordinances. Others are also at work on developing stormwater plans and local water plans to help preserve water resources. There is increasing coordination across agency and governmental units in addressing these issues, but more resources could be identified.

The program will look at ways to assist where ever possible in these efforts. It is currently unclear which state programs as identified through the intent of Section 309 might be appropriate to allow for additional resources to address issues that are primarily the responsibility of local units of government. There may be pilot projects, demonstration projects or uses of innovative techniques that could assist in this effort.

VI. Marine/Lake Debris

Section 309 Programmatic Objectives

I. Develop or revise programs that reduce the amount of marine and lake debris in the coastal zone.

Marine/Lake Debris Characterization

The Lake Superior coastline and its associated rivers, streams and harbors are relatively clean and free of debris. As everyone knows, the more people in a place, the greater the potential for waste (waste paper, plastic, etc.). However, Minnesota prides itself on its natural resources and numerous volunteer and state-mandated recycling programs are in effect to help maintain them.

1. *In the table below, characterize the extent of marine/lake debris and its impact on the coastal zone.*

Source	Impact (Significant/Moderate/Insignificant)	Type of Impact (aesthetic, resource damage, etc)
recreational fishing and boating	insignificant	aesthetic, minor resource impact (fishing line, oil, fuel, etc.)
commercial fishing	insignificant	(spills, etc.)
tourists	moderate	aesthetic, minor resource damage due poor land/water stewardship
industry	moderate	aesthetic, resource damage due spills, improper management
general public	insignificant	aesthetic, minor resource impact due poor land/water stewardship

2. *If any of the sources above, or their impacts, have changed since the last assessment, please explain.*

No changes (first assessment).

Management Characterization

1. *In the table below, identify state ocean/Great Lake management programs and initiatives developed since the last assessment. (Minnesota’s Coastal Program dates from 1999. The programs marked “yes” were established prior to this date).*

Program	Status	Funding Source (309 or Other)
State/local program requiring recycling	<u>Yes</u> Developing No	Other
State/local program to reduce littering and wasteful packaging	<u>Yes</u> Developing No	Other
State/local regulations consistent with Marine Plastic Pollution Research and Control Act	Yes Developing <u>No</u>	Other
Marine debris concerns incorporated into harbor, port, marina and coastal solid waste management plans	Yes <u>Developing</u> No	Other
Education and outreach programs	<u>Yes</u> Developing No	Other
Other <u>Beach Sweep</u>	<u>Yes</u> Developing No	Other

2. *For the changes identified above provide a brief description of the change and its effect.*

Minnesota’s Adopt-a-River Program is active on seven of the Lake Superior streams and lakeshore. In addition, Beach Sweep, sponsored by the Great Lakes Aquarium has been effective in getting Duluth/Superior schools active on beach and stream clean-ups. Outreach is continuing to expand these activities farther up the coast. Harbor management plans are being developed which address marine debris and other issues.

Conclusion

1. *Identify major gaps in addressing the programmatic objectives for this enhancement area.*
None.

2. *What priority was this area and what priority is it now, in the view of the coastal program?*

<u>Last Assessment</u> N/A	<u>This Assessment</u>
High ___	High ___
Medium ___	Medium ___
Low ___	Low <u>X</u>

3. *Briefly justify the proposed priority ranking.*

Effective management, outreach/education and voluntary tools are in place at this time to ensure that protection keeps pace with future development.

VII. Special Area Management Planning

Section 309 Programmatic Objectives

- I. Develop and implement special area management planning in coastal areas applying the following criteria:
 - areas including significant coastal resources (e.g., threatened and endangered species and their critical habitats, wetlands, waterbodies, fish and wildlife habitat) that are being severely affected by cumulative or secondary impacts;
 - areas where a multiplicity of local, state, and federal authorities prevents effective coordination and cooperation in addressing coastal development on an ecosystem basis;
 - areas with a history of long-standing disputes between various levels of government over coastal resources that has resulted in protracted negotiations over the acceptability of proposed uses;
 - there is a strong commitment at all levels of government to enter into a collaborative planning process to produce enforceable plans;
 - a strong state or regional entity exists which is willing and able to sponsor the planning program.

Resource Characterization

SAMP-like processes continue to be used to address a number of issues extending beyond local governmental jurisdiction. Among these, the most prominent is the North Shore Management Plan and its associated North Shore Management Board and Citizens Advisory Committee which date from 1988 and are still active. The Arrowhead Regional Development Council serves as its staff and has proposed a review of the original plan for possible revisions. The Remedial Action Plan for the St. Louis River is another SAMP-like process which resulted in the development of both a plan and the St. Louis River Board Citizens Advisory Committee. The committee is now the St. Louis River Citizens Action Committee and provides citizen oversight to the implementation of the plan. Other plans like the Miller Creek Clean Water Partnership and the Duluth/Superior Dredge Disposal Plan are currently ongoing. An inter-agency, inter-state committee, the Harbor Technical Advisory Committee, oversees work in the Duluth/Superior Harbor. The Duluth North Shore Sanitary Sewer Board and the Knife River Larson and the Tofte-Schroeder Sanitary Sewer Board joint powers agreement has also been established to oversee the development of a sewer line extension eastward from Duluth to Two Harbors. In addition, the MN Pollution Control Agency's development of its Lake Superior Basin Plan has led to the formation of a programmatic work group comprised of representatives from the community, local, state and federal governments. Other active efforts as listed in the FEIS include efforts by The Nature Conservancy (Minnesota Chapter)

1. *Using of the criteria listed above, identify areas of the coast subject to use conflicts that can be addressed through special area management planning.*

Area	Major conflicts or actions
North Shore Management Plan	Considering updating plan.
Duluth North Shore, Knife River-Larsmont and Tofte-Schroeder sanitary districts	Changes in density, land use.
Dredge Material Management Plan	Need to identify alternative disposal methods.
Lake Superior Basin Programmatic Work Group	Interagency coordination and cooperation on watershed issues.

Management Characterization

1. *Identify areas of the coast that have or are being addressed by a special area plan since the last assessment (since program entry in 1999).*

Area	Status of Activities	Funding Source (309 or Other)
St. Louis River RAP	Under implementation.	Other
Miller Creek CWP.	Completing Phase I.	Other
Duluth/Superior Dredge Material Management Plan	In progress.	Other

2. *Identify any significant changes in the state SAMP programs since the last assessment (i.e., new regulations, guidance, MOUs, completed SAMPs, implementation activities, etc...). Provide the following information for each change:*

Identify the change & whether it was a 309 change
(If not a 309 change, please specify funding source)
 Briefly summarize the change
 Characterize the effect of the change

None.

Conclusion

1. *Identify major gaps in meeting the programmatic objectives for this enhancement area.*

None.

2. *What priority was this area and what priority is it now, in the view of the coastal program?*

<u>Last Assessment</u> N/A	<u>This Assessment</u>
High ___	High <u>X</u>
Medium ___	Medium ___
Low ___	Low ___

3. *Briefly justify the proposed priority.*

Existing programs are sufficient to meet the needs for which they were developed. As indicated in its Final EIS (May, 1999), “Minnesota’s Lake Superior Coastal Program will not in effect perform any management duties, other than to administer the Coastal Program grants program and consistency reviews.” Accordingly, the development of formal SAMPs lies beyond the scope of its networked program. Informally, SAMP-like processes are encouraged: “[t]hrough this program an effort to coordinate, simplify and streamline planning, processes and permitting will be encouraged.”

In recognition of the on-going SAMP-like projects, the priority for this assessment has been placed at “high.” This allows the opportunity for long-established plans like the North Shore Management Plan to move forward as in the annual work plan to be filed in May, 2001.

VIII. Energy & Government Facility Siting

Section 309 Programmatic Objectives

- I. Enhance existing procedures and long range planning processes for considering the needs of energy-related and government facilities and activities of greater than local significance.
- II. Improve program policies and standards which affect the subject uses and activities so as to facilitate siting while maintaining current levels of coastal resource protection.

Management Characterization

1. *Identify significant changes in the state ability to address the siting of energy and government facilities since the last assessment (i.e., new regulations, guidance, manuals, etc...). Provide the following information for each change:*

The siting of new power plants and major power lines, pipes, railroads and other similar corridors is overseen by Minnesota State Planning and the State of Minnesota's Environmental Quality Rules. There have been no recent changes to these rules.

Conclusion

1. *Identify major gaps in meeting the programmatic objectives for this enhancement area.*

None.

2. *What priority was this area and what priority is it now, in the view of the coastal program?*

<u>Last Assessment</u>	N/A	<u>This Assessment</u>
High	___	High ___
Medium	___	Medium ___
Low	___	Low <u>X</u>

3. *Briefly justify the proposed priority.*

There are no current plans for additional power plants or government facilities and activities in the coastal area of greater than local significance. Adequate review mechanisms exist should they arise. A proposed powerline from Minnesota to Wisconsin utilizing existing corridors is under current review and has raised public concern in both states. The clearing of new corridors for powerlines in the coastal area would be a concern if they were to be proposed. Existing plants within the Coastal area include the LTV Plant at Taconite Harbor, currently undergoing environmental review for relicensure, and the Hibbard Plant in Duluth which provides power to an adjacent paper plant. In addition, Minnesota Power manages a series of hydro power reservoirs on the St. Louis River under FERC licensure. Although a low priority, there is a recognized need for additional power in the Upper Midwest which may alter this enhancement area when next it is reviewed.

IX. Aquaculture

Section 309 Programmatic Objective

- I. Enhance existing procedures and long range planning processes for considering the siting of public and private marine aquaculture facilities in the coastal zone.
- II. Improve program policies and standards which affect aquaculture activities and uses so as to facilitate siting while ensuring the protection of coastal resources and waters.

Resource Characterization

1. *Briefly describe the state aquaculture activities.*

Minnesota DNR supports one fish hatchery in the coastal area at French River. Future expansion of Minnesota's hatcheries within the Lake Superior Coastal area (either public or commercial) is unlikely. There are two types of aquaculture operations that might be possible here: 1. Shore-based facility with pumped water supply; 2. Net pen operation. Physical factors that are limiting to both types include extremely cold water temperature that limits growth potential and profitability; unprotected shoreline that limits net pen potential or is a hazard to pipelines; very soft water that limits carrying capacity of the rearing units and profitability; and extreme winter conditions including threats of ice cover and moving ice operations. Evolving technology, especially in the area of open sea net pen operations, may make aquaculture operations in Lake Superior more feasible in the future.

There are also existing regulatory frameworks that aquaculture operations are subject to that may limit aquaculture expansion within the Lake Superior coastal area. In 1998 the Great Lakes Initiative was adopted by Minnesota through MPCA. This initiative contains nondegradation provisions which scrutinize any new or increased discharge into Lake Superior, including discharge from aquaculture operations. Any aquaculture operation in Minnesota is subject to site review, permitting, and monitoring by the Minnesota DNR. Minnesota is also a member of the Great Lakes Fisheries Commission. The GLFC is the forum where member states resolve issues, address resource problems, and set resource management frameworks through consensus. A recent issue has been regulation of the increasing numbers of net pen aquaculture operations in the lower Great Lakes. The GLFC is in process of developing an Environmental Assessment Tool for Cage Aquaculture in the Great Lakes which will provide regulatory guidelines to all Great Lakes. Once adopted, each member State including Minnesota will be expected to enforce these guidelines within their Great Lakes waters.

2. *Briefly describe environmental concerns, i.e., water quality, protected areas, impacts on native stock and shell fish resources. Also, describe any use conflicts, i.e., navigational, aesthetic, incompatible uses, public access, recreation; and, future threats, i.e., shoreline defense works, introduced species.*

These are addressed above.

Management Characterization

1. Identify significant changes in the state's ability to address the planning for and siting of aquaculture facilities since the last assessment (i.e., new regulations, guidance, manuals, etc...). Provide the following information for each change: None.

Identify the change & whether it was a 309 change
(If not a 309 change, please specify funding source)
Briefly summarize the change
Characterize the effect of the change

Conclusion

1. Identify major gaps in addressing the programmatic objectives for this enhancement area.

None.

2. What priority was this area and what priority is it now, in the view of the coastal program?

<u>Last Assessment</u>	N/A	<u>This Assessment</u>
High	___	High ___
Medium	___	Medium ___
Low	___	Low <u>X</u>

3. Briefly justify the proposed priority ranking.

The French River Hatchery is unique in the role and function that it provides in helping to develop and maintain the Lake Superior fisheries. However, these are adequate to the needs that it fulfills. Accordingly, the priority for enhancement of this area is low.

Minnesota's Lake Superior Coastal Program Enhancement Strategies

Introduction

After years of program development, Minnesota's Lake Superior Coastal Program received federal approval in July 1999. This process overcame years of contentious debate about the program and the federal government's role in assisting local units of government to protect natural, cultural and historic resources. Issues reached a peak with federal actions like the expansion of the Boundary Waters Canoe Area Wilderness, the listing of the wolf as an endangered species, and the closing of Reserve Mining for dumping taconite tailings into Lake Superior during the late 1970's. Later, revised Statewide Shoreland Management Standards (1989) provided the impetus for the development of the North Shore Management Plan and Board. These were seen as better adapted to the needs of the Lake Superior area and community.

It is no wonder, then, that Minnesota's entry into the coastal program brought with it a strong commitment to no new programs or layers of government. It is a networked program consisting of various elements, agencies and programs at all levels (federal, state, local). These elements can be roughly placed into three separate categories, as determined by the assessments:

- Research (data development, distribution and analysis);
- Management (all levels, from public resource management to local land use);
- Education and public participation.

While it could be argued that enforceable mechanisms apply only to management, in reality all of them are interconnected. For example, meetings with local planning and zoning administrators conducted during the assessments revealed their need for more technical information and its interpretation in helping them to make informed land use decisions on matters affecting natural resources. Another meeting at the EPA Water Laboratory in Duluth indicated a desire by many of the researchers to assist in the transfer of their research so that it could be better applied by local decision makers. Education, the third element, is what connects research to management and also engages the public so that they can be more informed, supportive and effective partners and leaders in land management and stewardship efforts. When properly utilized, research, management and education can combine to form management strategies that are self-enforcing and adapted to a community's own local needs and interests on resource-based decisions.

Local governmental units (cities, counties, townships) have primary responsibility for land use management decisions through their authority in planning and zoning. All of these have their role in an effective coastal program. The challenge lies in the area of coordination and networking. As noted in a survey response by one of the coastal communities, it seeks ways to network with other communities and government agencies in solving common problems.

Because of staff and funding limitations, many agencies recognize the need to cooperate with others in helping to achieve common goals of a healthy and safe environment. However, these same limitations can also affect the amount of time a staff person can put into cooperative work outside their own defined program boundaries.

The strategies show that additional time is needed for work in the priority areas in planning and technical assistance (e.g. GIS). They suggest that 309 funding be used to address these needs

during the first five year period of the new Lake Superior Coastal Program.

I. Cumulative and Secondary Impacts

Issue Summary

As recognized in the Tenth Biennial Report on Great Lakes Water published by the International Joint Commission in July, 2000, the issue of urbanization within the Great Lakes coastal area has seen big changes over the past 20 years. "It is easier to manage development rather than remedy its negative effects, so governments should act before the situation deteriorates further... [A]ll levels of government have a role in watershed management and associated land use..." These recognitions lie at the heart of the goals and strategies for Cumulative and Secondary Impacts.

Geographic Information Systems - While coarse state-wide data exists for some of the needs of the program, the assessments show that there needs to be a concentrated effort to develop GIS capabilities within the coastal area. Many of the necessary specific data layers for management decision do not exist in a form that is useful or available. The only erosion hazard data for Cook County is included in the 1988 maps from the North Shore Management Plan. The Protected Waters Inventory is also incomplete in this area. Hydrographic layers for rivers, streams and lakes is also missing. In addition, there is only one regional DNR GIS staff person who has limited resources due to responsibilities over a large geographic area. Mapping needs are identified in nearly every conversation along the shore. Communities lack parcel data which is critical to the analysis of land use activities. Opportunities to protect critical areas for public access and habitat are at risk due to lack of good data. Concentration on filling some of the gaps of major data layers and tackling some specific projects will be a focus area for the GIS component of the program. Lake County has also been selected to receive comprehensive assistance with setting up its GIS program from MN Planning. They were chosen based upon need. This need is mirrored across the coastal area within local units of government and provides a unique opportunity to assist in developing GIS programs that will be the key to future to resource management.

Emerging Issues - Coastal development is facing every part of the nation. Census data shows that Lake County grew at 6.2%, primarily in the coastal area.. Cook County grew at 33.6%, Carlton County grew at 8.2% with St. Louis County showing the least amount of growth at 1.2%. Increases in seasonal homes and out of county buyers are dramatic within the coastal boundary. Emerging issues accompany this rate of development that is often not yet addressed in regulations or enforceable policies. The Coastal Program has the unique opportunity of providing resources to speak to some of these issues with a quicker response than other mechanism. Amongst these issues are concerns for the cumulative and secondary impacts of fiber optic cables, wireless communications towers, failing septic systems, sewer line extensions, stormwater impacts from increased development and impervious surfaces, ridgeline development, underwater recreation plans, and loss of public access. This support could come through a variety of measures including updates of plans, ordinance, zoning and rule changes, hiring consultants to provide research on specific areas, education and outreach, public participation processes and increased coordination through a State of the Coast Conference.

Program Changes and Tasks

A. The Coastal Program will complete necessary the GIS hydrographic layers (lakes, rivers, wetlands) for the coastal area that includes associated watersheds and protected wates inventory. It will pilot its use for permit tracking, monitoring and watershed management activities within the coastal area.

B. The Coastal Program will assist in the development and training of local decision makers in the use of natural resources information through GIS and other management tools and options. In addition, the program will provide assistand and support for the DNR created Landview Program. This stand alone program provides basic spatial data for reference and educational purposes in land use and natural resource decision-making.

C. Associated products will be requested and created to address emerging issues that have cumulative and secondary impacts. These GIS products could include mapping of areas at risk for development, loss of critical habitat, and loss of public access. Products would facilitate planning efforts that will result in program enhancements of public access, water quality and habitat protection.

D. The Coastal Program will support and facilitate coordination of efforts to deal with issues of common interest in the coastal area like the use of GIS, siting of communication towers, ridgeline development and other issues identified by local governmental units that pertain to land use management and public access. The Coastal Program will seek ways to provide greater agency participation, assistance and coordination to local land use planning efforts including but not limited to comprehensive planning, local water plans, comprehensive wetlands management, erosion hazard management, sewer line extensions, communication facilities siting, stormwater management, watershed management plans and their associated ordinance changes, conservation easement program development and innovative education programs such as Project NEMO.

General Work Plan (five year period)

Year 1 - 5 Geographic Information Systems component:

Hire a GIS position to begin data creation, assistance to local units of government and product development as they relate to the above emphasis areas. The hydrographic layer is part of a larger, state-wide mapping project funded by EPA. Coastal Program funds and staff will be used to expedite the mapping within the coastal area so that it can be used as a pilot for tracking and monitoring permits and for other watershed activities. The GIS mapping will be completed in the first year with associated permit uses and layers developed thereafter.

Estimated Costs (yearly)

GIS Technician	1 FTE	\$36,561
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Benefits	\$ 8,043
Federal indirect	<u>\$ 6,423</u>
subtotal	\$51,027
<u>Equipment/training/supplies</u>	<u>\$12,000</u>
Total for GIS component	\$63,027

Year 1 - 5 Emerging Issues Support component:

It is anticipated that some of the above identified emerging issues could benefit from additional resources in cooperative efforts with other state, regional and local entities.

- A conservation easement program with the purchase or transfer of development rights.
- Addressing wireless communications towers in a regional manner.
- Facilitation of a public participation processes that identify a vision for the North Shore of Lake Superior and link research with management.
- Planning, research and GIS to support land use planning efforts related to the extension of the sewer line and other issues dealing with wastewater controls.
- Support of innovative educational programs that link water quality with land use such as Nonpoint Education for Municipal Officials.
- Ordinance changes that increase protection of the coastal area.
- Studies, research, analysis, and GIS products are ways to support any of the above efforts.
- Studies of rigdeline development, viewshed protection and associated issues related to change in land use on the rigdelines of the coastal area.

Estimated Costs (yearly)

Contractual	\$17,973
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Likelihood of Success

The likelihood of success of any of the above mentioned items is high. This list essentially reflects the movement of the coastal community towards more actively dealing with these issues. They all have been identified in various workplans, public participation processes, watershed plans, comprehensive land use plans and other documentation that show that the timing is right for success on these issues.

II. Special Area Management Plans

Issue Summary

The North Shore Management Plan (NSMP) was created in 1988 as a distinctive management unit that had resource concerns that were not adequately addressed by the statewide Shoreland Management Program. The NSMP replaces the statewide standards in the management plan area. A joint powers board was formed consisting of county, city and township governments that had zoning authorities. The purpose of the North Shore Management Board (NSMB) is to direct development and implementation of the North Shore Management Plan. This plan has not been updated since it was originally adopted in 1988. In the thirteen years since the creation of the plan, development pressures have increased and the 1999 administrative review identified significant data gaps and inconsistencies in reporting. Other comments included a need to look at expanding the boundary to include the City of Duluth. An update of the NSMP has been included in the workplan for the NSMB.

Program Changes and Tasks:

The NSMP is the regulatory authority for the planning area and thus incorporated by rule into MN Statutes. An update of the plan would revise the outdated plan to more accurately reflect existing social, economic and environmental conditions. Possible boundary changes may also be explored in the revision.

Year 1- Prepare a Scoping Document, including a comprehensive public participation process. Issues to be addressed include reviewing the plan, governance and boundary issues. The scoping process would clearly identify concerns and areas that should be address in the revision of the plan. As a two year process, this first year will be spent identifying issues and possible solutions that will be further developed and adopted by the NSMB in year 2.

Year 2- Revise the NSMP. Continuing with the public participation process, revise and update the plan and its implementation strategy. This could include a change in the boundary to include Duluth. Review of the mission, policies and governance would also be included in this revision. Printing of the document is also included in this task.

Estimated Costs (yearly)

Contractual	\$25,000
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Likelihood of Success

The revision of the NSMP has been identified in the NSMB 2001-2003 Workplan. Additional resources are necessary to ensure adequate funding for the public participation component and other activities that go beyond the general administration of the board. With recent changes in leadership on the NSMB and with support staff, the likelihood of success is high.

III. Public Access

Issue Summary

As identified in the assessments, the issue of public access is quite complex and important to the well being of Minnesota's Coastal area. Large amounts of money and plans have already been invested that have resulted in the development of harbors, trails and other forms of public access.

Of primary concern with public access is the issue of conflicting values with regards to access to public lands and waters. At the heart of nearly every traditional or emerging use is the conflict between motorized and non-motorized uses. There is a compelling need to work collaboratively across agencies, political boundaries and ideologies to meet the collective needs of the public for public access and recreation.

Additionally, a variety of funding sources tend to drive these access issues. Boat and snowmobile licenses and gasoline taxes provide revenue streams for the creation and maintenance of trails and water access. Other public demands for access to lands and waters are attained through a variety of underfunded and private nonprofit funded sources for activities like hiking, biking and kayaking. This increases the conflicts among various user groups.

Most immediately is a request by the Great Lakes Shipwreck Preservation Society (GLSPS) to evaluate the feasibility of intentionally sinking a ship in Lake Superior as a recreation and tourism attraction. This is a somewhat controversial concept that needs further study, evaluation and planning.

Program Changes and Tasks

Year 1- 5 Comprehensive Public Access Plan

Minnesota's Coastal Program currently has no Comprehensive Public Access Plan. There are a variety of plans that have been developed for the area that include almost every recreational, cultural, historical and public access facility. The DNR manages many of the public boating access facilities, trail systems and state parks in the area. There are many other partners that manage the remaining trails, cultural and historical resources and lake accesses. With competing interests and limited resources, a comprehensive plan could address some of the conflicts that emerging related to increased use of the coastal area. This would include special interest groups efforts for development of trails, underwater parks and other amenities.

A. Year 1. As soon as funds are, available given the prioritization and timing of this task, work with the MN DNR Parks and Recreation and GLSPS to develop a feasibility study to evaluate the underwater park concept, the impact to tourism, and development and execution of a plan to sink ships in Lake Superior.

A. Year 2. An initial scoping and public participation process is necessary to assess the needs, concerns and vision for the North Shore. An initial approach includes developing a process that invites public comment and participation that then can be responded to through the continuing development of the comprehensive plan.

B. Year 3-5. The Coastal Program would facilitate and coordinate the development of a comprehensive Public Access Management Plan. This would collect needs and interests of all potential users and providers along with other public and private interests and concerns. The process would include citizens, managing state agencies, nonprofits and local units of government in addressing associated issues of common needs, conflicting values and the sharing of resources.

General Work Plan (five years)

Coastal Program staff will be involved in a DNR North Shore Visioning process that begins to look at some of the issues related to the increase pressures for recreation and management of the natural resources of the coastal area. A conference or public participation process shall be included early on in the gathering and sharing of information and ideas around the creation of a shared vision and the following Comprehensive Public Access Plan. This may take place through a formation of a steering committee to bring together all the various elements involved in public use within the coastal area (users, providers, local units of government and general public).

Developing a feasibility study for an underwater park would take place over two years to allow for sufficient public comment and participation and economic and environmental impact assessment.

Estimated costs (funding source of FY 2000 remaining funds)

Comprehensive Planning effort	
Staff and expenses	\$25,000
Contractual for Underwater Park Plan	\$10,000

Likelihood of Success:

The MN DNR Region Two 2001-2003 Workplan has identified a North Shore Visioning to begin to create a shared DNR vision for the North Shore of Lake Superior. While there is some internal apprehension towards this planning effort, there continue to be interdivisional disagreements on the future of the North Shore. This issues can not be addresses without some sort of process for discussing these concerns. Beginning with a process that incorporates the public in a upfront, holistic manner will be key to the success of this effort. Understanding the public's perceptions, priorities will allow for a plan to be developed that will incorporate and address those concerns, eventually resulting in a much more cooperative and collaborative effort. Oportunities for the public to participate in the managing of our coastal resources has been identified as a high priority during a recent survey. This effort would provide a mechanism and a mission to provide unity in our coastal communities.

Expenses for July 1, 2001 - December 31, 2002 Award

Priority 1 - Cumulative and Secondary Impacts	\$81,000
Priority II - Special Area Management Plans	\$25,000
subtotal for July 1, 2001 - December 31, 2002 Strategy	\$106,000

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MDNR and OCRM. 1999. Minnesota's Lake Superior Coastal Management Plan Final Environmental Impact Statement. Part V. p. 3-1 - 3-126.

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Appendix A

Notes from meetings with local units of government, SWCDs, local water planners, etc.

(in chronological order)

1. Lake County Meeting Notes.	November 2, 2000	ii.
2. City of Duluth Meeting Notes.	November 2, 2000	v.
3. Lake Superior Association of SWCDs and St. Louis County	November 21, 2000	viii.
4. EPA Water Quality Lab Meeting Notes.	November 21, 2000	xi.
5. Carlton County Meeting Notes.	November 28, 2000	xii.
6. Cook County Meeting Notes.	November 28, 2000	xiv.
7. Programmatic Work Group Meeting Notes.	November 29, 2000	xvii.
8. Education/Outreach Meeting Notes	December 7, 2000	xix.

Coastal Program Enhancement Study

1. Lake County Meeting Notes

Nov. 2, 2000

Present: Dick Sigel, Larry Moon, Walt VanDenHeuvel, Wayne Seidel, Tricia Ryan, Peder Otterson (notes begin with a conversation with Wayne Seidel before meeting).

Local Water Planning (Skunk Creek Project)

We discussed the county's local water plan and how its listing of Skunk Creek as a priority in 1998 led to the formation of the Skunk Creek Watershed Advisory Committee (a citizens' group), development of the Skunk Creek Watershed Inventory (March, 1999), and the current Coastal Grant to develop the Two Harbors Stormwater Plan. Wayne provided me a copy of this excellent inventory which includes percent of impervious surfaces for the subwatersheds and identifies areas of slumping, among other things. Data uses GIS format (ArcView) enabling future updates and reproduction. Among its recommendations are watershed-based zoning to manage impervious surfaces in the undeveloped areas and use of BMPs in the urban area where impervious surfaces already exceed 20%. Increased monitoring and maintenance are suggested for areas where erosion is a problem. A buffer ordinance is also suggested along with the development of a stormwater management plan. Other areas touch on public education, street maintenance, wetlands inventory, monitoring and the development of a river trail. Of note is the listing of potential funding sources at the back of the report. Indeed, this is an excellent report!

What impressed me most, however, is how the local water plan effectively identified a watershed issue which led to the formation of a citizens' committee and other actions that are ongoing. Also of note is how this element of the local water plan is largely within the city of Two Harbors and has the city's support. This is unique because many water plans are seen and act as county instruments of little value to municipalities. The Lake County Local Water Plan helps to break down this misconception. I understand that Cook County SWCD is initiating a stormwater project for the Grand Marais area due to similar erosion and flooding problems.

Coastal erosion

We discussed the erosion hazards along Lake Superior. Wayne mentioned Gene Clark, BWSR coastal engineer, and their joint efforts to work on coastal erosion. Gene initiated a BWSR GIS project that includes fisheries habitat, erosion hazard areas and completed projects. Additional information from Lake County projects will be included. Wayne's assessment is that many of the most severe erosion hazards in Lake County have now been addressed (Burlington Bay, Flood Bay, Silver Cliff, etc.) with a majority of the rock supplied through MnDOT's highway improvement projects. Wayne sees a need for additional joint planning with MnDOT on future road projects to secure additional rock riprap. The 3-year CWP grant of \$940,000 to Lake, Cook and St. Louis counties (received March 1999) provides low interest (5%) loans to help coastal residents deal with problems of erosion and failed septic systems. Both Cook and Lake Counties have each submitted continuation requests for an additional \$300,000. This will result in each county having \$613,333 available over a five year period.

A technical committee has been set up to help prioritize requests and both Lake and Cook counties are actively soliciting applications. Currently, there are about 12 - 15 projects pending in Lake County.

We also discussed the Knife River Stewardship Project and how it helps to reduce stream sedimentation by planting and ponding improvements. I plan to follow-up with Paul Sandstrom, District Conservationist, who initiated the idea, and other SWCDs. Similar work is just getting started on the Flute Reed

The following topics were discussed with Dick Sigel and others at the meeting after Wayne left:

Lake County Comprehensive Plan and Zoning Ordinance

Lake County began updating its 1978 Comprehensive Plan in 1995 and was fortified by a Community Attitudes Survey done by ARDC in 1999 that went to every resident. This revealed that 73% of the population is located within 5 miles of Lake Superior (within the coastal zone). Unfortunately, staff and organizational changes at ARDC stalled the completion of the plan. The pieces are all there, but work is still needed to pull it together and develop a vision statement. Work is in progress using local resources.

Dick indicated that major revisions to the zoning ordinance took place in 1992 (adoption of new shoreland rules and NSMP guide and institution of county-wide ISTS standards) and 1997 when Section 8 (wetland and stormwater management standards) was added. This requires a water and vegetative management plan including wetlands delineation for any project that disturbs greater than one acre of land.

We spoke some about the county's relationship to the North Shore Plan. With the changes taking place (planned sewer line extension from Duluth, newly-defined coastal area that extends inland to include most of ridge line, and possible addition of the City of Duluth to the NSMB), Dick has suggested to the NSMB that they should seek a determination from the Attorney General's Office regarding its authority and flexibility to consider plan revisions. The NSMP does not replace local zoning authority, but it does serve as a guide, similar to how Statewide Standards for Shoreland Management serves to guide inland lakeshore development.

Dick indicated that the county handles about 14 variances a year and 25 conditional use permits. He noted that the Board of Adjustment inspects sites individually to avoid influencing each others' opinions. Also noted is that both the Board of Adjustment and Planning Commission have final say on their respective decisions (no bucking it up to the County Board). Dick noted that except for Itasca, St. Louis and Lake Counties, there are few which make this distinction. He stressed the importance of keeping politics out of land use decisions.

Wetlands

Walt handles the inspections. In 2000, the Local Water Plan provided \$2000 in seed money for wetlands enforcement which the county has now increased to \$15,000/year.

Wetlands are assigned functional values based upon standards developed by their technical committee and included in the ordinance. Walt noted that most wetlands impacts are small and associated with driveways outside the coastal area. Yearly, there are only about 2 - 3 wetlands replacements on the shore.

Development trends

Dick sees growing development pressure along the shore and, also, in the large interior lots as being potential problems. The county used to have a “no service zone” for remote areas, but it was removed in the late ‘80’s because of lack of support from the schools.

Issues/Needs (Planning & Zoning)

- Redo the Comprehensive Plan.
- Improve the subdivision ordinance to address the random breakups of property and require platting in all shoreland areas.
- Define contractor liability (road projects, grading & filling, etc.) in ordinance.
- Determine the authority of North Shore Management Board to consider revisions to the North Shore Management Plan in light of changes (sewer line expansion, ridge line development, etc.).
- Expand the county administrative penalty order authority (APO) that AMC has proposed for dealing with county solid waste to include individual sewage treatments systems (ISTS).
- Establish a coastal area GIS Consortium to provide guidance, unified standards and assistance/training to all coastal communities who have an interest or need for such services.

General comments on technical services:

Dick believes that physical proximity is the key element to successful services. He noted the value of having the area hydrologist readily available to answer technical questions (OHWL, etc.) as they arise. Tim Peterson, Army Corps of Engineers, was also cited for his availability to meet with Walt on field inspections involving wetlands. We discussed the possibility of having someone available to provide technical assistance on use of GIS and other data interpretation, and Dick suggested the possibility of a GIS Consortium for the Coastal area. Limits and availability of ARDC to provide ongoing support were also discussed.

Coastal Program Enhancement Study

2. City of Duluth Meeting Notes

Nov. 2, 2000

Present: Bill Majewski, Kyle Deming, Duluth Planning; Marnie Lonsdale, Stormwater Utility, Peder Otterson, DNR Waters (note taker)

Comprehensive Plan

Current plan adopted in 1927. Work on plan in 1950's, but never adopted. Various neighborhood and corridor plans were developed in the '70s - '80s (Miller Hill Corridor Plan, Downtown Waterfront Plan, etc.). Present work to update plan began in the early '90s with a visioning process ('95). Committees (2) are formed and a contract is let with an estimated completion date of two years.

Bill indicated that the city continues to experience a general decline in population with no real development pressures except for a few "hot spots." As in other cities, development is generally "outwards and upwards." ("Up" as in over the hill from the city proper, but also on ridge line and steep slopes). Because of the 42 streams that traverse the city, development in the upstream areas can contribute to flooding in the downstream neighborhoods below the escarpment.

The comp plan will treat the ten districts or neighborhoods that comprise Duluth as separate entities with another being Park Point because of its unique location, resources, and history of development. (A Coastal Program Grant is being applied for to provide additional assistance.)

Glenn Kreg, Minnesota Sea Grant, is developing a public preference survey which will assess the public's value of open space. The city had originally proposed to develop GIS-style kiosks for use in public places like the library, aquarium and mall where people could examine various build out scenarios and rate their preference. This, however, was not approved by the UM NE Regional Sustainable Development grant which is funding the cost of the survey.

Marnie indicated that they are also collecting data on watersheds both within and beyond the city's limits. However, these activities are apparently not tied in with the county's local water plan or SWCD. I suggested greater coordination might be possible with adjacent communities like the City of Proctor, based on what I received from them in their questionnaire. Mention was also made of the St. Louis River Citizen Advisory Committee and their bioassessments which are being funded by a grant from Cargill.

GIS System

The city currently uses a system developed by Hennepin County (Ultimap) which was state of the art when purchased, but is now out of date. They plan to convert over to ArcView and to get parcel data into the system based on land ownership. We discussed the Metro's Land Cover Classification System and I shared the offer that I had received earlier from one of its developers to come to Duluth and make a presentation on it. This seemed favorable to Bill and staff.

Other Ordinances and Plans

The erosion ordinance covers land alterations greater than 10,000 square feet, but it lacks enforcement bite and has no post-construction requirements. Bill indicated that all related ordinances would be tied into the comp plan and updated at the appropriate time.

Marnie described the work that is just beginning on the Surface Water Management Plan. They intend to conduct a test on two of the city's creeks (Chester and Oregon). Chester has a large amount of open space (good permeability), whereas Oregon has virtually no open space (highly impervious). These should help them to develop the watershed tools needed for dealing with the city's 42 watersheds. There was talk of using a process similar to NEMO for identifying areas where different levels of watershed protection could be applied.

Duluth is also a participant on the development of the Northshore Sanitary Sewer Plan since the proposed sewer line will open up unsewered areas within the city's north shore area.

Needs

- New set of air photos (next spring) including County GPS posts for elevation. These will provide something to which the City's GIS data can be registered, making it more accurate to ground measurements.
- Additional detailed base line data is also needed (soils, wetlands, natural resources).
- **Technical Services.** Assistance is needed to put natural resource data into proper context (data interpretation) so that it can be used by decision makers. Examples include wetlands functional values, forests, slopes, soils (how to tie it all together within a GIS format?). Example: in mitigating wetlands, is there a difference between a wetland on Chester Creek vs. one adjacent Lake Superior? If so, how should they be treated?
- Bill suggested a guide book in simple language that the City Council and others could use to identify all the overlying controls related to the above issues and would explain the basis for the regulations (this could be similar to what DNR once did with its shoreland and floodplain rules). Marnie stressed the need for tools and information that can be used by the decision makers.
- There is a need to evaluate the city's water resources code to see if it is achieving the intended purpose (use of retention basins, etc.). Soil limitations (rock, clay), the need for BMPs specific to cold water (trout) streams, retrofitting existing development and construction techniques were some of the items discussed.
- **Training** (hands on stuff!) for staff and public on items like erosion control, stream maintenance, floodplain management, shoreland management and site plan evaluation. (Tie in with county's local water planning?)
- GIS tools that would help to predict a project's impact on a given parcel of land. We discussed the NEMO Project and how it might relate to this need. Also discussed was the ARDC as clearing house for all data sets–linkages, etc.

Enforcement. City Council is beginning to cut back its work on land use issues to those involving policy determinations. This should enable Planning & Zoning to de-politicize its work in enforcing and administering city codes and build greater trust in the system. Bill mentioned tree cutting on city property (North Shore Drive) beyond McQuade Road as being somewhat a problem. Property owners above the road are not always aware that the city owns the land between the road and lake.

Additional thoughts:

Things like regional eco-tourism, bird watching at Hawk's Ridge, etc. suggest the need for more maps, information, linkages. Demonstration areas on certain watersheds could be beneficial for public education. As for technical support, Steve Hopkins, EPA Duluth, was cited as being an effective ombudsman between the city and EPA in helping to simplify and clarify EPA requirements. It is good when there is someone on hand locally to attend to this issue.

As follow-up to other meetings (South St. Louis SWCD, etc.), Bill indicated that the Natural Resource Inventory Committee has discussed the need to look at entire watersheds including those areas outside the jurisdiction of the City of Duluth and that the City would be interested in participating on some sort of a forum that brought together various entities (SWCD, local water planning, adjacent LUGs, etc.) to discuss common watershed management goals. Bill also expressed interest in a GIS consortium of local users and providers that is beginning to take shape and will be discussed in a January meeting that Tricia Ryan will convene.

Coastal Program Enhancement Study
3. Lake Superior Association of SWCDs and S. Louis County Meeting Notes
South St. Louis SWCD Office, November 21, 2000

Representatives from Cook, Lake, St. Louis and Carlton County SWCDs were present along with Mark Nelson and Gene Clark from BWSR and Tricia Ryan, Coastal Program Manager

Joseph Newberg, MASWCD, presented on the NACD **Great Lakes Committee** on which he sits. Each of the eight Great Lakes states has one member. The committee was officially formed in 1988, but has struggled to maintain funding since NACD cut staff support in 1998. They meet twice a year. Staff support, expenses and publications (newsletter) require about \$50,000/year. There was discussion on both the funding and function of the committee. Among the priorities for the coming year are to explore and promote relationships between SWCDs and CZM programs—especially, on nonpoint source pollution reduction programs—and to develop an information clearing house for issues of common interest to Great Lakes SWCDs. They are also working to increase SWCDs participation in Section 319 Program of the Clean Water Act.

Brad Matlack, Carlton Co. SWCD, presented an update on the **Forest Stewardship Grant** with DNR that their SWCD administers. About 70% of the 56 stewardship plans are in Carlton County. The current agreement to pay \$25/plan does not cover costs. There was discussion on raising it to \$75, but that would require the review/approval of the separate participating SWCDs. Apparently, DNR Forestry requires that 75% of the grant funds must go to planning. R.C. Boheim expressed the need to go beyond planning to implementation. Brian Haugen has replaced Marty Wiley at Moose Lake Forestry. I suggested that there could perhaps be greater support from DNR or the Forest Resource Council (Dave Miller, Duluth) if they could connect with the right people.

Mark Nelson, BWSR, discussed the **Government Innovation Grants** that are due on Dec. 15. BWSR is supporting SWCD applications for the \$100,000 (possibly, two grants?) that is available for developing “new ways of doing business.” Apparently, what is sought are things that simplify or combine services (joint powers agreements, working relationships, etc.). I noted that such activities could perhaps be considered as program enhancements in the work that I am doing. Mark and I agreed to compare notes on this later. Possibilities being considered are in forest stewardship and wetlands mapping/management.

There was also discussion on the **Coastal Program Grants** and **GLC Grants**. Tricia Ryan briefly described the coastal grant program and noted that many in the room had already applied for or received grants. R.C. Boheim expressed his appreciation for the new funding source which the coastal grants program has created for work within the Coastal area.

We then moved into discussion of the **Coastal Program Enhancement Study** that I am doing: I described some of my findings from earlier meetings with Lake County and the City of Duluth (need for technical services, development of shared data bases, etc.). Mark Nelson noted the challenge of bringing it all together—that it requires certain skills and experience as well as a lot of time. More specifically, reference was made to the need for coordination, grant writing and networking savvy across agency lines. When available, DNR area hydrologists have been effective in contributing to joint planning efforts and providing technical services upon request.

Following lunch, the discussion continued with a smaller group including Mark Johnson, St. Louis Co. Local Water Planner, R.C. Boheim, Mark Nelson, Gene Clark and Paul Sandstrom. We briefly discussed some of the work within the cities (Duluth, Proctor, Hermantown) in relationship to local water planning and cooperation with SWCD. Proctor has been actively involved; Hermantown and Duluth, less so. We debated how to encourage more watershed-based planning across city boundaries. Phase I of the Miller Creek CWP is just finishing up. It already has a joint powers board so the option of establishing a watershed district is among its considerations. Concern was expressed that there should be good linkage between the city's stormwater plan and its comprehensive plan (preservation of green space, etc.). Greater involvement of both SWCD and the county's local water plan should be encouraged.

Mark Johnson noted that the public interest at the annual Home Show where the county has a booth is high in both **erosion control and septic systems**, based on the discussion and brochures that they pass out. This suggests that there is public interest and demand for greater services (education, technical assistance, funding) in these areas. However, the erosion side of the CWP grant to St. Louis County is not garnering much interest because there are only a few properties that are eligible. Ditto, the sewage system side because most of the available land is slated to be sewerred under the proposed sewer line extension.

[Later conversation with Connie Christensen on Nov. 27, 2000, added the following information (she manages the grant for St. Louis County through the Community Development Division). She indicated that they have now funded three septic systems with the low interest loans, but no erosion control projects. Funds are available for protecting the shoreline of Lake Superior and those tributaries that feed into it. She noted that people are more willing to pay to replace a failed septic system than to put money into erosion control. Accordingly, she doesn't expect that the county will be able to pay out the full amount of the grant. Both R. C. Boheim and Gene Clark have been helpful in getting out the word on the program. However, she sees the need for providing one on one assistance with local property owners as being essential and that there is also a need for further financial assistance to add to the loans in making a more attractive erosion control package for the land owner. A technical committee is set up to oversee requests.]

Paul Sandstrom described the **Knife River Stewardship Project**. It is unique among similar watershed efforts because of its high fisheries value and the support it has received from the group making up the Forest Stewardship Committee—DNR Fisheries and Forestry, Lake and St. Louis Counties, BWSR, SWCD's and fishing organizations. Approximately 50% of the land is private; the rest of it is county land with the land split between Lake and St. Louis counties. Work began around 1990 with the nationwide establishment of the Forest Stewardship Planning Initiative. The local effort attempts to inform all watershed landowners of resource problems and opportunities connected to the health of the river system. Both counties participate on the Stewardship Committee providing project oversight. In addition, a contract forester (Toivo Sober) prepares Stewardship Plans for private landowners requesting assistance. There is also a newsletter that is sent out to all the land owners in the watershed. Paul noted that about 30% of the land owners now have forest stewardship plans, but that few have participated in associated cost share programs. The plans themselves provide a holistic view to land management (tips on controlling runoff, managed harvesting, BMPs, buffer strips, tree planting and conversion to forest from brush). Major erosion problems are identified, but the scope and cost of their repair are beyond the plan. In some instances, DNR Fisheries has been able to partner with the land

owner to protect banks and establish instream habitat. Similar work has been done on the Nemadji River since the early 90s. R.C. Boheim indicated that the contracted forester is now expanding his work westward from the Knife River to watersheds closer to Duluth.

Future Needs

GIS

Paul would like to see GIS landscape level planning applied to work within the watersheds using vegetation cover as a tool. (Studies by Sandy Verry at the Forestry Research Center show that there is a threshold at 40% open space when a forest is converted to something less than 15 years in age). This could be a useful planning tool. The ability of all landowners to coordinate forest management at the landscape level would be extremely beneficial to watershed health. Mark Johnson sees a GIS parcel layer as being useful for future web-based permitting.

Building Capacity

Although appreciative of all the grants that are available, R.C. Boheim expressed his frustration of the energy and time that is taken up working on grants in order to do the ongoing work that everyone knows is necessary—especially, in the area of nonpoint pollution reduction. He also noted the time and effort that goes into the development of plans—from large scale to small (forest stewardship plans) versus the lack of time that goes into implementation or follow-up. Paul noted, as an example, the need for more direct contact with property owners within the Knife River Watershed. However, no one has time to put to such efforts. New initiatives like the Flute Reed River stewardship effort (similar to what is being done with Knife River) may not be possible because of limited staff. This can be a problem with the smaller SWCDs.

Nonpoint Source Pollution Reduction

R.C. noted the work that is in progress on both the Lake Superior Basin Plan and the Coastal Nonpoint Source Pollution Program. The SWCDs are often the agency that implements nonpoint source reduction projects. [This was also made clear to me as I reviewed the South St. Louis SWCD Workplan 2000 that R.C. gave me at the meeting.] Accordingly, R.C. suggests that the Coastal Council consider passing through some of the CZM funds directly to SWCDs for their work in coastal nonpoint source pollution reduction. The Council could set the priorities or approve the plan under which such work took place. This would ease the burden and uncertainty of annual grant applications for ongoing high priority work in this area.

Coastal Program Enhancement Study

4. EPA Water Quality Lab

November 21, 2000, 3:30 - 5:00 p.m.

Present: Naomi Detenbeck, Danny Tanner, Debra Taylor, Jo Thompson, Sherry Batterman, Mark Pearson, Leslie Jagger, Ginny Snarski, Matthew Stacey, Jack Kelly, Stacey Stark, John Brazner, EPA Lab; Paul Sandstrom, NRCS; Brian Frederickson, MPCA; Tricia Ryan, Peder Otterson, DNR

We discussed the Western Lake Superior Watershed Research Workshop that was held February 17-18, 1998, at Duluth. Over 100 people participated. I noted some of the discussion topics (BMPs for coldwater streams, riparian zone protection vs. total watershed protection, etc.) and the breakout session on outreach. Brian Frederickson described some of his efforts with the Lake Superior Basin Plan. Tricia Ryan described the coastal grant program. While federal agencies are not eligible, they are most welcome to partner with local sponsors on grant applications. One recent grant that was not funded was a north shore stream study sponsored by Julie McDonnell, MPCA, that would have contrasted an impacted stream with one that was not impacted.

Naomi indicated that she is working to update summaries of ongoing research in watershed planning at the lab to put on their web site. We then discussed the difference between research and management; there are different languages and values involved. The challenge is to transfer what is learned from research into meaningful elements that can be applied by local resource managers and decision makers. Her unit's goal is to develop a water classification strategy for non point source sensitivity that includes both percent impervious and forest cover.

We talked about various regional needs:

- integrated data bases
- coordinated access/training
- derived layers (watershed classification)
- data interpretation/summaries
- landscape level planning (GIS)

There is a need to reconvene the initial workshop researchers to assess their progress over the last three years. However, there is also a need to determine how to improve the transfer of information to local decision makers (planning & zoning)—so that they know what the research is about and how it can be applied at their level. We discussed an initial scoping meeting made up of a few key researchers and local decision makers to work out the plans for a future workshop in the spring. Brian indicated that this could perhaps be tailored to fit a workshop that Steve Hobbs, Hennepin Co. SWCD, will be doing on “sharing the coast.” March or April were suggested as possible dates (before the field season goes into full force). Naomi will see who is interested at EPA Lab in helping scope out a workshop. Brian, Tricia and perhaps Peder will also contribute. It is likely that Sea Grant will also help to design and carry out the workshop plans.

Coastal Program Enhancement Study
5. Carlton County P&Z, LWP, and SWCD
Nov. 28, 2000 Meeting Notes (Peder Otterson)

Present: Brad Matlack, Carlton SWCD District Manager; Bruce Benson, Zoning Administrator; Brian Hayden, Local Water Planning Coordinator; Peder Otterson, DNR Waters (note taker)

Comprehensive Planning.

We began by discussing the **community based comprehensive planning** that is ongoing. Bruce mentioned that the planning committee was somewhat overwhelmed when the DNR showed up in force (about 10 people) with numerous presentations and data. In particular, Trails & Waterways' suggestion that snowmobile trail access be included in subdivision plats caused some concern among local citizens. In general, it was "a lot to swallow at one time" according to Bruce. I asked Bruce his overall opinion of the process (community-based planning). He sees it as basically a good process because of its good public participation. It is in public review now (third meeting in early December). The final draft and public hearing for approval should occur in May, 2001. The plan includes the river corridors on both the Kettle River and St. Louis where development pressure is high and they are seeking to put in larger lot requirements.

Local Water Planning.

An update is planned for 2001. Some of the key areas include wellhead protection and watershed management. I received a copy of the existing plan which was done in 1996.

Nemadji River Project.

The county has picked up the NRCS recommendations for the Nemadji which provided the basis for a Phase I CWP grant. Phase II of the grant began in 1999. A workplan has been approved and work is ongoing. Tony Kroska (Community GIS) is conducting Landsat analysis to identify forest cover less than 15 years old. The aim is to ensure that forest management falls within the recommendations that Sandy Verry has developed (>60% above the age of 15 years). Plans call for future Landsat analysis of the watershed every two years.

As for stewardship, they are working on developing demonstration projects for local buy in. DNR Area Fisheries Supervisor John Spurrier has been involved, as has Mark Ebbers from the St. Paul Fisheries office, which provided \$150,000 for erosion control on the Blackhoof. This project also provided habitat improvement by adding some eight miles of accessible trout habitat to the stream. Ryan Reed, Big Sandy Watershed Coordinator, has also been doing some technical coordination with Sandy Verry on the Nemadji. JoAnn Rosberg, MN Extension, is doing the administrative coordination.

Needs and challenges.

Brad sees educational outreach as an ongoing challenge. In addition, there are the daily needs for technical support and information. Earlier, the SWCD had functioned with a clerk and technician. By hiring Brad as a district manager, the District is better able to meet the technical needs that it has. Brad is working on improving their operational website and feels they could be doing more with schools, etc. if they had the time.

GIS

Mike Peloquin suggested that the SWCD apply for a Coastal Grant to digitize their protected waters and wetlands. However, as the Nemadji Basin is excluded from the Coastal area, little of the county would be included. Perhaps at some future date a boundary change can be considered?

The City of Cloquet is conducting a wetlands inventory (GIS) involving digital imagery of flight data tied in with Landsat data.

The county needs money to build up its GIS layers (parcels being a high priority).

We discussed the possible formation of a GIS Consortium.

Coastal Program Enhancement Study
6. Cook County Planning, SWCD and Citizens Committee
November 28, 2000 Meeting Notes (by Peder Otterson)

Present: Bonnie MacLean, Chel Anderson, Hyla Napadenski, I.A. Napadenski, Eleanor Lease (Cook Co. Coalition of Lakes), Anne Cervenka, Karen Evens, Timothy Nelson (County Planning & Zoning), Rebecca Wiinanen, Clarence Thompson (SWCD), Bernie Gestel, Jim Hall (County Commissioner), Tricia Ryan, Peder Otterson (DNR).

We began by going round the room saying who we were and our concerns for the coastal area. I was impressed by the breadth of knowledge of the citizens present who were also retired. In summary, here are the issues they raised:

- What is the effect of land activities upon near shore habitat on Lake Superior?
- Algal growth in inland lakes, downstream impacts to Lake Superior?
- The county's OHV trail plan (stream crossings, wetlands impacts, enforcement issues)
- Personal watercraft and their effects (oil pollution, etc.)
- Highway improvement projects (stormwater runoff, sediment control)
- Maintaining our clean water
- Bringing together Lake Superior shoreland property owners
- soft public access (quiet recreation) for local use and enjoyment
- good stewardship
- Better data management, GIS, tracking permits, etc.
- Getting the comp plan implemented into county ordinances, management tools
- Nonpoint source pollution—especially, with riverbank erosion and roads
- Enforcement and inspection of projects
- Roads and trails and their impact on the land (steep slopes, fragile soils, etc.)
- Development impacts (over development of certain areas, septic systems, etc.)
- Large scale developments (Lutsen area)
- Gunflint Bypass (erosion concern)
- Development of Old Ski Hill Road (steep slopes)
- Siting of towers

Roads, trails and other open corridors (power lines, etc.).

We discussed how many of the county's roads began as logging trails and that even a small cross-country ski trail or driveway can disrupt natural flows and increase erosion if not done properly. Summer use of such trails by OHV can cause added damage. All are accountable from USFS through DNR Trails to private resorts and other interests. There was a suggestion that the responsible parties from MnDOT through DNR and County Engineering should come together to develop a county road plan. Grant-in-aids for the various trails were also discussed. Some sort of a periodic trail audit was proposed. Ski trails within the blowdown area were also listed as a concern because of the enhanced erosion there (needs to be well-designed to avoid erosion).

Enforcement, tracking of permits

Tim Nelson described the “Black Bear” software that he is setting up to track permits, etc. This has been used successfully in Brown County and a few others. It is useful for keeping track of projects and also trends analysis. Enforcement often begins with a citizen’s complaint.

Wayne Seidel’s periodic inspections of ongoing erosion plans was cited as being important during a project’s construction stage (something almost always needs some attention). Another concern is after the fact permits with minimal financial penalty which can result in a fair amount of intentional development without permits.

Ordinance amendments

Jim Hall indicated that the ordinance is too lenient on Lake Superior setback (40 feet from the vegetation line). Others indicated they would like to see larger lots on lakes. Tim Nelson stated that the subdivision ordinance needs to be updated. We discussed reference to the Statewide Shoreland Management Standards and that counties are free to adopt stricter standards and make other revisions, based on their specific needs. Tim expects to see the Shoreland Ordinance updated in 2001 along with Subdivisions and an ordinance on towers.

Needs

GIS

Tower requests are pointing to the need for spacial analysis tools (GIS) to help determine the visual impacts (Carver County uses this now). Tim would also like to see parcel management through GIS, but it is slow going as different departments have different needs.

Karen indicated a need for a regional archive of historical maps and photos (base line data). She cited the forest inventory that is based on older (80's) photos and others that should be digitized and placed on CDs for future reference.

Tim Nelson’s wish list (from the questionnaire): enthusiastic citizen participation, fully implemented GIS, updated ordinances and the trend tracking software up and working.

Issues

Public awareness/ownership/enthusiasm

How to build local ownership/responsibility throughout the county that reaches both seasonal and year-round citizens? Newsletters (Arrowhead Currents, Flute Reed Newsletter, “Far Fetched”) were discussed along with workshops and other ideas. With the local talent that the County has, some felt that a weekly talk show might be a way to build and gather interest.

Recent Successes

Source Water Drinking Assessment, Gunflint Lodge (Bruce Kerfoot). This is a three tier assessment that will be the model of its kind for the state.

BMP Workshop for Contractors (last September). Contractors like Thoreson are more effective at designing driveways, etc. with proper attention to drainage, etc.

Stream Workshop (two days) by an Ontario Consultant with the International Erosion Control Association. Workshop blended engineering and biology for effective erosion control.

School involvement. Exciting work going on in both the elementary and middle schools. The Coalition of Lake Associations and SWCD have also provided materials on lake/water issues.

Quality of subdivision plats is improving as developers become more educated.

Following the meeting, I reviewed the Lake Superior erosion and septic system loans that the SWCD is administering through the Clean Water Partnership Loan Program (Lake Superior Shoreline Protection Project). This provides funding for low interest loans for shoreline protection. Two shoreline erosion control loans are completed and another two are pending (~\$88,000). Efforts are made to combine the loans with grants. Sixteen septic system loans are in process; eight have been completed. Of these, two are on inland lakes with the rest on Lake Superior. One involves a cluster of nine units. Total funds allotted to date: ~\$167,000. Rebecca Wiinanen, Cook County SWCD District Manager, believes that the County will have no problem filling out the rest of the grant and is in the process of requesting additional funds along with Lake County SWCD.

Rebecca also described the work that is ongoing with the Lower Flute Reed Watershed Project. An NRCS EQIP Grant (\$40,000) is pending, and a technical committee has been formed to deal with issues like erosion and sedimentation.

Coastal Program Enhancement Study
7. Programmatic Work Group (PCA) Meeting
November 29, 2000 Notes (Peder Otterson)

After updating the group on the work I am doing, the following was discussed:

Coastal Program Grants.

Dick Sigel (Lake County) noted the replicative nature of some of the Coastal Program grants and suggested there should be a way to make some of them more collective (bigger bang for the buck).

Power lines and related issues.

Powerline and tower siting issues were raised as a major concern. Some suggested that the North Shore should require stricter standards than inland areas. Unified standards for towers, corridors, etc. could perhaps be achieved through a consortium of the affected LUGs. Sharing of towers adjacent county or city lines was also suggested as a possible outcome.

Dan Retka indicated that the **DNR's Utility Crossing Permits** is also in need of improvement. Reference was made to last year's clear cutting adjacent the Kadunce River in Cook County and the uproar it caused.

GIS

The question was raised about digitizing of protected waters and wetlands within the full coastal area. I will look into what is required to achieve this (time and cost).

Other items discussed by PWG:

Jesse Anderson, PCA, presented on their **monitoring of Lake Superior streams**. Only 2 of the 27 streams are currently fully monitored. He showed nutrient levels (P,N) on the streams which appear to relate to development pressure between Duluth and Two Harbors. Phased monitoring on the Sucker, Talmadge and Poplar rivers is planned using continuous recording of stream flow, temperature and conductivity with 15 - 20 event samples (P, N, DO, turbidity, Hg?) to estimate loading rates. These streams were chosen because they are all on the impaired waters list for TMDLs. Paul Sandstrom suggested both upstream and downstream monitoring of the Poplar because of the recent land development along it. Equipment cost alone is \$6,000/site. Bill Majewski wondered how this might tie in to the City's work on its comp plan and the new sewer line extension.

Larry Moon indicated that Steve Hobbs, Hennepin Co. SWCD, will be at the next PWG on Dec. 20 and that there will be a steering committee meeting after it to lay plans for the April workshop at Superior Shores that he will be leading (similar to "Sharing the Heartland"). It will include innovative methods (TDRs) and other items useful to local decision makers and planners to ensure that development does not diminish local natural resource values and functions.

Before the PWG, I met with Julie McDonnell who manages the **Duluth PCA's 319 and Clean Water Partnership grants**. In addition to administering these grants, she is involved in some interagency coordination and networking, as well as internal coordination within the PCA. She noted that watershed management is not always an easy sell at the local level because people are reluctant to get involved with big management projects. Partly, this may be because of the

bureaucracy involved (forms, reports, etc.) as well as fear of attached strings which might lead to loss of local control.

We talked about the **need for technical support** that I have noted in my meetings with LUGs. Julie noted that, like DNR, PCA staff is also stretched and busy with its own requirements. A budget shortfall could lead to layoffs.

Julie is working on a Coastal Grant application to fund a coordinator for doing three pilot **NEMO projects in the coastal area**. Unfortunately, she is finding it difficult to achieve the required \$15,000 cash match as no one (including her) has the time or resources to put to it. An existing coastal grant for watershed education for local decision makers in Duluth Township is proceeding. The three proposed pilot areas are Cloquet, Two Harbors and Grand Marais. \$5,000 from each community would cover the cash match and provide the GIS mapping that is required.

We talked about the value of having better coordination across agencies so that each agency could contribute its share to effective watershed management irrespective of issues of turf or program. Such an approach would be not only more efficient but also more consistent. Julie mentioned that Mark Ebbers, DNR Fisheries, has been helpful in some of her watershed efforts.

Coastal Program Enhancement Study
Meeting with Education/Outreach Staff in Coastal Area
8. Minnesota Sea Grant, Washburn Hall, UMD, Duluth
December 7, 2000, 2:00 - 4:30 p.m. (Notes by P. Otterson)

Present: Cindy Hagley, Minnesota Sea Grant; Terry Anderson, MN Extension Director, NE District; Jay Sandal, Minnesota Aquarium; Mike Kennedy, OEA; Peder Otterson, DNR

We entered upon a discussion which ultimately ended up being more of a brainstorming session for enhancing outreach/education within the coastal area.

Mike noted that recent visioning of the Environmental Education Board might be helpful in shaping strategies. There is emphasis on partnering with various groups including business to help achieve goals. Learning outside the classroom including service learning is big on the list. DNR would seem to be well-situated to help enhance youth volunteer services.

I passed around a couple copies of the new GreenPrint and called attention to the audience involving government officials & boards which I felt was important to consider, based upon the needs I have heard in meetings with various local units of government in the coastal area (copies of these meeting notes were also distributed). We then discussed the following:

Transportation costs to get kids out of school is a major issue and an impediment to most outdoor learning activities. How to build this into education/outreach? A major challenge.

Local geography is a challenge. Length of the coastal area challenges coordinating what can be done—may be better addressed by Upper Shore (above Two Harbors) and Lower Shore (below it).

Arrowhead Water Quality Team has been highly effective—especially, in addressing issues of water quality concern. Team includes northern Wisconsin in such areas as NEMO coordination (a work in progress). They are working on a ground water education challenge grant (similar in concept to NEMO) which will cover the basics of ground water at county workshops (6) via CD-ROM presentation. Grant will be administered through Carlton County.

The Team consists of a core group of 15 - 18 people including local water planners and MN Extension, among others from a larger pool of ~50 groups and people (including DNR). Because of its effective mix of people and agencies, we debated whether the AWQT might be the appropriate mechanism for greater coordination of outreach/education services within the coastal area. It could be just the catalyst needed to get things done. That said, the team is currently struggling to find the money to keep its newsletter “Arrowhead Currents” alive.

Minnesota Extension. Terry indicated that the pamphlet “Living on a Few Acres” might be able to be modified for coastal areas. It has been popular in other areas of the state. There is an open position now which could be a shared position for a curriculum/event manager or youth outreach coordinator. Jay Sandal from the Aquarium expressed interest. He also indicated that their Aquarium Team makes use of youth volunteers to interface with the public (service learning). Summer interns is something else that Terry might be able to help provide through Extension. Minnesota Extension is also developing a tool (CD-ROM) for helping to train local units of government in various areas. Assistance is through CURA. Steve Daley Larson, Kim Boyce and

Dianne Flynn were mentioned as contacts. Extension also supports the Incredible Exchange (an opportunity for service learning). There is talk of extending the highly successful Master Gardener program to include aquatic vegetation.

Beach Sweep (Coast Week)

Lake Superior Center (nee Aquarium) is the lead. They have expanded it from just beaches to include watershed clean-ups. The beauty of it is that it is pretty much run by kids (schools) although others including even divers contribute to the clean-up effort. Kids also do the monitoring (recording of data, etc.). It generally takes place the third Saturday in September.

T-shirts and gloves are provided to the volunteers. Coast Week, which is its offshoot, was initiated by the Center for Marine Conservation and covers some 80 countries around the world. Locally, both Duluth and Superior participate in it.

We brainstormed expanding the program to a full week (i.e. Coast Week) and farther up the shore to make it, in effect, more of a coastal area celebration. There was talk of including our coastal heritage and possibly even the Grand Marais Art Colony. This could become an annual series of celebrations/workshops/events focusing on various elements of the coastal area. It could help to build an appreciation of place (space and time) for the coastal area.

If the project were to be expanded, there would likely be the need for a local coordinator at key points along the shore with overall coordination by someone else. Who would they be?

River Watch

This volunteer monitoring activity is supported by the St. Louis River Remedial Action Plan citizens advisory committee (Lynelle Hanson is contact: 218-733-9520). I understand that it was once quite active and is in process of being renewed. I am curious to know more details in order to determine whether it might be possible to expand volunteer monitoring to other watersheds.

EPA Workshop

We discussed the idea of a workshop that brought together the researchers at EPA lab with the local decision makers (first discussed at an earlier meeting with the EPA Lab). Terry indicated that Extension could assist with the marketing (publicity). Mike said OEA could probably assist with a grant, if needed. The Aquarium expressed interest and Sea Grant (Cindy) agreed to see to the coordination/facilitation.

Final Comment

Cindy stated that DNR needs to be more open to opportunities of partnership with Minnesota Extension, etc. in helping to achieve the types of projects that we discussed. Duly noted.

Addendum to Meeting Notes

I spoke with Lynelle Hanson (218-733-9520), Executive Director for the St. Louis River Citizens Action Committee (CAC) and former River Water Coordinator for the CAC.

She provided the following history on the **St. Louis River Watch Program**. From 1991-1995, it was coordinated by Jill Jacoby, Duluth PCA, who built it up to include 14 schools (elementary thru high school) within the Area of Concern for the St. Louis River Remedial Action Plan. It became dormant when Jacoby left PCA. In 1997, the Fond Du Lac Community College received funding from Minnesota Extension for River Watch, and Lynelle Hanson was hired in January, 1998, to coordinate the program. In the spring of 1998, 14 schools held a river congress and sent a

representative on to the state River Watch Congress. In the fall of 1998, the program was expanded to 22 schools covering the full watershed including Aurora, Hibbing and Cotton schools. The spring 1999 congress had 250 students; the spring 2000 congress, 500! By then, the program had grown to include Barnum, even though it lies outside the watershed.

Essentially, River Watch involves fall and spring monitoring of streams. Basic equipment costs to schools is not large (~\$250/school for waders, dip nets, etc.). The biggest job is establishing good relationships with teachers and then training them on the field methods. EPA lab staff have been great at providing the teacher training that is needed. River Watch is linked to other schools via the local and state congresses and the web.

When Lynelle took her job as executive director with the CAC, the coordination of River Watch again went into limbo. She expects that the Fond Du Lac Community College will fill it soon. Meanwhile, individual teachers in some of the schools have continued the monitoring program on their own. Lynelle indicated that the Silver Bay school may also have River Watch through the Michigan program?

Bottom line is this is an effective volunteer monitoring program that is popular with schools, but needs ongoing support and coordination in order for it to expand. Lynelle is happy to provide additional advice and support through the CAC. I wonder if it could be incorporated into other watershed initiatives like the Knife River Stewardship Project and even PCA and DNR's own instream monitoring efforts?

In speaking with Andy Wold, new environmental education director at Fond du Lac CC, I learned that a River Watch coordinator will be hired in January in time to put together the spring conference. He believes that the community college can have a role in expanding River Watch to the entire Lake Superior basin and welcomes the notion of coordination/collaboration with other agencies/groups, possibly, through the Arrowhead Water Quality Team.

Extension Retreat (summaries provided by Terry Anderson at our meeting).

I marked a number of the brainstorming titles that stood out to me as being potential for coastal program enhancement: Coordination of Youth Environment Education (this might include River Watch), Land Use-Planning urban/rural conflict (training twp. officers, etc.), Healthy Lakes & Rivers (River Watch again?), Backyard Forestry (incl. wetlands educ.). Good stuff, all!

Appendix B.

Summary of information from Local Government Questionnaire sent out to 31 local units of government within the Lake Superior Coastal area on October 13, 2000, plus sample fact sheets.

Number of units responding: 11 (4 counties, 4 cities, 3 townships).

Comprehensive Planning: 3 underway, 5 done recently, 1 needs updating

Of those done recently, 3 are tied to their local county water plan

Zoning Ordinances: 3 underway (updating), 4 done recently, 2 need updating

Subdivision controls: 4 need updating

Issues identified:

- enforcement
- erosion
- septic systems/sewer line extensions
- structures on bluffs, ridgelines

Needs identified:

- BMPs
- building enthusiastic citizen participation
- community air photo coverage
- developing new stormwater management plans
- a GIS Consortium to deal with GIS tools, training, etc.
- networking with other communities, government agencies on solving common problems
- technical services, guidebooks, information, training of local officials, citizen boards

Other:

Insufficient information was provided on variances and conditional use permits. However, of those reporting, the proportion of variances to number of zoning permits was not high.

In addition to gathering information, the questionnaire was used as a guide to help foster discussion at the 6 of the 8 meetings which are summarized in Appendix A. See Appendix A for greater detail in the items discussed.

**Minnesota Coastal Program Assessment Study
Local Government Questionnaire
(Please return by October 25, 2000)**

Local Unit of Government: _____ Date: _____
Name of Respondent/Title: _____ Phone: _____
Address: _____ FAX: _____

I. Planning.

A. Local Comprehensive Plan.

Date of current plan: _____. Planning underway or to begin on: _____.

Is it tied to Local Water Plan? Yes/No

Is it tied to other plans and ordinances? Yes/No

List of other special plans and ordinances (e.g. river, NSMP, stormwater, erosion control, etc)

B. Planning identified the following needs (information, management tools, GIS, etc):

C. Other needs and problem areas based upon your experience in local planning & zoning:

II. Ordinance Administration.

A. Recent updates, innovations or new ordinances (e.g. stormwater management, etc.):

1. _____

2. _____

3. _____

B. Monitoring/Trends Assessment/Management for Growth (no. of permits, variances, etc.):

III. Ordinance Enforcement. (How are land use violations managed? Any problems, trends?)

IV. Wish List. (Tools, services, etc. that would enhance local land use decision making).

Minnesota's Lake Superior Coastal Program Enhancement Study October, 2000

Minnesota's new Coastal Program is up and running and already into its second round of grant applications. The National Oceanic and Atmospheric Administration (NOAA) provides additional funds to help states with existing coastal programs to identify specific areas for program improvement. It begins with an assessment of the following potential enhancement areas and leads to strategies for those given high priority. The nine required assessment areas are:

wetlands, public access, coastal hazards, cumulative and secondary impacts, energy and government facility siting, marine debris, ocean (lake) resources, special area management plans, and aquaculture.

States currently involved in coastal programs (some are on their third assessment) use this as a periodic opportunity to review the nine enhancement areas in order to reset priorities and strategies for those areas needing work. As a new program, Minnesota's enhancement study will set the base line upon which the next five year assessment can be made, and will be used to help make the new coastal program even better during the coming five years (2001 - 2005).

Minnesota's Coastal Program has been built from the ground up using existing programs. Ours is a networked program which honors the respective roles of both state and local government working together to protect the local land and water resources and interests of Minnesota's Lake Superior coastal area. While the DNR is recognized as the lead state agency, it respects and supports the land use decision making authority of all the local units of government on the shore. During the first funding cycle of the Coastal Program, eight applications identified ordinance assessments and revisions as a part of the scope of work for their projects. Added support to local units of government to enhance land use decision making is an example of how the program enhancements might work.

The assessments and strategies developed by other Great Lakes states generally identify only a few areas for enhancement. Often, these are in the areas of wetlands, coastal hazards, and cumulative and secondary impacts (including areas like local comprehensive planning). It is likely that these are among the areas Minnesota will also choose to prioritize for enhancement.

Please note that nothing in program enhancement is intended to create any new programs or regulations. Instead, we intend for it to enhance and assist whatever is already in place. For example: some of Minnesota's coastal communities are included in the North Shore Management Plan. Enhancement funds could be used to assist coastal communities in updating their comprehensive plans and associated ordinances. Perhaps there is a need to better define erosion hazard areas? The strategies will depend upon what is identified in the assessments.

Minnesota's enhancement study is due in Washington on March 1, 2001! Although the time is short, we seek public participation for its development. If you or your respective group or unit of government would like to be involved, please contact Tricia Ryan, Minnesota's Lake Superior Coastal Program Manager (218-834-6625) or Peder Otterson (651-297-2405). We'll see that you are kept informed as the work proceeds. A rough time table follows:

Minnesota's Lake Superior Coastal Program Enhancement Study Time Table

October 1 - November 15, 2000

Development of assessments. Draft assessments will be posted on website and distributed among those who express interest in or have contributed to their development.

November 16 - December 31, 2000

Development of strategies. Draft strategies will be posted on website and distributed/discussed among those who have expressed interest in or have contributed to their development.

Mid - January, 2001

Public Workshop/Presentation on Draft Assessments & Strategies.

January 15 - February 28, 2001

Final Document prepared, posted on website and distributed to interest groups.

March 1, 2001

Minnesota's Lake Superior Coastal Program Enhancement Study is submitted to NOAA for approval and funding.

Contact Tricia Ryan or Peder Otterson (project coordinator) for additional information:

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Minnesota's Lake Superior Coastal Program
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NSMB Work Plan Prioritization Process

Projects Benefits	Conservation easements along the North Shore	Revise North Shore Management Plan	Communication tower development	Address needs for public access along the shore	Coordination among planning orgs. along shore	Sign ordinance revision along the North Shore	Land use coordination for unsewered areas	Reinvent the NS Management Board	Ridgeline development along the shore	Off-Highway Vehicle use along the North Shore
Result in significant action or effective ordinance creation	5/5	3/3	5/5	3/3	3/3	5/5	3/3	0/0	3/3	0/0
Relation to water quality	5/10	3/6	0/5	3/6	3/6	0/5	5/8	3/3	0/3	1/1
Promote communication or coordination between jurisdictions	3/13	5/11	5/10	1/7	5/11	5/10	3/11	5/8	3/6	0/1
Enhance or restore the image of the North Shore Management Board	3/16	3/14	5/15	3/10	5/16	3/13	3/14	5/13	3/9	0/1
Relation to public access	5/21	0/14	0/15	5/15	1/17	0/13	0/14	0/13	0/9	0/1
Able to withstand legal challenge	5/26	5/19	5/20	0/15	5/22	5/18	0/14	0/13	5/14	0/1
Project can be completed within a reasonable timeframe	1/27	3/22	5/25	3/18	0/22	3/21	3/17	3/16	0/14	0/1
Relation to managing development along the shore	5/32	5/27	5/30	3/21	5/27	5/26	5/22	0/16	5/19	0/1
Relation to shoreline erosion	5/37	5/32	0/30	3/24	3/30	0/26	0/22	0/16	0/19	1/2
Creates additional funding opportunities for future projects	3/40	3/35	0/30	5/29	3/33	1/27	5/27	3/19	0/19	0/2
Project of high visibility	3/43	1/36	5/35	5/34	1/34	5/32	3/30	5/24	3/22	3/5
Quality Function Deployment (QFD) Ranking	1	2	3	4	4	6	7	8	9	10
Straight Ranking	6	1	3	8	4	9	5	2	6	10
10-4 Ranking	7	1	3	6	4	8	8	1	5	8
Average <small>QFD weight → .50 Straight weight → .25-10- 4 weight → .25</small>	3¾	1½	3	5½	4	7¼	6¾	4¾	7¼	9¼
Priority Order	3	1	2	6	4	8	7	5	8	10