

# Duluth-Superior Port Land Use Plan

February 2006



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Prepared by

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Duluth-Superior Metropolitan Interstate Council



# Duluth-Superior Port Land Use Plan

## Introduction

In 2002, the Metropolitan Interstate Council (MIC) was discussing work program projects and harbor issues. It was recognized that the existing Duluth Comprehensive Port Development Plan was ten years old. There was a desire to update that plan and also to examine the harbor as a whole—although it is located in two states, the working waterfront functions as a single harbor. The result is the combined Duluth-Superior Port Land Use Plan.

To approach this project, it was decided to examine Superior and Duluth separately to identify and address issues unique to each state. The Superior side was chosen for the first half of this planning effort. As the process got underway, the study committee felt that approaching it as a *land use* plan would be more appropriate than as a *development* plan. The study methodologies determined for the Superior Plan, which was completed in June 2003, were then followed and refined for the Duluth Plan, completed in October 2005.

Placing both plans under one cover does, however, create some redundancy as the plans were generated as stand-alone documents but have very similar organization and content. This introduction will outline the methodology and content of the plans as well as the similarities and differences between them.

It will be the charge of the MIC's Harbor Technical Advisory Committee (HTAC) to review this document every three years. Many of the same people that served on each study advisory committee would be primary candidates to serve on this review subcommittee. The review will include a status report of the action plans as well as examining the recommendations to ensure they are still valid. In the short term, MIC staff will continue to work with all port stakeholders toward implementation of all elements of the plan.

## Stakeholder Input/Public Outreach

Port stakeholders harbor-wide were contacted to obtain their input on issues and needs in the port area. Port area businesses in both Duluth and Superior were contacted and asked a series of questions about port related infrastructure, land use issues, regulatory issues and bigger picture Great Lakes shipping issues. A public outreach effort was also conducted to engage port related groups and receive their input on issues they felt important. Presentations were done at monthly or quarterly meetings of the International Shipmasters, Propeller Club, Grain and Elevator Processing Society, Duluth-Superior Transportation Association, and St. Louis River Citizens Action Committee.

Some common themes that we heard included land uses in the study areas are better suited to maritime and industrial uses with some opportunities for limited recreation uses. The port area needs a land use plan so land use decisions are made with consistency and continuity. The federally designated shipping channel is a resource that should be protected. The feedback that we received was valuable and was considered in the development of the future land use map.

## **Public Trust Doctrine**

One of the biggest differences between the states on how rules and laws have evolved is in the area of public trust. In Wisconsin, the Public Trust Doctrine is imbedded in its State Constitution and in Minnesota it is not. Wisconsin has developed some specific rules as to what types of development are allowed on lands created by filling navigable waterways. The State of Wisconsin charged its Department of Natural Resources (DNR) with enforcing the Public Trust Doctrine. The Superior Plan (pg. 25) contains a matrix developed in 1989 to assist local governments, developers and the public to understand the allowable uses on filled lands.

In Minnesota, the Public Trust Doctrine is not defined as specifically as in Wisconsin. Minnesota also charges its DNR to uphold the concepts of public trust. This can be accomplished through permitting requirements for water projects, court action, and statutes authorizing local zoning ordinances that address development along navigable waterways. The Duluth Plan includes in the Appendices some of the more pertinent state statutes and rules that apply to the Public Trust Doctrine and navigable waterways (pg. 93).

The primary reason to include information on the public trust is to inform local decision makers, port stakeholders, and the general public that public trust issues may impact land use along the working waterfront.

## **Current Land Use**

One of the biggest differences in current land use between the two cities is the amount of available land. Superior has more land available along the waterfront for port related development. In Duluth the majority of port land are currently developed with the exception of Garfield Docks C & D which are currently available for development.

Some of the issues surrounding land use and the availability of land are how long does a city hold onto land awaiting port dependent development.

Another issue key to port land use is compatible land uses. Current businesses that transship bulk commodities by their very nature as noisy and generate dust. That type of land use is not compatible to certain types of recreational and commercial land uses. Locating a marina next to a facility that generates dust and has large ships docking nearby are not compatible land uses.

Each plan also contains information about waterfront facilities. The information was drawn from a variety of sources including each city, the Army Corps of Engineers, and the U.S. Coast Guard. The information provides the reader with a description of each facility and some information about each company that operates the facilities. Potential uses of this information include marketing inactive facilities to prospective buyers.

## **The Natural Environment**

This is one issue that shows the need to form a holistic approach to addressing the problems in this area. Environmental problems are not unique to one state or city. These problems cross boundaries and must be addressed on a regional basis. The information in both the Superior and Duluth sections of the plan outline some programs that are unique to each state in dealing with contaminated sediments and brownfields. Developing a strategy to clean up contaminated sediments should be a coordinated effort that addresses the entire area of concern (AOC). Participation of all port stakeholders is important as current efforts are already underway in developing an estuary-wide sediment management plan.

## **Future Land Use**

A key piece of each plan is the Future Land Use Map that was developed to provide the respective cities with a guide for future land use decisions. As we heard from businesses on both sides of the harbor, they want land use decisions to be made with consistency and continuity. The goal is to provide an arrangement of land uses that are compatible, protect natural and economic resources, and provide opportunities for future development.

One factor that was very important in examining future land use in the port area is the location of the federally designated shipping channel. This channel is maintained to facilitate the movement of deeper draft ships that move the many tons of bulk cargoes moving through the Duluth-Superior port. Port land with proximity to the shipping channel has a higher value and is in limited supply. Land uses that don't require access to the shipping channel should be located elsewhere along the waterfront. Once these channel front lands are used for purposes other than freight moving, they will be extremely difficult to reclaim.

## **Funding**

Many of the funding sources are unique to each state and apply to port facilities, rail and waterfront businesses. On the Wisconsin side the Harbor Assistance Program (HAP) is designed to help harbor communities maintain and improve waterborne commerce facilities. Since the completion of the Superior plan, the City of Superior has been successful in obtaining a HAP grant to improve the dock at General Mills Elevator S&X.

On the Minnesota side the primary funding program is the Minnesota Port Development Assistance Program, which aids Port Authorities in rehabilitating and improving port infrastructure and is patterned after the Wisconsin HAP. The Duluth Seaway Port Authority submits projects to the Minnesota Department of Transportation and has been successful in the past in obtaining harbor grants for projects such as the development of Helberg Drive in the port terminal area.

A number of funding sources listed in both plans are targeted toward cleaning up brownfields. This would help get some useable land along the waterfront cleaned up and back in productive land uses. Other funding sources outline tax breaks for various activities that would benefit the port community.

## **Policies and Recommendations**

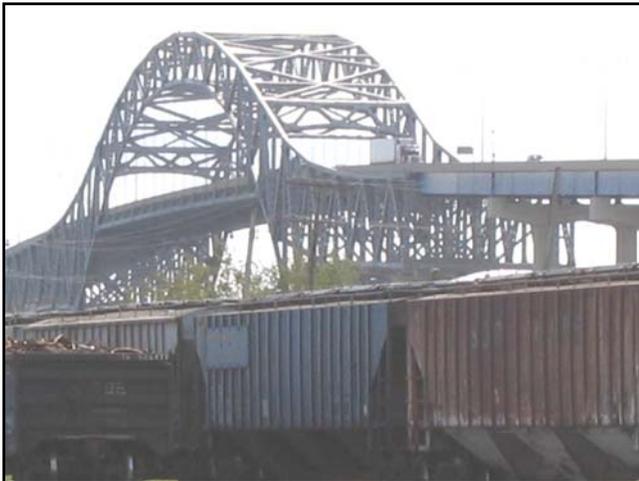
The policy and recommendation chapters are structured to briefly summarize information from each plan. They include policies and recommendations from prior planning efforts as well as new ones. The final section of these chapters contains an action plan and implementation schedule which displays each recommendation and who is responsible for implementing it and when it should happen.

The recommended policies from each plan include similar elements, such as utilizing the Future Land Use Maps, considering the Public Trust Doctrine in development decisions, promoting beneficial reuse of dredge materials, protecting natural areas, encouraging reuse of underutilized dock structures, and giving priority to maritime commerce in land along the federally designated shipping channel. Unique to the separate plans are the recommendations that the City of Superior re-establish its Board of Harbor Commissioners and that the City of Duluth should update the Memorandum of Understanding from the 1992 Duluth Comprehensive Port Development Plan.

As mentioned above, one recommendation is to have a subcommittee of the HTAC review the plan every three years. Elements of this review would include compiling a status report of implementation activities of the recommendations. Other activities would be examining each recommendation to see if it is still relevant; updating or changing the recommendations, outlining implementation priorities, and determining if sub area studies are needed to examine land use issues on a smaller scale. Periodically reviewing the plan will keep the plan current and provide a status report on implementing activities.

# Duluth Port Land Use Plan

October 2005



Prepared by the Duluth-Superior Metropolitan Interstate Council





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*Duluth and Superior urban area communities  
cooperating in planning and development  
through a joint venture of the  
Arrowhead Regional Development Commission  
and the  
Northwest Regional Planning Commission*



To view this plan online  
or for more information  
please visit [www.ardc.org/mic](http://www.ardc.org/mic)

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## Acronym Guide

|                  |   |
|------------------|---|
| <b>AGP</b>       | Ag Processing Inc.                                |
| <b>AOC</b>       | Area of Concern                                   |
| <b>ARDC</b>      | Arrowhead Regional Development Commission         |
| <b>BEA</b>       | Business Economic Areas                           |
| <b>BNSF</b>      | Burlington Northern Santa Fe                      |
| <b>BWSR</b>      | Board of Water and Soils Resources                |
| <b>CAD</b>       | Confined Aquatic Disposal                         |
| <b>CDF</b>       | Confined Disposal Facility                        |
| <b>CLM Co.</b>   | Cutler-Magner Company                             |
| <b>CN</b>        | Canadian National                                 |
| <b>CP</b>        | Canadian Pacific                                  |
| <b>DEED</b>      | Department of Employment and Economic Development |
| <b>DM&amp;IR</b> | Duluth Missabe & Iron Range                       |
| <b>DMMP</b>      | Dredged Material Maintenance Plan                 |
| <b>DNR</b>       | Department of Natural Resources                   |
| <b>DRAP</b>      | Development Remedial Action Plan                  |
| <b>DSPA</b>      | Duluth Seaway Port Authority                      |
| <b>EPA</b>       | Environmental Protection Agency                   |
| <b>FRIIP</b>     | Freight Rail Infrastructure Improvement Program   |
| <b>FRPP</b>      | Freight Rail Preservation Program                 |
| <b>GIS</b>       | Geographic Information Systems                    |
| <b>HTAC</b>      | Harbor Technical Advisory Committee               |
| <b>IJC</b>       | International Joint Commission                    |
| <b>JOBZ</b>      | Job Opportunity Building Zones                    |
| <b>LGU</b>       | Local Unit of Government                          |
| <b>LLC</b>       | Limited Liability Corporation                     |
| <b>MIC</b>       | Metropolitan Interstate Council                   |
| <b>MnDOT</b>     | Minnesota Department of Transportation            |
| <b>MLSCP</b>     | Minnesota's Lake Superior Coastal Program         |
| <b>MOU</b>       | Memorandum of Understanding                       |
| <b>MPCA</b>      | Minnesota Pollution Control Agency                |
| <b>MRSI</b>      | Minnesota Rail Service Program                    |
| <b>NOAA</b>      | National Oceanic and Atmospheric Administration   |
| <b>OHWM</b>      | Ordinary High Water Mark                          |
| <b>PAH</b>       | Polycyclic Aromatic Hydrocarbons                  |
| <b>PCB</b>       | Polychlorinate Biphenyls                          |
| <b>PTD</b>       | Public Trust Doctrine                             |
| <b>R4R</b>       | Resources for Redevelopment                       |
| <b>RAP</b>       | Remedial Action Plan                              |

|               |  |
|---------------|--|
| <b>RLF</b>    | Revolving Loan Fund                                      |
| <b>RO/RO</b>  | Roll-On/Roll-Off   |
| <b>SLRCAC</b> | St. Louis River Citizen Action Committee                 |
| <b>SLRIDT</b> | St. Louis River Interlake/Duluth Tar Superfund Site      |
| <b>TBA</b>    | Targeted Brownfield Assessment                           |
| <b>TH</b>     | Trunk Highway  |
| <b>TIFIA</b>  | Transportation Infrastructure Finance and Innovation Act |
| <b>UP</b>     | Union Pacific  |
| <b>UWS</b>    | University of Wisconsin-Superior                         |
| <b>VIC</b>    | Voluntary Investigation and Cleanup                      |
| <b>VOC</b>    | Volatile Organic Compounds                               |
| <b>VPIC</b>   | Voluntary Petroleum Investigation and Cleanup            |
| <b>WCA</b>    | Wetland Conservation Act                                 |
| <b>WLSSD</b>  | Western Lake Superior Sanitary District                  |

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### ***Map Disclaimer***

*The information contained in the following maps is a compilation of data from various federal, state, county, regional, and municipal sources. Geographic information has limitations due to the scale, resolution, date and interpretation of the original source materials. Users should consult available data documentation (metadata) to determine limitations and the precision to which the data depicts distance, direction, location or other geographic characteristics. These maps and/or data are not legal survey documents to be used for describing land for the purpose of ownership or title.*



# Introduction

The Duluth-Superior port is located at the far western tip of Lake Superior 2,342 miles by ship from the Atlantic Ocean. This bi-state port is located in the cities of Superior, Wisconsin and Duluth, Minnesota. The naturally protected harbor on the lower reaches of St. Louis River consists of 19 square miles of land and water with 17 miles of dredged shipping channels protected by a natural sand peninsula. On average, 40 million metric tons of cargo moves through the port, making it the largest port on the Great Lakes and one of the premier bulk cargo ports in the United States. The primary bulk commodities shipped through the port are coal, iron ore, and grain. The port is a key economic generator for the regional economy and employs over 2,000 people through its direct and spin-off activities.

## Duluth-Superior Port History

In 1852, railroad speculation caused the U.S. government to send representatives to survey the western end of Lake Superior. The next year a settlement emerged near the mouth of the Nemadji River in what now is the east end of Superior. The natural harbor in Superior Bay was an excellent site for the terminus of the proposed railroad and speculators hoped to plan a port town. Early settlers petitioned the State of Wisconsin to form Douglas County in 1854. The development of the Soo Locks in 1855 opened Lake Superior to further mineral exploration and, along with existing water routes, connected Duluth-Superior to New York City. The Duluth-Superior harbor became a base for supplies to the fur trade, mineral exploration, and lumber camps of the area.

The Lake Superior & Mississippi Railroad was completed connecting Duluth to Minneapolis and St. Paul by 1871. This time represented a boom for Duluth while Superior remained isolated. It was also around this time that Duluth residents decided to cut another entrance through Minnesota Point to improve access to their inner harbor along Superior Bay. Superior residents felt this action threatened the development and growth of their town and harbor and sought an injunction from the federal government to stop the new canal. By the time the injunction came from Washington, the canal was completed and ship traffic was already using the new Duluth entry. The addition of a rail line to Duluth and the new Duluth harbor entry brought most of the ingoing and outgoing freight to the newly developed inner Duluth harbor.

By 1882, Superior had its rail connection and was able to reclaim some of the freight shipments. The village of Superior, having gone through a series of phases of growth and decline, incorporated in 1887. At this time, a boom led to the development of numerous ore docks, grain elevators, and coal docks along the Superior waterfront. Lumber from northern Wisconsin and northeastern Minnesota was shipped to the growing cities of the Midwest. Cargo statistics for the port were first recorded in 1871 and showed that 273 ships visited the Duluth-Superior port that year. By 1880, 500 ships a year were visiting the port. Over 5,000 ships per year were calling at the port at the turn of the century, moving over 10 million tons of cargo. The port of Duluth-Superior port fueled a large population growth in the early 20th century with Superior

becoming the second largest city in Wisconsin by 1900 and Duluth growing to nearly 100,000 by 1920.

The connection of western Minnesota and the Red River Valley to the Duluth-Superior port led to a large growth in grain shipments. By 1891, Duluth operated 13 elevators and shipped 20,000,000 bushels of grain, mostly the famous hard spring wheat. Another ten elevators were in operation in Superior. Grain production diminished somewhat at the turn-of-the-century, although by 1909, wheat shipments at Duluth-Superior rose to more than 54 million bushels with a value of over \$55 million. Between 1919 and 1935, the United States and Canada shipped one-third of the world's grain. Duluth-Superior harbor handled nearly 20 percent of all the grain that was shipped on the upper Lakes. By World War II, the Twin Ports operated 25 elevators with a combined storage capacity of 50 million bushels. Just after the war, grain shipments set a record of 4.1 million metric tons that would hold for the next 30 years. With the opening of the St. Lawrence Seaway in 1959, Duluth-Superior became a significant port of origin in the world grain market.

The discovery of high-grade iron ore in northeastern Minnesota led to the development of ore docks, first in Superior in 1892 and then Duluth in 1893. This began an era when ore shipments rose to 5 million metric tons by 1900 and 22 million metric tons by 1910. In that year, iron ore accounted for about half of all cargo tonnages shipped on the Great Lakes. High-grade iron ore from northeastern Minnesota fueled ship building for two world wars as well as the extended economic growth periods after World War II. By the mid 1950s, most of the highest grade iron ore was depleted and lower grade ore were beginning to be mined. This was the beginning of the inclusion of taconite into iron ore shipments. By 1967, processed taconite shipments surpassed natural ore because it was more uniform and economical to process.

Coal shipments at the Duluth-Superior port were historically inbound until the development of what is now Midwest Energy Resources Corporation in 1976. Coal was the leading inbound commodity from the 1870s through the 1960s. While some coal is still inbound, western low-sulfur coal is experiencing high demand because of its environmental importance. Midwest Energy, a subsidiary of Detroit Edison, moves as much as 18 million metric tons of coal through their facility each shipping season. They can load coal onto ships at a rate of 11,500 metric tons per hour. In 2000 and 2001, coal passed iron ore as the top commodity in tonnage shipped through the Duluth-Superior port.

In addition to grain, coal and ore, another important cargo proved to be lumber. At the turn of the century, cargoes of Minnesota and Wisconsin lumber grew to tremendous proportions. For the next ten years, about 400 million board feet of lumber (a million tons) were shipped from the harbor annually, making it the hub of the industry until 1920, when focus shifted to the Pacific Coast. Much of this lumber along with the iron ore shipped from the port helped develop the Midwest in its era of growth.

Congress combined the Duluth and Superior ports in 1896, and for the first time provided a joint appropriation of \$3 million for harbor improvements. During the next ten years, channels were

enlarged and deepened to 20 feet. Large anchorage basins were created inside the harbor, and both the Duluth and Superior entries were rebuilt and enlarged.

The U.S. Army Corps of Engineers kept pace with the growing Twin Ports industry, widening, deepening, and extending channels to new locations as the harbor and vessels expanded to new size and capacity. Channels were deepened from 20 feet to 24 feet in the 1930s. With the development of the St. Lawrence Seaway system during the 1950s, many waterways in the Great Lakes were deepened to 27 feet deep to accommodate larger lake ships, as well as the ocean-going foreign vessels.

The opening of the St. Lawrence Seaway in 1959 introduced a new era as it brought greater numbers of oceangoing ships to the Duluth-Superior port. New trading opportunities were opened as the port now had access to world markets. Grain shipments increased from an average of 2.8 million metric tons in the 1950s to over 4 million metric tons in the 1960s to over 5.7 million metric tons in the 1970s. This increase in grain trade is quite significant given that grain is the highest-value commodity of the three main bulk commodities (ore, coal, and grain) that dominate port cargoes.

Recent port history has seen a decrease in the amount of grain and iron ore with an increase in coal shipments. Changes in national steel and grain markets combined with changes in the transportation market have moved shipment of some commodities to other waterways and modes of transportation.

### **Economic Impact of the Port**

The port of Duluth-Superior is one of the most important sectors of the regional economy. Klaers, Powers and Associates produced the Port of Duluth-Superior Economic Impact of 2001 Shipping Season. This document presents the estimated economic impact generated by transshipment of cargoes and private and public investment in port infrastructure during the 2001 shipping season.

The analysis is done using an input-output model customized for this area. The total economic impact for the 2001 shipping season was estimated at over \$210 million. This total was broken down into almost \$138 million in direct impact or the cost of transshipping goods and the capital investments. The other portion (over \$72 million) was indirect impacts plus induced impacts, or the purchase of goods and services from other economic sectors, along with the wages paid workers in the direct and indirect activities.

The port generated 1,227 jobs directly and 766 jobs indirectly in 2001. The port handled 36.5 metric tons of cargo in 2001 valued at \$1.9 billion. Coal was the leading cargo with 15.1 metric tons followed by iron ore (13.9 million tons), grain (3.8 million tons) and various dry bulk cargoes (3.4 million tons). This analysis points out how important the port of Duluth-Superior is to the regional economies of northwestern Wisconsin and northeastern Minnesota.

## **Planning Process**

The Duluth Port Land Use Plan derived from the need to produce a coordinated land use plan for the entire port. The Duluth-Superior port functions as one port even though it is located in two cities and two states. The Metropolitan Interstate Council (MIC) first completed the Superior plan and then utilized the same methodology to complete the Duluth side with a few modifications. By completing one side at a time, information unique to each state can be considered in greater detail. The two plans will be combined upon completion to form the Duluth-Superior Port Land Use Plan.

The study area for the plan is shown on Map 1 and extends from Bayfront Park upstream to Stryker Bay. It includes all water areas adjacent to the described land out to the Wisconsin border. The land area goes inland to the first major roadway. The study area for this planning effort represents the working waterfront or the area where water dependent freight movement activities are concentrated. The MIC, designated as the metropolitan planning organization for the Duluth-Superior area, is charged with transportation planning for all modes of transportation. This includes planning for the efficient movement of freight. This planning effort is designed to aid water dependent freight movement.

The planning process for the Duluth Port Land Use Plan includes a number of elements: background research, data collection and analysis, public outreach, stakeholder input, and a study committee. Each of these elements is described in greater detail throughout this document

Background research was conducted in order to gain some insights into previous decisions on port management. A number of local plans were reviewed that addressed specific as well as port wide issues. State rules and laws were examined to gain a perspective on how Minnesota governs its waterfront lands. Federal literature was also researched to gain an idea on how national forces are influencing water transportation.

An extensive geographic data collection and analysis effort was undertaken to provide an accurate depiction of current land use and to assist in developing a vision for future land use. Broad data categories including environmental, utilities, transportation and land use provided the input data for the land use analysis. The results of the data analysis were utilized as input information for determining best future uses of port land.

Throughout this planning process, a public outreach and stakeholder input efforts were carried out. Groups with port interests were identified by staff and subcommittee members and contacted with a request to present information and seek feedback from their members. Presentations describing the planning process and goals were made at their meetings and comments were taken. Stakeholder input is important to gain knowledge on the needs of businesses currently operating on the Superior waterfront. Businesses were interviewed to identify those needs and find out what these business operators see as the future of the Duluth-Superior port.

Information updates were presented to the Harbor Technical Advisory Committee (HTAC) throughout the planning process. The HTAC is an assemblage of stakeholders for the Duluth-

Superior port that advises the MIC on harbor-related issues. The HTAC's mission is to provide a forum for the discussion of harbor-related issues and concerns, promote the harbor's economic and environmental importance to the community, and provide sound planning and management recommendations to the MIC.

The HTAC's primary functions are threefold. First, to provide an interstate forum for the discussion and formulation of recommendations regarding harbor issues relevant to the Duluth-Superior urbanized area by private, local, state and federal officials who are directly concerned with their planning, programming and implementation. Secondly, to encourage participation in and coordination with comprehensive metropolitan planning by all local governments, state and federal agencies, and industry and environmental representatives that have a direct role in the physical development, dredging and dredged material management, environmental restoration and enhancement activities, and land use development activities in the St. Louis River Bay and Estuary. And finally, to develop, promote, monitor adherence to, and complete an annual review of comprehensive port development plans for the harbor, including the existing *Duluth Comprehensive Port Development Plan* and the *Superior Port Land Use Plan*. The HTAC input was important given the varied interests on the committee.

### **Study Committee**

A study committee was organized to assist staff throughout the planning process. The Study Committee was coordinated as a subcommittee of the HTAC which included some non-HTAC technical advisors. The committee members possess a wealth of knowledge on port issues and are familiar with the maritime industry and the history of the Duluth port. They represent a wide range of interests and provided a valuable forum for review of data analysis, public outreach opportunities, policy development, and visioning for future port land use.

#### *Study Committee Members:*

Ron Chicka, MIC Director

Brian Fredrickson, Minnesota Pollution Control Agency

Chuck Froseth, City of Duluth Planning

Lynelle Hanson, St. Louis River Citizens Action Committee

Denny Johnson, Minnesota Department of Transportation

Al Klein, Army Corps of Engineers

Mike McCoshen, Industry Representative

Mike Peloquin, Minnesota Department of Natural Resources

Lt. Greg Schultz, U.S. Coast Guard

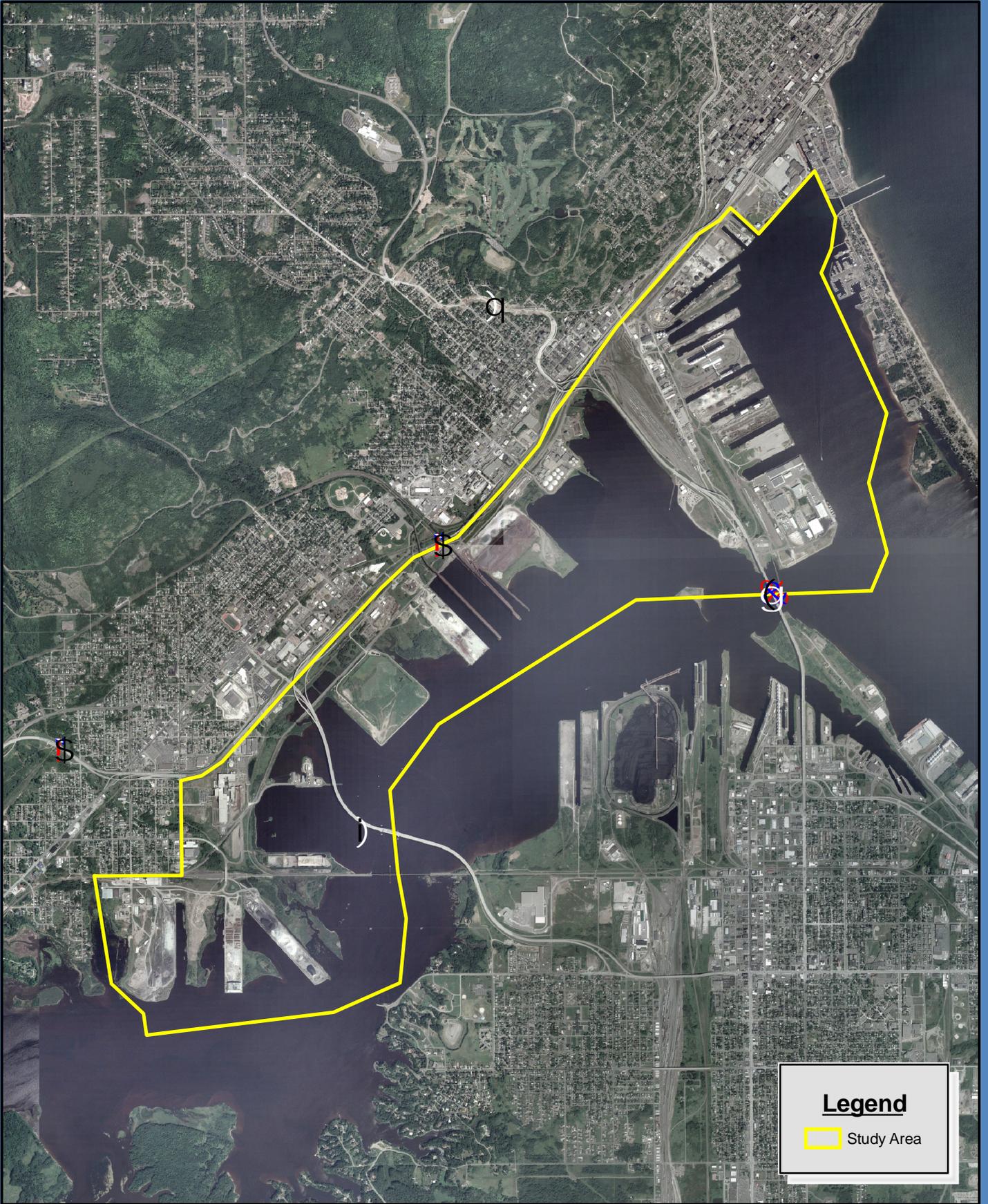
Jim Sharrow, Duluth Seaway Port Authority

Capt. Ray Skelton, Duluth Seaway Port Authority

Jim Stauber, Duluth City Council

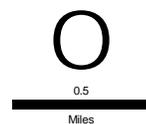
Dr. Richard Stewart, University of Wisconsin Superior – Transportation Logistics Program





Map 1

# Duluth Port Land Use Plan Study Area



**Back of Map 1**  
**Duluth Port Land Use Plan Study Area**

## Background Documents

The following plans and documents were reviewed to provide background information for this planning process. These plans represent a wealth of information and recent history of port planning issues and represent the hard work of many agencies, groups, and citizens. The Duluth Port Land Use Plan recognizes these prior planning efforts and builds upon many of the ideas outlined in the documents. This plan is intended as an update to the Duluth Comprehensive Port Development Plan.

### **1978 Land Use and Management Plan for the Duluth-Superior Harbor**

The “78 Harbor Plan” as it is referred to was undertaken to provide direction to guide development and use of the harbor. The planning area for this document included the entire St. Louis River Estuary from Fond du Lac to the Duluth and Superior Port Entries. The major issues addressed in the plan include marine development, natural resources, harbor accessibility, dredge disposal, recreation, and harbor management. The plan generated policies that speak to these issues and set forth a preferred pattern of land use for the study area. The plan was prepared by the MIC and funded in part by grants from the Office of Coastal Zone Management of the National Oceanic and Atmospheric Administration, Department of Housing and Urban Development, and the Minnesota and Wisconsin Coastal Zone Management programs.

### **A Plan for the Duluth Waterfront 1985**

A Plan for the Duluth Waterfront was the final product of the city of Duluth in conjunction with Buckhurst Fish & Jacquemart, Inc. and the Pei Property Development Corporation. Addressed in the study was the two miles along Lake Superior and the Duluth Harbor basin between 14th Avenue West and 10th Avenue East and includes a map of land use within the study area. Mixed land use suggestions included a marina and 30 luxury apartments and condominiums along the Duluth Harbor as well as offices and shops for Canal Park. The Plan was to be used as a prospectus to identify opportunities for private development and zoning amendments to implement the Plan. The work consists of a comprehensive physical and design analysis as well as an economic and development evaluation. The project included a major public participation process consisting of a series of waterfront workshop sessions with a diversity of civic and business groups. The results from the workshop sessions were presented in technical memos.

### **Duluth Comprehensive Port Development Plan – 1992**

The Duluth Comprehensive Port Development Plan contains a Memorandum of Understanding (MOU) that binds the City of Duluth, Duluth Seaway Port Authority, and Minnesota Department of Natural Resources to set forth procedures for ensuring preservation of natural areas, disposal of dredged materials in designated disposal sites, and conservation of harbor lands suitable for maritime industrial development. The MOU also describes a forum for joint discussion and formal comments on land use development issues in and adjacent to the St. Louis River and Estuary. The Plan also contains a description of designated natural protection areas, designated dredge material disposal sites, habitat and protected waters mitigation procedures, a wetlands inventory, harbor front lands zoned W-1 Waterfront District, and an inventory of mitigation sites.

### **St. Louis River Remedial Action Plan – 1992, 1995**

The Remedial Action Plan (RAP) process was the result of the International Joint Commission's (IJC) efforts to halt the degradation of water quality in the Great Lakes. The St. Louis River was identified in 1978 as one of 43 areas of concern (AOC) across the Great Lakes. The Great Lakes Water Quality Agreement, as amended on November 18, 1987, defines AOC as "...a geographic area that fails to meet the general or specific objectives of the Agreement, or where such failure has caused or is likely to cause impairment of beneficial use or of the area's ability to support aquatic life." The goal of RAPs is to define problems and their causes, and then recommend actions and timetables to restore all beneficial uses of the AOCs. Restoring uses is to be achieved through implementation of programs and measures to control pollution sources and remediate environmental problems. The IJC requested that the Minnesota Pollution Control Agency and Wisconsin Department of Natural Resources develop a RAP that identifies specific management strategies to control sources of pollution, abate environmental contamination already present, and restore beneficial uses in the AOC.

### **Resolution of Land Use and Port Access Conflicts at Inland Waterway Ports – 1996**

This report was compiled by the U.S. Department of Transportation – Maritime Administration to identify methods for resolving conflicts of port land use. Urban redevelopment of the waterfront area has grown tremendously in the last two decades and has produced competition for waterfront land between waterway navigation interests and redevelopment interests. Guidelines presented in the plan focus on developing mechanisms to improve communication among individuals and agencies involved in the planning process. Recommendations include disseminating information from this plan to planners, intermodal transportation interests, and waterway navigation interests. Other recommendations include establishing an industry review committee, holding a forum to address conflict issues, and development of a Department of Transportation Interagency Task Force to assist cities in the resolution of port land use issues.

### **Erosion and Sedimentation in the Nemadji River Basin – 1998**

This study examined sedimentation and erosion problems in the Nemadji River watershed. This watershed, located in Douglas County in Wisconsin and Carlton and Pine Counties in Minnesota, produces the highest sediment load per square mile of any monitored watershed in Minnesota and Wisconsin. The watershed drains an area that has erosion problems caused by excessive peak flows resulting from the low permeability of the soils exacerbated by plant covers changes and hydrologic modifications in the watershed. The study makes recommendations that are designed to restore beneficial uses to the Nemadji River Basin.

A fact of particular note for the Duluth Port Land Use Plan is the Nemadji River carries an annual sediment load of 131,000 tons, which is broken down to 117,000 tons of silt and clay and 14,000 tons of sand. The U.S. Army Corps of Engineers estimates that it annually removes 33,000 tons of Nemadji River sediments to maintain adequate depth for shipping traffic in the bay. The annual cost of this dredging is approximately \$200,000.

### **Dredged Materials Management Plan – 1998**

The purpose of this study conducted by the Detroit District of the Army Corps of Engineers is to determine if additional suitable dredged material placement facilities are available in the vicinity of the Duluth-Superior Harbor that will satisfy future dredged disposal needs for at least 20 years. The plan describes and evaluates alternatives and selects a base plan which has a design capacity of at least 20 years, is the least costly and engineering feasible, and meets all federal environmental standards. From the base plan, a management plan was chosen based on federal policies and budgetary priorities. The management plan includes three segments: 1) beach nourishment, 2) continued use of Erie Pier, and 3) placing dredged materials in deep holes within the Duluth-Superior Harbor.

### **Harbor Partnering Agreement – 1999**

This agreement was a renewal of an agreement signed by the partners in 1996. It basically states that the partners have formed a partnership based on communication and understanding and agree to commit their agencies to pursue an approach to dredge materials management in a manner that seeks to mutually benefit commercial navigation and the natural environment of St. Louis River and Lake Superior. The partners in this agreement are:

- U.S. Army Corps of Engineers, Detroit District
- Duluth Seaway Port Authority
- City of Superior
- Minnesota Pollution Control Agency
- Minnesota Department of Natural Resources
- Wisconsin Department of Natural Resources
- U.S. Environmental Protection Agency – Region 5
- Arrowhead Regional Development Commission
- Northwest Regional Planning Commission

The goals of the agreement as stated are:

- Promote mutual understanding of each partner's objectives and constraints
- Continue to exchange pertinent information
- Timely problem solving and decision-making
- Protect and enhance natural resources
- Serve maritime commerce with proper channel depth

### **Duluth-Superior Landside Port Access Study – 2000**

The purpose of the Landside Port Access Study is to examine land-based access to the port of Duluth-Superior. Roadway and rail connections were examined in the study and impediments and deficiencies were identified. Strategies were recommended to correct or reduce problems. One of the most important recommendations to come out of this plan was to develop a second connection to the port terminal area via Arthur Avenue. While this was not a new idea to this planning process, the Arthur Avenue concept was solidified with an alignment study conducted in conjunction with the study. The result was a successful application for federal Surface Transportation Program funding. Arthur Avenue is scheduled for construction in 2004 or 2005.

### **Lower St. Louis River Habitat Plan – 2002**

The Habitat Plan was prepared by the St. Louis River CAC Habitat Committee to facilitate protection of the ecological diversity of the Lower St. Louis River. The conservation goals described in the Habitat Plan represent an ideal from an ecological perspective. It may not be possible to achieve every goal to its full extent; practical considerations will play a role in where, how, and to what extent the goals can be achieved. By setting conservation goals that will achieve a mix of ecological and social benefits, the Habitat Plan presents a new vision of the St. Louis River ecosystem toward which communities, organizations, and individuals can work in cooperation and partnership.

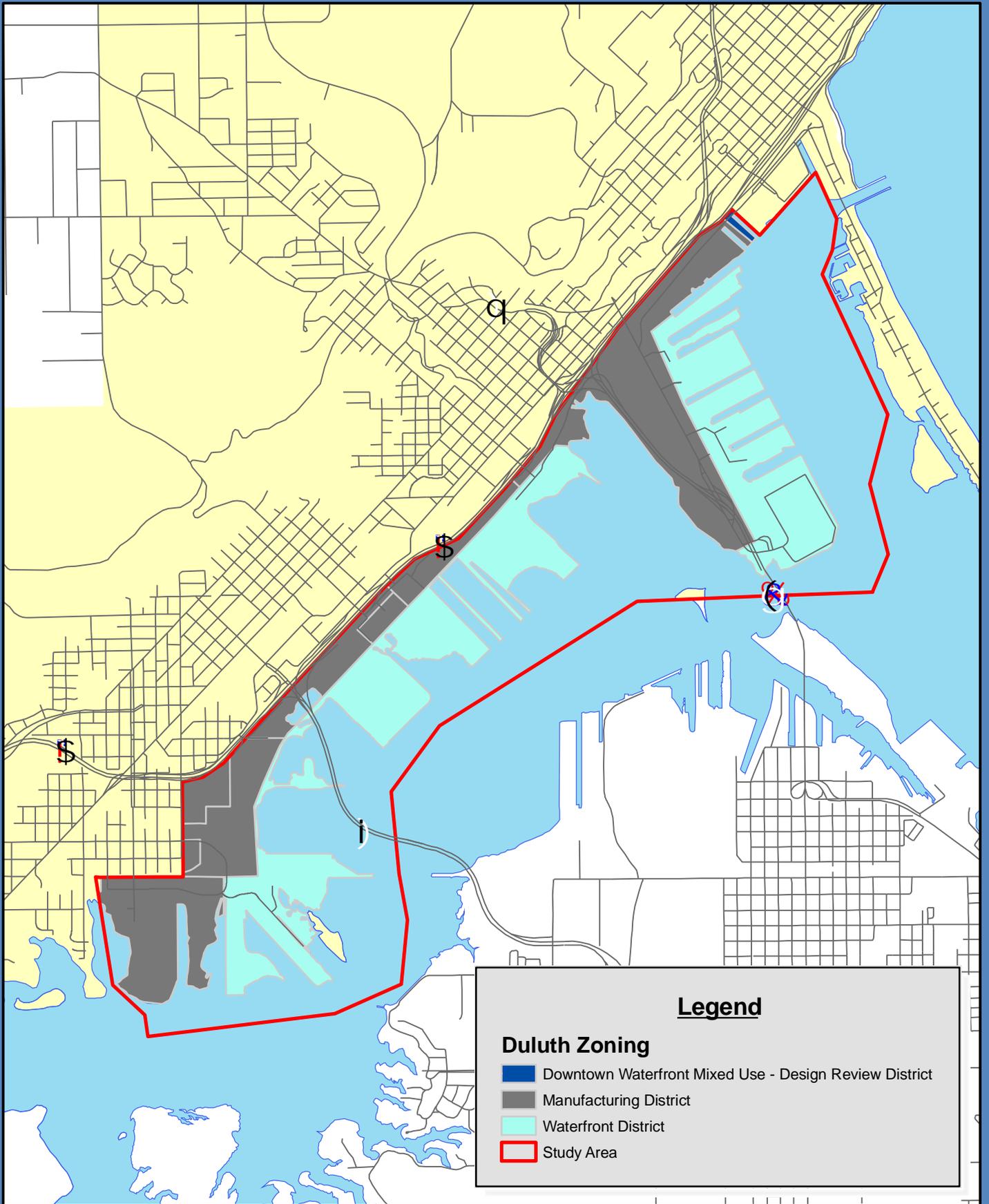
The Habitat Plan includes a detailed and comprehensive synthesis of existing information, an estuary-wide guide for resource management and conservation, a list of conservation and management objectives, and a collection of specific, obtainable, prioritized conservation and management actions that address specific threats.

### **Twin Ports Intermodal Freight Terminal Study – 2003**

This study examines the potential for an intermodal freight terminal in the metropolitan area of Duluth, MN and Superior, WI (Twin Ports). Geographic regions in the US and Canada are assessed for potential sources of cargo. Operating intermodal terminals in comparable statistical metropolitan areas are examined and key success factors derived. Key shippers in the region are surveyed to determine freight volume, shipper requirements, and destinations of inbound and outbound freight. Intermodal Marketing Companies and other third party providers are surveyed. Reebe (Transsearch) freight flow data between sixty-six Business Economic Areas (BEAs) and the Twin Ports are analyzed for freight volume by mode, destinations, lanes and load balance. The establishment of a Roll-On/Roll-Off (RO/RO) marine service with Thunder Bay, Ontario is examined as a feeder for an intermodal terminal. Operating rail yards in the Twin Ports are cataloged and evaluated as potential intermodal terminals. An overall evaluation of the Twin Port's suitability as an intermodal terminal is presented.

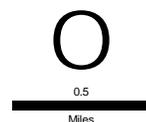
### **City of Duluth Zoning Regulations**

Article XX – W-1 Waterfront District spells out the permitted land uses for the area defined as the Waterfront District (see Map 2). These land uses include shipyards, docks, boat services, sewage pumping plants, power generation plants, water pumping stations, and yacht harbors and clubs. Any permitted use in the M-2 Manufacturing District is allowed provided the planning commission certifies to the building inspector that the proposed use is advantageously served in this location through direct access to water transportation or requires access to large quantities of raw water.



Map 2

**Duluth Port Land Use Plan  
Zoning Districts**



**Back of Map 2**  
**Duluth Zoning Districts**

# Stakeholder Input

In an effort to gain more input into this planning process, MIC staff conducted a public outreach effort and held interviews with large maritime businesses along the Duluth waterfront.

## Public Outreach Presentations

In an effort to gain more stakeholder input, MIC staff conducted a public outreach program by attending regularly scheduled meetings of groups with a vested interest in the development of the Duluth-Superior Port. Time was reserved on the agendas of the groups listed and a short presentation was given. The presentation began with a description of the MIC explaining who we are and what we do, followed by a description of the Duluth Port Land Use Plan, which included a study overview, data collection and analysis, study committee structure, and the stakeholder input process. The presentation was followed by questions and comments. The following section lists the groups that invited MIC staff to speak, the date of the meeting, and a summary of comments and questions.

- International Shipmasters – April 2004
- St. Louis River Citizens Action Committee – March 2004
- Grain Elevator and Processing Society – November 2004

The following is a list of the comments, questions and suggestions received during presentations to the above groups:

- There is currently enough land along the waterfront dedicated to park space. Would not want to see any more harbor front land converted to park space.
- Bayfront Park and the cement facility can coexist.
- Moving freight by ship is the most environmentally friendly mode to move bulk freight.
- Put in a dock facility in Bayfront Park that could accommodate commercial fishing boats. Tourists would frequent this area.
- New security measures could prohibit cruise ships from docking behind the DECC.
- The Duluth Port Land Use Plan should be part of the Duluth comprehensive planning process.
- There is nowhere along the lower Duluth waterfront to dock commercial fishing vessels. Operator is forced to dock farther upstream where his boat is ice locked much longer in the spring.
- The Elevator C&D site on Rices Point would be a good spot for Hallett Dock to consolidate some of their operations.
- If a parcel of land can generate more tax revenue from tourism uses, then it should convert to tourism. The use that generates the most tax revenue should drive the use in areas such Bayfront.
- Protecting and enhancing the utility of the federally authorizing shipping channel by preserving land adjacent to it is the most important issue because you can't get it back once it is developed.
- How is the change in ownership at DM&IR (purchased by CN) going to impact land use near their ore dock?

- The St Louis River Habitat Plan identifies as a strategy to Duluth/Superior Comprehensive Port Plan.
- The information compiled in the GIS-based Sediment Quality Database for the St. Louis River Area of Concern should be used in this planning process.
- There is a negative perception in this port that harbor developers have to deal with regulatory agencies from two states.
- The jobs created moving bulk freight through this port support families and are more valuable to the local communities than tourist related jobs.

### **Maritime Business Interviews**

Maritime businesses along the Duluth waterfront were interviewed to get an idea of what their needs are to improve their businesses and to learn what their vision is for future land uses along the waterfront. Economic development does not always entail creating or assisting new businesses but can include identifying opportunities for existing businesses to improve or expand their current operations.

Listed below are the businesses that were interviewed. The answers to the questions are summarized to capture what was said and to omit repetition. The questions are listed in bold and the answers are listed by bullet after each question. Participants are not identified with their answers and some responses were generalized to maintain confidentiality.

The following companies responded to our request for personal interviews. Companies are not identified with their responses because we assured them confidentiality.

- |                         |  |
|-------------------------|--|
| • AGP Grain Limited     | • Lake Superior Warehousing Company, Inc.      |
| • Azcon Corp.           | • Marine Tech LLC                              |
| • Cargill Inc.          | • Murphy Oil USA, Inc., Duluth Marine Terminal |
| • Hallett Dock Company  | • Northland Bituminous (at Northland Pier)     |
| • Lafarge North America | • St. Lawrence Cement Inc.                     |

#### **1. What do you need infrastructure-wise to expand or improve your business?**

- Infrastructure is adequate
- Not happy that the city tried to charge Rices Point businesses for a storm water surcharge when there is no storm water facilities in the area.
- More land. Improvements to the storm sewer system
- A truck scale located on Rices Point area.
- The development of Arthur Ave will address utility needs
- Deeper draft in upper channel
- Sewer to cover all of Rices Point businesses
- Cargill, Inc – Not affected by infrastructure problems
- More land, deeper port
- Nothing

## **2. Do you need improved access to roads or rail?**

- Would like better access to rail and also better rail service
- Would like to have service from more than one rail company. CP Rail provides excellent service but there are worries over rail labor strikes and derailments that could interrupt service at crucial times.
- Would like a link to BNSF rail.
- The development of Arthur Avenue should address access needs.
- Need better road access and the ability to access BNSF track would be helpful.
- A rail spur to dock would help. Arthur Avenue should address road access needs.
- No, currently their needs are met.
- There will be helpful road improvements with Arthur Avenue. The rail access is good.

## **3. What other types of businesses would you like to see develop along the Duluth waterfront?**

- Manufacturing and industrial uses would be preferable.
- Only industrial. There is too much tourism based industry in our area. A more healthy economy would have more industry as a base.
- Industrial maritime would be preferable. Maybe a maritime container operation.
- Working waterfront, maritime businesses only.
- A marina near Bayfront Park and more maritime industrial on Rices Point.
- Industrial and maritime – land uses compatible with what is currently operating in study area.
- Maritime commercial
- Supporting industries for our business
- Restaurants nearby
- More industry – both maritime and non-maritime but maritime makes more sense.

## **4. Do you see a need for the City of Duluth to have a land use plan for the waterfront?**

- Yes, to better define and support industrial areas.
- Yes, if it is balanced to consider industrial uses as well as tourism uses. The City has a history of leaning toward tourism uses at the expense of industrial uses.
- Yes, if the port community has a major voice.
- Yes, if the port is considered. Should be cautious about being flexible.
- Yes, to prevent spot zoning.
- Yes, to make more information available to help development and to keep land uses compatible.
- Yes, to set direction for the port.
- Yes, regulate how the waterfront is developed – vs – random development
- Yes, the City of Duluth should be involved in land use planning.
- Yes, to maintain industry and create more jobs.

## **5. Should land along the maintained shipping channel be preserved for maritime activities?**

- Yes – there is extra value for land along the channel.
- Yes the land adjacent to the shipping channel has a higher value and should be used to its highest extent (industrial). Areas that can support both maritime and nonmaritime should if they can coexist.
- Yes to first part and No to second part – nothing should be designated but addressed on a case-by-case basis.
- Yes all available land should be preserved for maritime uses. Within 25 years other ports will be so congested that Duluth may see an increase in general cargo. There should be caution about developing non-maritime uses on valuable maritime waterfront.
- Yes, maritime industrial should be separate from other uses. Recreation uses should be located farther up the St Louis River.
- Yes, area along channel should be reserved for shipping uses.
- Yes, land holds more value for port related businesses
- Yes, for safety issues.

**6. Should recreation and residential uses be developed along the waterfront in the study area?**

- Selectively – residential and recreation uses should be lower priority to industrial and manufacturing uses.
- No not in the study area. Park Point and the upper St Louis River has plenty of areas for recreation and residential opportunities. Dust and noise make most of the study area incompatible for recreation and residential uses.
- No residential, but recreation is compatible in certain areas.
- No, those uses are not compatible with the maritime industrial uses.
- Bayfront area for recreation and upstream of Stryker Bay for residential.
- No, not in study area
- No, those uses should locate farther upstream
- Yes, wouldn't hurt this company providing the proximity wasn't too close.
- No, not around industry, they should be kept separate.

**7. Are there any governmental regulations that make it difficult for you to improve or expand your business? Are additional regulations needed?**

- Security issues if they start shipping again.
- Homeland security costs are not in line with the benefits received. A one-size-fits-all approach to security is short sighted. The federal government has placed an unfunded mandate on the shipping industry and port facility operators. Many security measures being implemented in this area are unnecessary.
- Increased security has changed the way port businesses are run.
- Port Authority has been very helpful in assisting port operators in dealing with government regulations.
- Environmental regulations are too restrictive. MPCA is overly aggressive in enforcing regulations. Non-international shipping should not be held to the same security standards as international shipping.
- Environmental permitting can be a problem at times.

- Dredging regulations have improved because of realistic interpretation of how they should be applied.
  - Yes, all government regulations are restrictive, but are also necessary. The new security issues are also restrictive but mostly necessary. No additional regulations are needed.
  - Homeland Security regulation will hinder business because it is a large expense.
  - Yes new security laws could hinder business. No additional regulations needed.
- 8. What could be done to make the port of Duluth-Superior more competitive with national freight rail, Mississippi River shipping, or East and West Coast shipping?**
- Deeper drafts if they start shipping again.
  - Seaway fees that are lower would help and rebuilding the lock system to bring it up to date is also necessary.
  - Lower Seaway tolls, lower trade tariffs, and deeper drafts.
  - Eliminate Seaway tolls and reduce pilotage requirements. It currently costs about \$120,000 per ship in Canadian Seaway tolls and pilotage costs to get a foreign boat from the Atlantic to Duluth.
  - Deeper drafts would allow ships to carry more cargo.
  - Short sea shipping would help eliminate road congestion in some areas. A good example is the Thunder Bay to Duluth-Superior rail ferry (former Incan). Container shipping by barge may have a future in the Duluth-Superior port. Provide more opportunities to have foreign ships haul steel and other commodities to Duluth-Superior so they can economically travel here to load grain. Development of a Great Lakes Advocacy group could bring more attention to the needs of our port.
  - Decrease rail rate. More back haul opportunities.
  - It is more cost effective not to increase the number of train cars because of the lack of space. It is cheaper to load here and ship out to the coasts and internationally.
  - Have more industry here with different modes of transportation.

## **Conclusion**

This information was very important to this planning process as it brought forward the needs and concerns of the businesses and organizations that are involved with port operations on a daily basis. Feedback from the interviews and public outreach presentations expressed strong stakeholder support for this planning effort. There was also a consensus that land uses inside the study area should be limited to maritime and industrial while other uses such as recreational and residential would be appropriate for areas outside of the study area. The information gathered from the business interviews and public outreach was utilized in the development of the future land use map (see Future Land Use chapter on page 75).

# Public Trust Doctrine

Information on the Public Trust Doctrine is presented in this plan because of the influence it has on future land use in the Duluth-Superior port. The section is organized by first looking at Public Trust issues on the national level, then looking at how the State of Minnesota addresses Public Trust, and finally what the impacts are to the City of Duluth waterfront.

## National Overview

The following description of the Public Trust Doctrine is from the Government Law Center of Albany Law School Public Trust Doctrine (PTD) Home Page and is written by Paul Bray. This is a portion of the introduction on the web site and is a good description of the Public Trust Doctrine on a national level.

The Public Trust Doctrine is an historical and currently evolving concept relating to the ownership, protection and use of essential natural and cultural resources. It is receiving increased attention in the United State because of the growing awareness of the duty of care owed the environment. The Public Trust Doctrine may prove useful as the nations of the world develop their own ecologically based real property law.

The origins of the Public Trust Doctrine were the declaration of the Justinian Institute that there are three things common to all mankind: air, running water, and the sea (including the shores of the sea). Title to these essential resources or the common are held by the State, as sovereign, in trust for the people. The purpose of the trust is to preserve resources in a manner that makes them available to the public for certain public uses.

There are two co-existing interests to trust lands: the jus publicum which is the public's right to use and enjoy trust lands; and the jus privatum which is the private property rights that may exist in the use and possession of trust lands. The State may convey the jus privatum to private owners, but this private interest is subservient to the jus publicum which is the State's inalienable interest that it continues to hold in the trust land or water.

The Public Trust Doctrine became part of the English Common Law and the courts in the United States have applied the doctrine. Also, some State Constitutions incorporate the Doctrine, like the Hawaiian Constitution, which declares that, 'All public natural resources are held in trust by the State for the benefit of the People.'

Until recent decades the predominant commons recognized as subject to the Public Trust Doctrine was tidal and navigable waters. American cases have held that title to lands underlying tidal and/or navigable waters are held by the State in its sovereign capacity as trustee for the benefit of the citizens of the State who

have the right to use the waters and adjacent land for navigation and to ‘fish, hunt, or bathe....’

The common [law] has been expanding in keeping with our changing ideas about the proper protection and management of natural and cultural resources fundamental to the welfare of society and future generations (intergenerational equity).

The Public Trust Doctrine provides legal support for protecting and managing natural and cultural resources. Public interest forms the basis for determining the use of the resource. It weighs public and private as well as conservational and development interests to create a well-balanced plan for resource protection and use. Public resources, once identified, may have beneficial uses that include recreational, environmental or economic. The report of the US National Project on the Public Trust Doctrine pointed out that "area-wide management programs may be structured, using the public trust doctrine with the state's police power in tandem, to encourage comprehensive management over lands, waters and resources within the area, and thus avoid the limitations inherent in ad hoc permitting decisions."

### **Minnesota Public Trust Doctrine**

States are charged with upholding the public trust in regards to navigable waterways and use different methods to accomplish it. Wisconsin has public trust provisions written into the state constitution that have historically been supported by the Wisconsin Supreme Court. Minnesota, on the other hand, does not have public provisions as defined as Wisconsin's. However, Minnesota does have a number of state statutes and rules that address navigable waterways and public trust issues (see Appendices pg. 93).

Minnesota law requires the state to intervene to protect public rights in the commercial or recreational use of navigable waters. The Department of Natural Resources, as the state agent charged with this responsibility, can do so through permitting requirements for water projects, through court action to stop nuisances in navigable waters, and through statutes authorizing local zoning ordinances that limit development along navigable waterways.

Minnesota courts have occasionally confronted the situation where past filling has created dry land on the beds of navigable waters. With regard to riparian owner rights, the court has said that in order to facilitate access to the water, you may improve, reclaim, and occupy the surface of submerged land out to the point of navigability. Even though the state still maintains ownership in the underlying bed, the courts have acknowledged that there is a public value served by the maintenance and development of certain submerged lands.

The Minnesota Shoreland Management Act (Minnesota Statute 106F and Minnesota Rules 6120.2500) provides that the DNR Commissioner can designate a local government unit (LGU) to adopt or amend land use controls that comply with the standards and criteria found in MN Rules 6120.2500, the “Statewide Standards for Management of Shoreland Areas”. The rules provide for the designation of and uses within zoning districts, including commercial or

industrial uses that require location in shoreland areas. Land use ordinances provide guidance for existing and future uses.

### **Influence on Duluth Waterfront**

The Public Trust Doctrine has a significant influence on land use on the Duluth waterfront. Because much of the land along the Duluth waterfront was formerly part of the navigable waters of the St. Louis River and created by filling it in, the Public Trust Doctrine applies to these lands. These waterfront areas were filled over the years for a variety of reasons such as disposal of industrial by-products and dredge materials and creation of docks, piers, wharves, and port land.

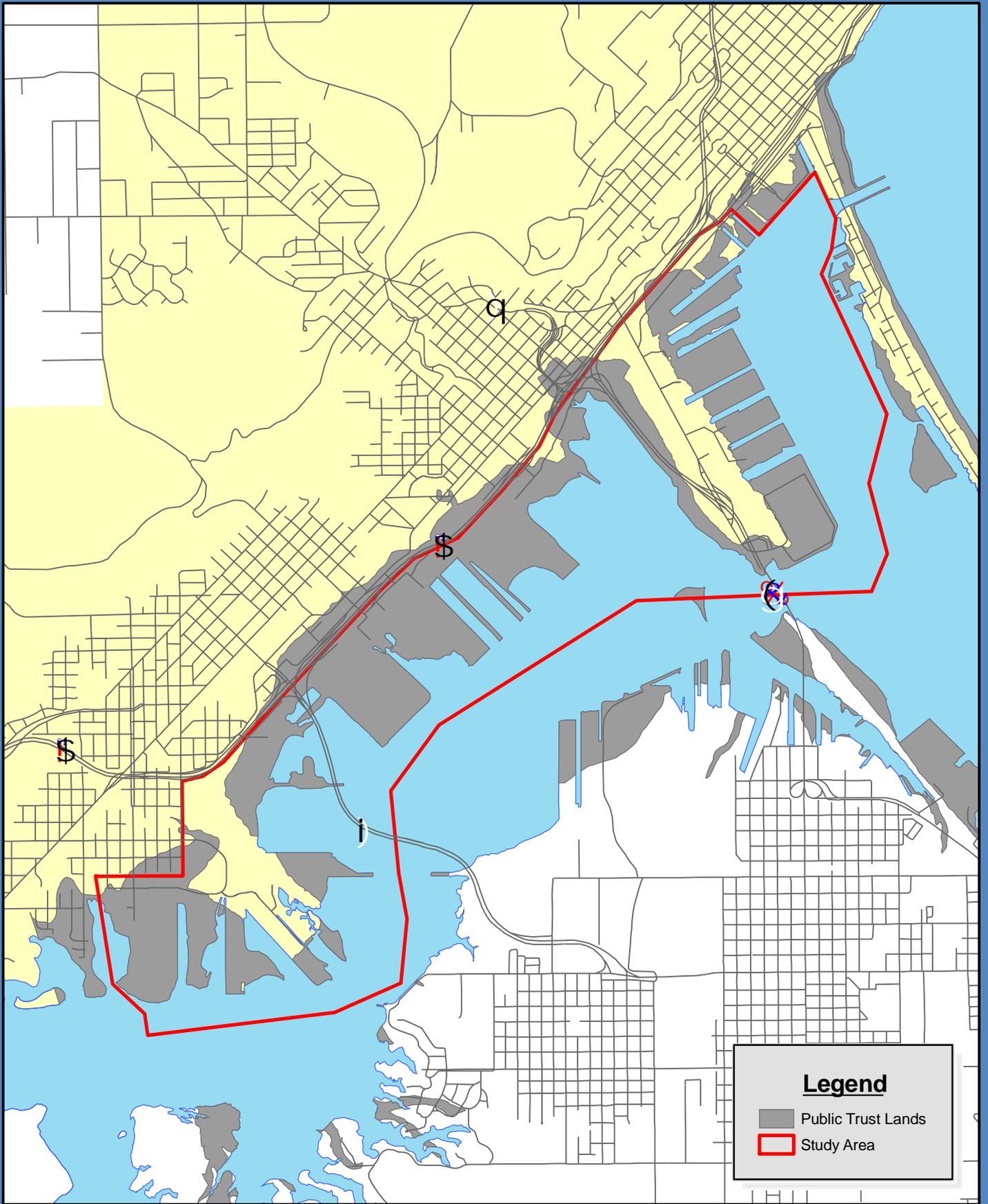
In November of 1999 the Natural Resources Research Institute, in cooperation with the Park Point Community Club, developed the Minnesota Point Environmental Plan. As part of this plan, a digital representation of the historic shoreline was created. This data was extracted from a port chart generated by the Army Corps of Engineers in 1861. Large areas of lower St. Louis River (including the Duluth waterfront) are shown as they existed in 1861. This data set was used in conjunction with the current shoreline to get a rough idea of what lands are considered filled lands (see Map 3).

In viewing the map of filled lands, the potential influence of this section of state law on the Duluth waterfront is evident. This being stated, it should not be viewed as lost opportunity, but as a way to focus certain types of development into appropriate areas. It can preserve lands for the public at large and provide additional opportunities for public use of navigable waterways as well as offer more efficient use of the federally designated shipping channel, which all federal taxpayers pay to maintain.

The City of Duluth regulates the use of all lands within the City, including waterfront lands that are submerged. Within the City of Duluth Zoning Regulations, Chapter 50 establishes a Waterfront District “W-1”. Allowable uses in the district are those that depend on water transportation or navigation purposes. The Public Trust Doctrine complements the policies of the Duluth Zoning Code.

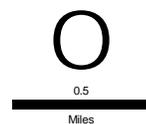
Since 1993 there have been a number of proposals to place fill for development and develop harbor front lands with non-water dependent activities. It has been the position of the Minnesota DNR that fill placed and use of lands adjacent to the navigation channel had to be for water dependent purposes or a specific public purpose. The Duluth Comprehensive Port Development Plan of 1992 has been utilized as a guide for the DNR, the City of Duluth and the Port Authority. There is a memorandum of understanding contained within the Plan that addresses conservation of waterfront lands for harbor related land uses.

In summary, the Public Trust Doctrine should not be viewed as an anti-development policy but as a confirmation that the uses of waterways must be consistent with the purposes for which those waterways are held in trust for the public. It promotes public and commercial development which enhances the use of navigable waters for navigation and its incidents..



Map 3

# Duluth Port Land Use Plan Waterfront Filled Lands



**Back of Map 3**  
**Duluth Waterfront Filled Land**

## Current Land Use

One of the goals of this planning effort is to describe current land uses along the Duluth waterfront. This section illustrates the current land use of the Duluth waterfront utilizing a slightly modified version of the Arrowhead Regional Development Commission's Land Use Classification System. This land use classification system was developed to standardize land use mapping at ARDC in order that data generated from different projects could be compiled and used in future projects. See Appendix C for a description of the ARDC Land Use Classification System.

Land uses were identified at the lots and blocks level for this study. Aerial photography was utilized to begin the data generation. Field checks were then conducted to more closely examine the current land use of lots and blocks. Review by the study committee was also used to ensure accuracy of the data. Map 4 on page 27 displays the current land use of the study area and ¼ mile beyond.

### General Description of Current Land Uses

The text in this section is a general description of the study area using the land use categories referenced above. The descriptions are broken down by area and start in the southwest portion of the study area near Stryker Bay.

*The area from Stryker Bay to Grassy Point* is currently a mix of light industrial, heavy industrial, maritime, commercial and railroad land uses. Some of the maritime uses will come to an end when the Proposed Plan for the Sediment Operable Unit St. Louis River/Interlake/Duluth Tar/Superfund Site is implemented. A confined aquatic disposal (CAD) will be constructed in Hallett Dock Slip #6 to permanently hold contaminated sediments. The placement of the CAD in Slip #6 not allow future maritime use. The capping of sediments in Slip #7 will limit that slip to smaller shallow draft ships docking mostly at the south facing end of the dock. The Grassy Point area is currently preserved as a wetland and has a system of trails and interpretive signs.

*The area from Grassy Point to Erie Pier* is currently a mix of heavy industry, maritime, and wetlands. Stora Enso paper mill dominates this area. Their operation is not water dependent and sees a large amount of truck traffic. There is an active rail track in this area as trains bound for Rices Point cross the Grassy Point Draw Bridge across St. Louis River and move through this area. There is also an abandoned rail corridor in this area that may provide a link for the Munger Trail extension. Erie Pier is the confined disposal facility (CDF) for the Duluth-Superior harbor and is categorized as a maritime land use. Much of the dredged material placed in this CDF is recycled for use in local road and construction projects.

*The area from Erie Pier to Western Lake Superior Sanitary District (WLSSD)* is a mix of maritime, light and heavy industrial and public/semipublic. There are industrial uses along Oneota Street away from the waterfront. Hallett Dock #5 and the CN Ore Docks (formerly DM&IR) are large maritime bulk material transshipment facilities in this area. WLSSD, the

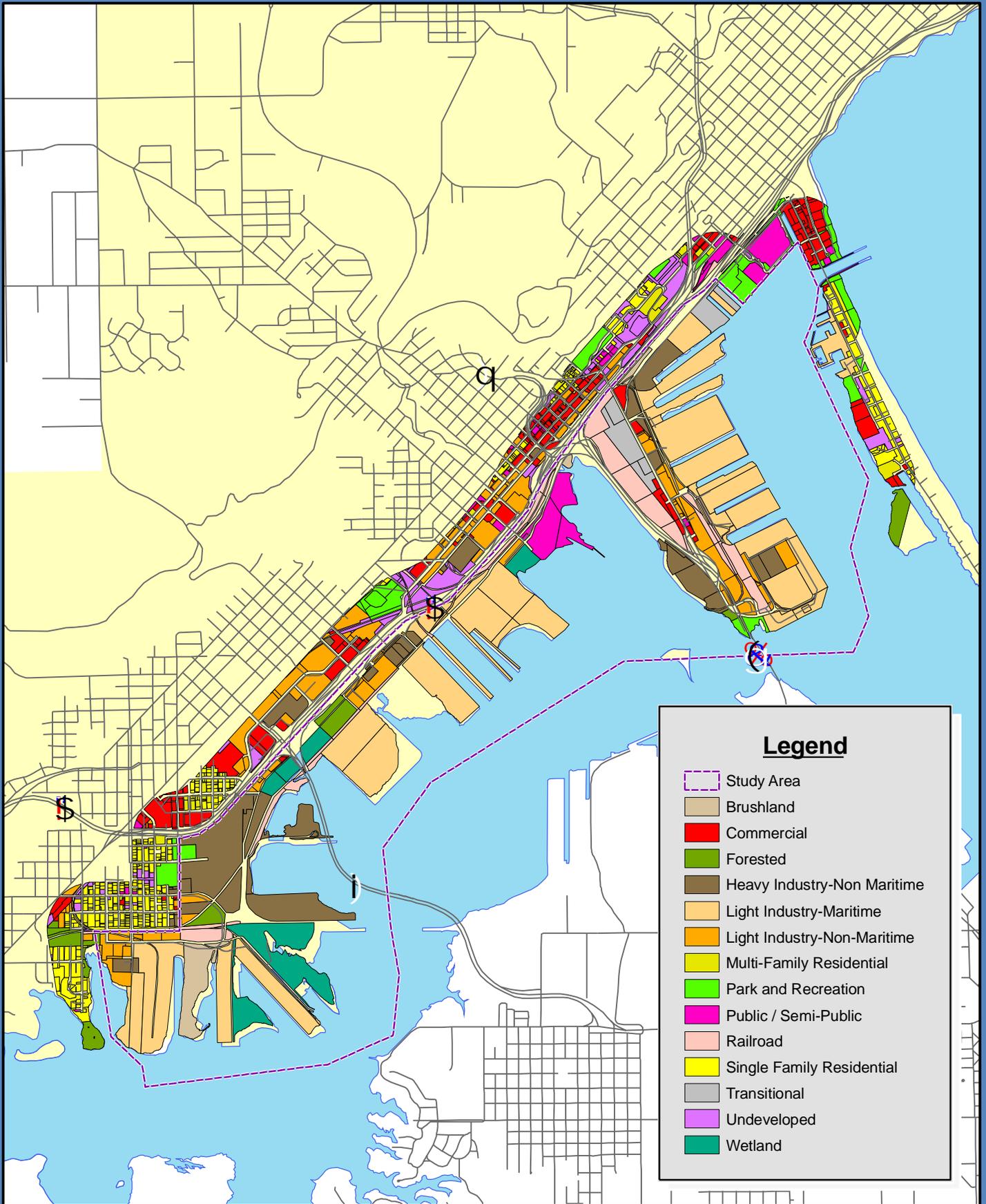
regional sewage treatment facility has its main plant located in this area and is labeled as a public/semi-public land use.

*The area from WLSSD to Bayfront Park including Rices Point* is a mix of rail yards, maritime, light and heavy industrial, and commercial. There are also a small amount of undeveloped and transitional land uses in this area. BNSF maintains a large rail yard along the west side of Rices Point. Adjacent to this rail yard along Garfield Avenue is some vacant land that is included in the JOBZ program (see page 85). Along Garfield Avenue is a district of commercial and industrial uses that are not water dependent. Along the eastern side of Rices Point is the maritime area that includes grain elevators, a scrap yard, an aggregate company and a general cargo operator. Along the northeast end of the study area are maritime, industrial and transitional land uses. These land uses include a board plant, salt dock and cement dock.

### **Waterfront Facilities**

The information in this section describes facilities along the Duluth waterfront that have docks and piers. A number of the facilities are currently active and are in operation while other facilities are no longer used. Information is provided on each facility in a text box. If a facility is not active, it is denoted under the title. Of the active facilities, some may not be currently used to their potential capacity. Opportunities may exist to increase the intensity of use of the active facilities.

A Map Reference Number is included in the upper left of each facility text box and corresponds with a number on Map 5 on page 29. Waterfront location maps and aerial photos for each facility are also included. The sources of information include the U.S. Coast Guard, U.S. Army Corps of Engineers, Duluth Seaway Port Authority and City of Duluth. The Coast Guard shared non-classified information they collected in compiling their Port Security Handbook. This handbook was compiled in late 2001. The Corps information came from their Navigation Data Center, which includes information on all ports in the U.S. The information for the Duluth-Superior port was updated in 1999.

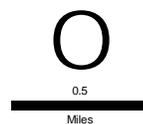


**Legend**

-  Study Area
-  Brushland
-  Commercial
-  Forested
-  Heavy Industry-Non Maritime
-  Light Industry-Maritime
-  Light Industry-Non-Maritime
-  Multi-Family Residential
-  Park and Recreation
-  Public / Semi-Public
-  Railroad
-  Single Family Residential
-  Transitional
-  Undeveloped
-  Wetland

Map 4

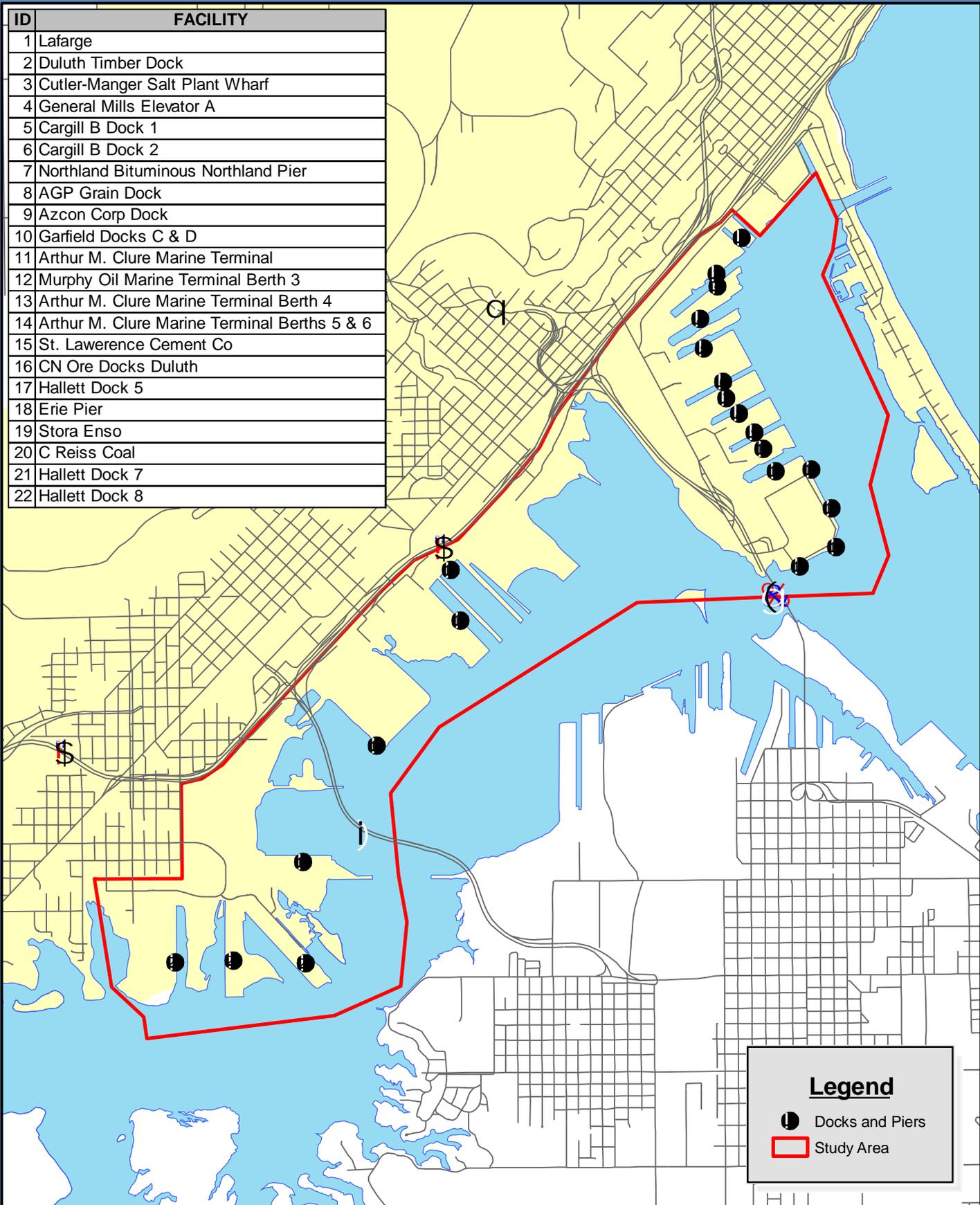
**Duluth Port Land Use Plan  
Current Land Use**



**Back of Map 4**  
**Duluth Port -- Current Land Use**

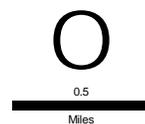
.

| ID | FACILITY                                     |
|----|--|
| 1  | Lafarge                                      |
| 2  | Duluth Timber Dock                           |
| 3  | Cutler-Manger Salt Plant Wharf               |
| 4  | General Mills Elevator A                     |
| 5  | Cargill B Dock 1                             |
| 6  | Cargill B Dock 2                             |
| 7  | Northland Bituminous Northland Pier          |
| 8  | AGP Grain Dock                               |
| 9  | Azcon Corp Dock                              |
| 10 | Garfield Docks C & D                         |
| 11 | Arthur M. Clure Marine Terminal              |
| 12 | Murphy Oil Marine Terminal Berth 3           |
| 13 | Arthur M. Clure Marine Terminal Berth 4      |
| 14 | Arthur M. Clure Marine Terminal Berths 5 & 6 |
| 15 | St. Lawrence Cement Co                       |
| 16 | CN Ore Docks Duluth                          |
| 17 | Hallett Dock 5                               |
| 18 | Erie Pier                                    |
| 19 | Stora Enso                                   |
| 20 | C Reiss Coal                                 |
| 21 | Hallett Dock 7                               |
| 22 | Hallett Dock 8                               |



Map 5

## Duluth Port Land Use Plan Port Facilities

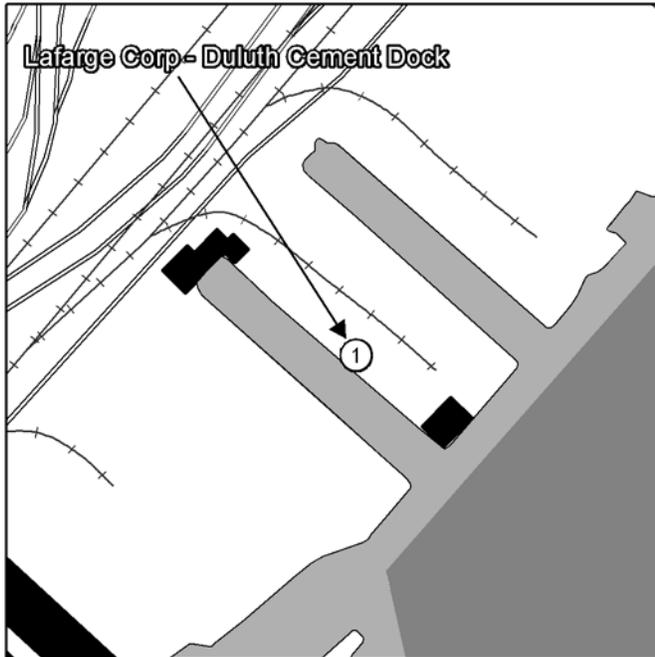


**Back of Map 5**  
**Duluth Port Facilities**

**Map Reference # 1**

## Lafarge Corp. – Duluth Cement Dock

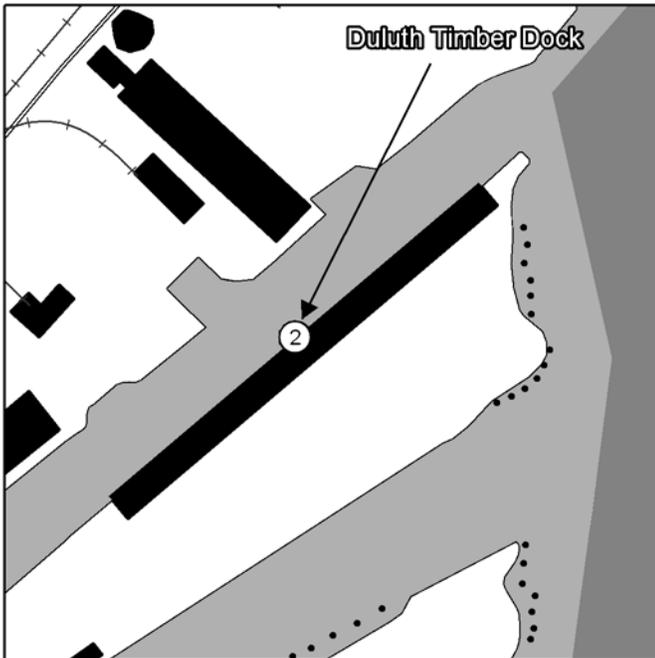
|                                    |   |
|------------------------------------|---|
| <b>Number of Employees:</b>        | 6   |
| <b>Year Company Established:</b>   | 1930s   |
| <b>Location:</b>                   | 8th Avenue West and Railroad Duluth Minnesota |
| <b>Current Use:</b>                | Receipt of bulk cement                        |
| <b>Roadway Access:</b>             | Private entrance road from Railroad Street    |
| <b>Rail Access:</b>                | Burlington Northern Sante Fe                  |
| <b>Dock Facilities:</b>            | Length: 850 feet<br>Depth: 17-25 feet         |
| <b>Access to Shipping Channel:</b> | Duluth Harbor Basin – northern section        |
| <b>Adjacent Land Uses:</b>         | Recreational and industrial                   |



**Map Reference # 2**

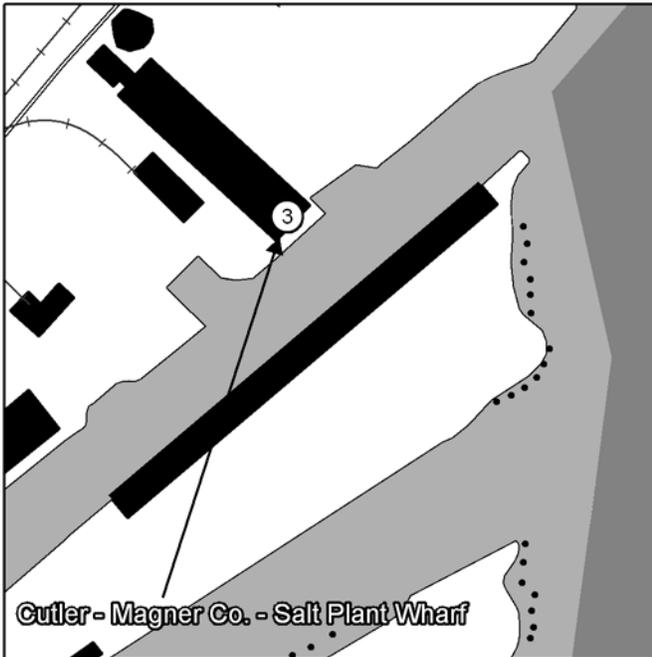
## Duluth Timber Dock

**Number of Employees:** 12  
**Year Company Established:** 1987  
**Location:** 13<sup>th</sup> Avenue West and Railroad Street  
**Current Use:** Timber recycling and general storage  
**Roadway Access:** Private entrance road from Railroad Street  
**Rail Access:** N/A  
**Dock Facilities:** Length: 2000 feet  
Depth: 16-20 feet  
**Access to Shipping Channel:** Duluth Harbor Basin – northern section  
**Adjacent Land Uses:** Maritime and industrial



## Cutler-Magner Co. – Salt Plant Wharf

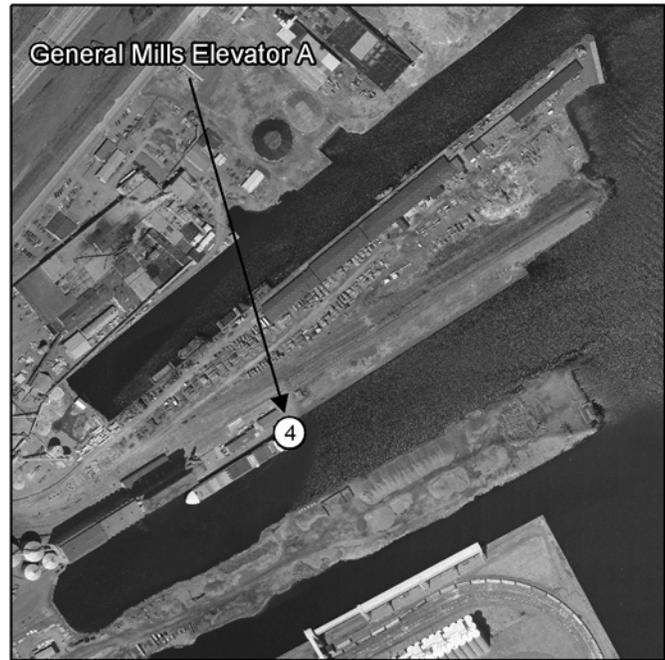
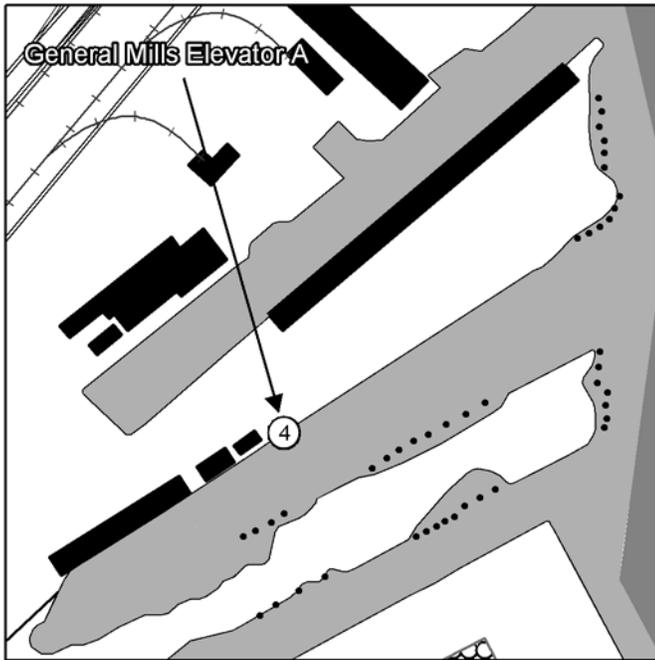
|                                    |  |
|------------------------------------|--|
| <b>Number of Employees:</b>        | 50   |
| <b>Year Company Established:</b>   | 1880   |
| <b>Location:</b>                   | 12th Avenue West and Railroad Duluth Minnesota |
| <b>Current Use:</b>                | Receipt of dry bulk rock                       |
| <b>Roadway Access:</b>             | Private entrance road from Railroad Street     |
| <b>Rail Access:</b>                | Burlington Northern Sante Fe                   |
| <b>Dock Facilities:</b>            | Length: 900 feet<br>Depth: 24 feet             |
| <b>Access to Shipping Channel:</b> | Duluth Harbor Basin – northern section         |
| <b>Adjacent Land Uses:</b>         | Maritime and industrial                        |



**Map Reference # 4**

## General Mills Elevator A

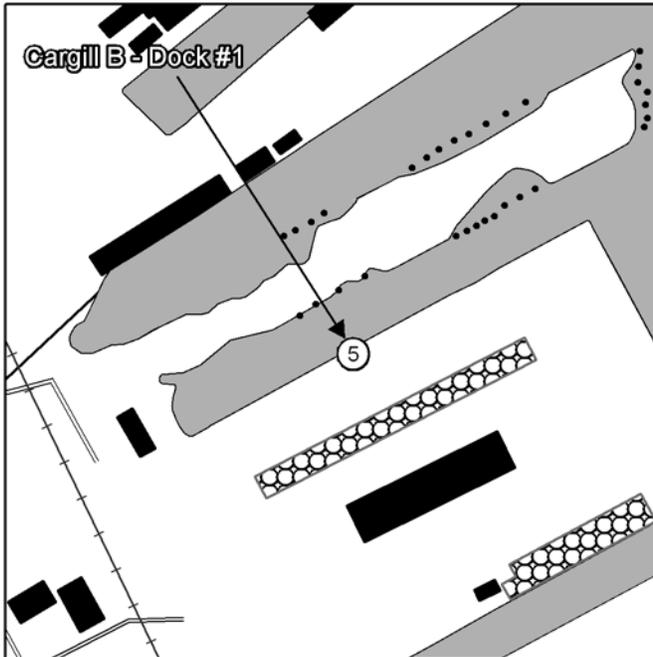
|                                    |  |
|------------------------------------|--|
| <b>Number of Employees:</b>        | 9                                      |
| <b>Year Company Established:</b>   | 1890s                                  |
| <b>Location:</b>                   | 200 Garfield Avenue                    |
| <b>Current Use:</b>                | Receipt and shipment of grain          |
| <b>Roadway Access:</b>             | Private driveway from Garfield Avenue  |
| <b>Rail Access:</b>                | Burlington Northern Sante Fe           |
| <b>Dock Facilities:</b>            | Length: 2,287 feet<br>Depth: 28 feet   |
| <b>Access to Shipping Channel:</b> | Duluth Harbor Basin – northern section |
| <b>Adjacent Land Uses:</b>         | Maritime and industrial                |



**Map Reference # 5**

## Cargill B-Dock #1

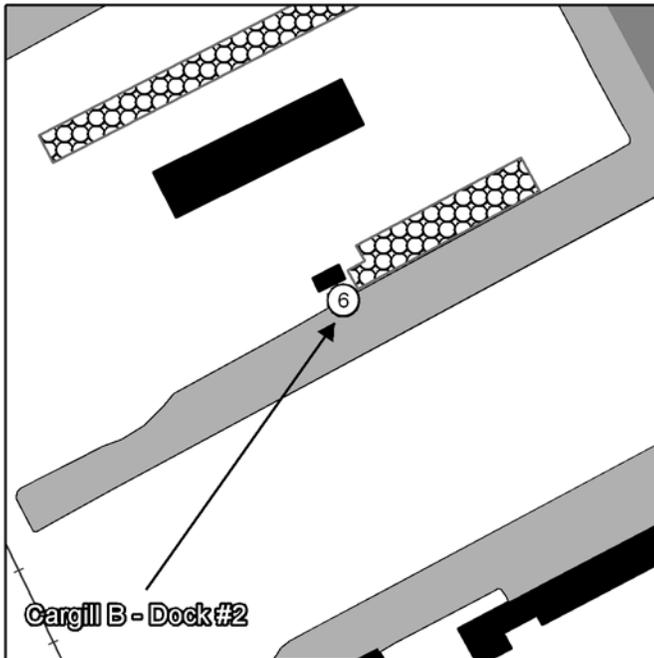
|                                    |  |
|------------------------------------|--|
| <b>Number of Employees:</b>        | 14                                     |
| <b>Year Company Established:</b>   | 1964                                   |
| <b>Location:</b>                   | 250 Garfield Avenue                    |
| <b>Current Use:</b>                | Receipt and shipment of grain          |
| <b>Roadway Access:</b>             | Private road from Garfield Avenue      |
| <b>Rail Access:</b>                | Canadian Pacific                       |
| <b>Dock Facilities:</b>            | Length: 1,700 feet<br>Depth: 28 feet   |
| <b>Access to Shipping Channel:</b> | Duluth Harbor Basin – southern section |
| <b>Adjacent Land Uses:</b>         | Maritime and industrial                |



**Map Reference # 6**

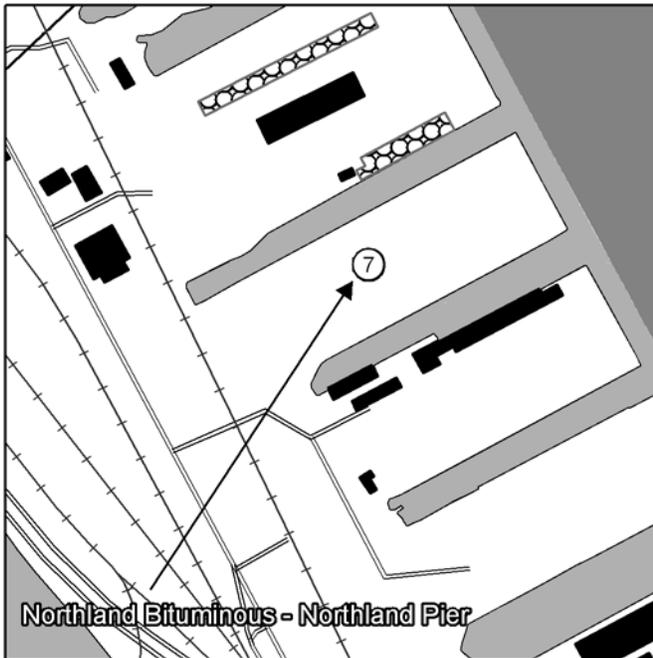
**Cargill B- Dock #2**

**Number of Employees:** 14  
**Year Company Established:** 1964  
**Location:** 250 Garfield Avenue  
**Current Use:** Shipment of grain.  
**Roadway Access:** Private road from Garfield Avenue  
**Rail Access:** Canadian Pacific  
**Dock Facilities:** Length: 1,560 feet  
Depth: 27 feet  
**Access to Shipping Channel:** Duluth Harbor Basin – southern section  
**Adjacent Land Uses:** Maritime and industrial



## Northland Bituminous – Northland Pier

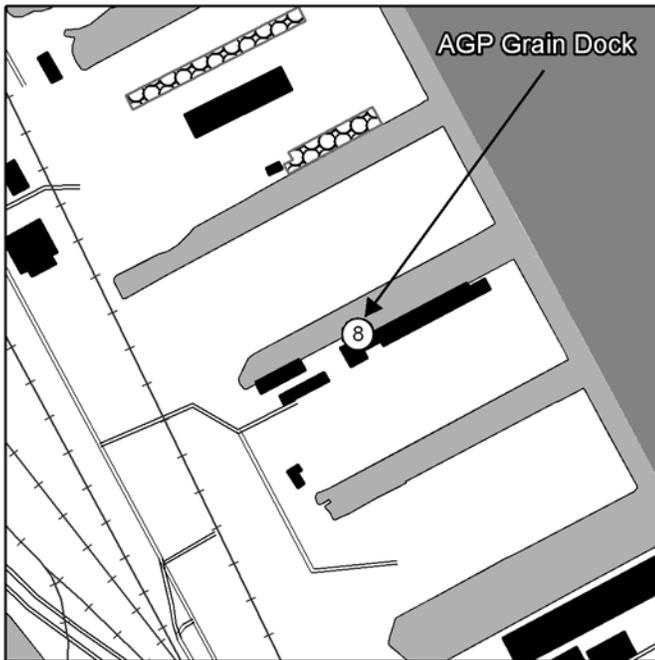
|                                    |   |
|------------------------------------|---|
| <b>Number of Employees:</b>        | 60-70   |
| <b>Year Company Established:</b>   | 1993  |
| <b>Location:</b>                   | 35 East Birch Street                              |
| <b>Current Use:</b>                | Receipt of sand, gravel, asphalt and limestone    |
| <b>Roadway Access:</b>             | Private road from Birch Street                    |
| <b>Rail Access:</b>                | Canadian Pacific and Burlington Northern Sante Fe |
| <b>Dock Facilities:</b>            | Length: 2,100 feet<br>Depth: 24-26 feet           |
| <b>Access to Shipping Channel:</b> | Duluth Harbor Basin – southern section            |
| <b>Adjacent Land Uses:</b>         | Maritime and industrial                           |



**Map Reference # 8**

## AGP Grain Dock

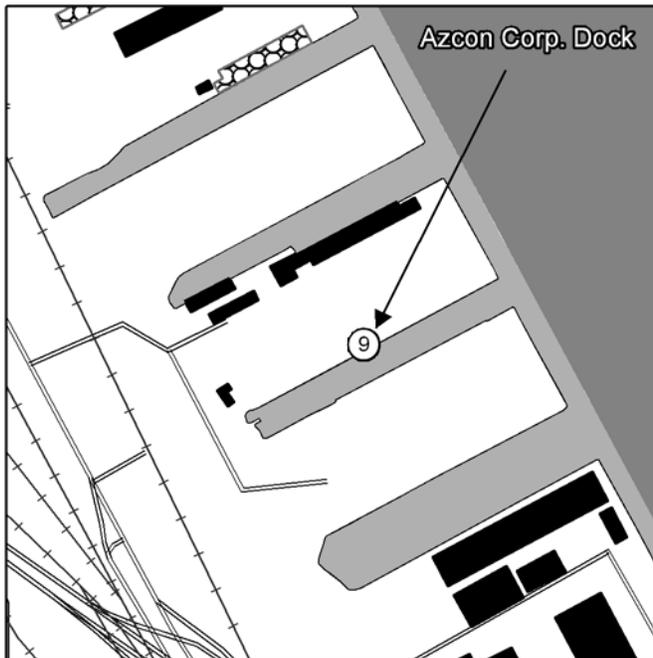
**Number of Employees:** 20  
**Year Company Established:** 1916  
**Location:** 600 Garfield Avenue  
**Current Use:** Receipt and shipment of grain.  
**Roadway Access:** Private road from Birch Street  
**Rail Access:** Canadian Pacific and Burlington Northern Sante Fe  
**Dock Facilities:** Length: 1,736 feet  
Depth: 12-28 feet  
**Access to Shipping Channel:** Duluth Harbor Basin – southern section  
**Adjacent Land Uses:** Maritime and industrial



**Map Reference # 9**

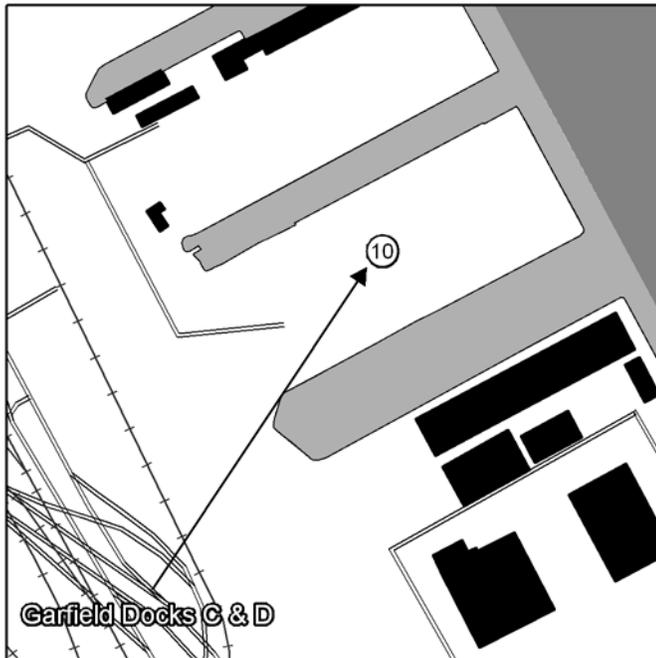
## Azcon Corp. Dock

**Number of Employees:** 22  
**Year Company Established:** 1920s  
**Location:** Foot of Birch Street  
**Current Use:** Shipment of ferrous scrap metal  
**Roadway Access:** Private road from Birch Street  
**Rail Access:** Canadian Pacific and Burlington Northern Sante Fe  
**Dock Facilities:** Length: 1,586 feet  
Depth: 22 feet  
**Access to Shipping Channel:** Duluth Harbor Basin – southern section  
**Adjacent Land Uses:** Maritime and industrial



## Garfield Docks C & D (Not Active)

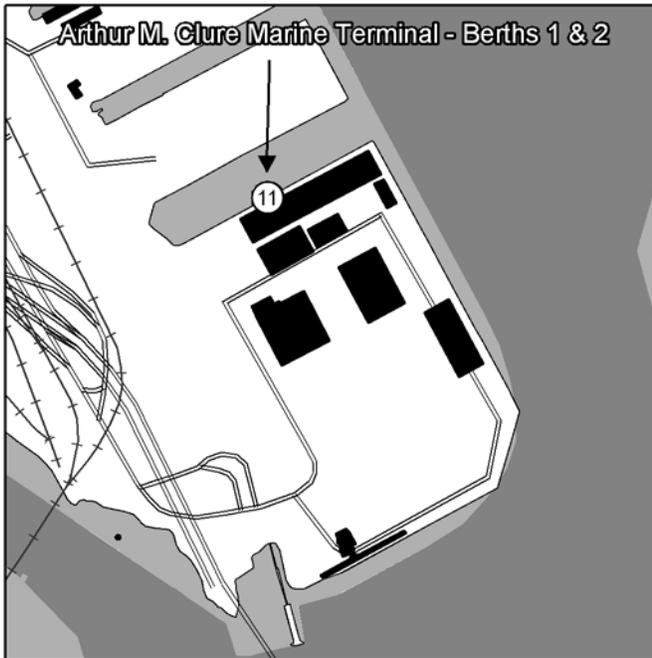
|                                    |   |
|------------------------------------|---|
| <b>Number of Employees:</b>        | N/A   |
| <b>Year Company Established:</b>   | N/A   |
| <b>Location:</b>                   | 250 Garfield Avenue   |
| <b>Current Use:</b>                | N/A   |
| <b>Roadway Access:</b>             | Birch Street to Arthur Avenue   |
| <b>Rail Access:</b>                | Canadian Pacific and Burlington Northern Sante Fe   |
| <b>Dock Facilities:</b>            | Length: Dock C - 1,610 feet; Dock D – 1,600 feet<br>Depth: Dock C - 28 feet; Dock D – 27 feet |
| <b>Access to Shipping Channel:</b> | Duluth Harbor Basin – southern section  |
| <b>Adjacent Land Uses:</b>         | Maritime and industrial   |



## Arthur M. Clure Marine Terminal – Berths 1 & 2

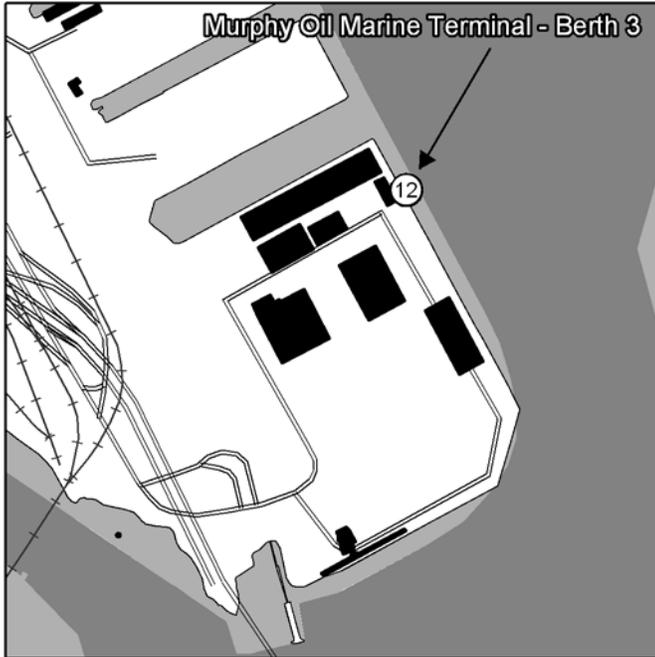
*Operated by Lake Superior Warehousing Co., Inc.*

|                                    |  |
|------------------------------------|--|
| <b>Number of Employees:</b>        | 14 Full Time; 20-150 Seasonal  |
| <b>Year Company Established:</b>   | 1991   |
| <b>Location:</b>                   | 1200 Port Terminal Drive   |
| <b>Current Use:</b>                | Receipt and shipment of general cargoes. Specializes in heavy lift cargoes |
| <b>Roadway Access:</b>             | Via Port Terminal Dr.  |
| <b>Rail Access:</b>                | Canadian Pacific   |
| <b>Dock Facilities:</b>            | Length: 1,620 feet<br>Depth: 30 feet                                       |
| <b>Access to Shipping Channel:</b> | Duluth Harbor Basin – southern section                                     |
| <b>Adjacent Land Uses:</b>         | Maritime and industrial  |



## Murphy Oil Marine Terminal – Berth 3

|                                    |  |
|------------------------------------|--|
| <b>Number of Employees:</b>        | 3                                      |
| <b>Year Company Established:</b>   | 1998 (at this location)                |
| <b>Location:</b>                   | 1100 Port Terminal Drive               |
| <b>Current Use:</b>                | Fuel and waste oil services facility   |
| <b>Roadway Access:</b>             | Port Terminal Drive                    |
| <b>Rail Access:</b>                | Canadian Pacific                       |
| <b>Dock Facilities:</b>            | Length: 1,200 feet<br>Depth: 30 feet   |
| <b>Access to Shipping Channel:</b> | Duluth Harbor Basin – southern section |
| <b>Adjacent Land Uses:</b>         | Maritime and industrial                |

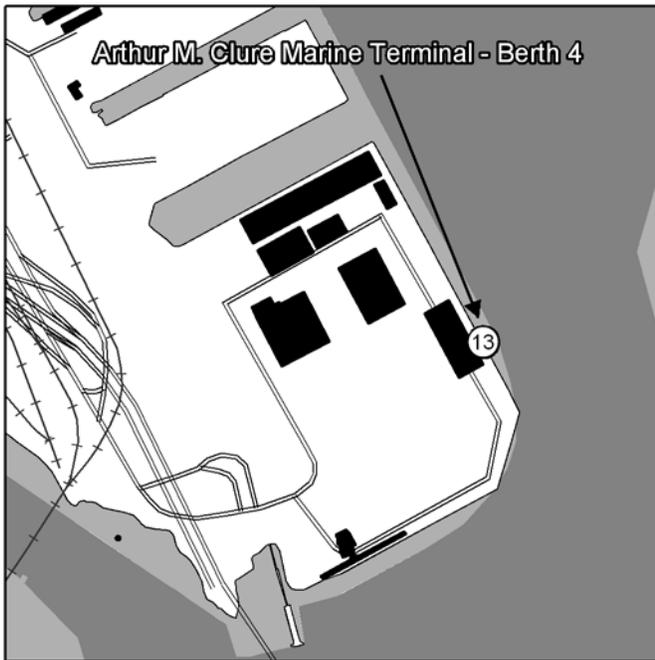


**Map Reference # 13**

**Arthur M. Clure Marine Terminal – Berth 4**

*Operated by Lake Superior Warehousing Co., Inc.*

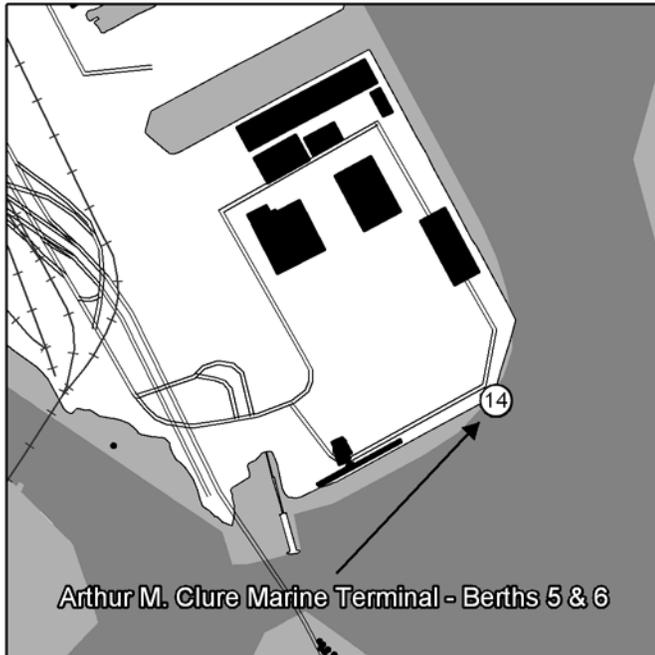
|                                    |  |
|------------------------------------|--|
| <b>Number of Employees:</b>        | See page 41                            |
| <b>Year Company Established:</b>   | 1991                                   |
| <b>Location:</b>                   | 1100 Port Terminal Drive               |
| <b>Current Use:</b>                | Receipt and shipment of general cargo  |
| <b>Roadway Access:</b>             | Port Terminal Drive                    |
| <b>Rail Access:</b>                | Canadian Pacific                       |
| <b>Dock Facilities:</b>            | Length: 1,000 feet<br>Depth: 30 feet   |
| <b>Access to Shipping Channel:</b> | Duluth Harbor Basin - southern section |
| <b>Adjacent Land Uses:</b>         | Maritime and industrial                |



## Arthur M. Clure Marine Terminal – Berths 5 & 6

*Operated by Lake Superior Warehousing Co., Inc.  
and Duluth Seaway Port Authority*

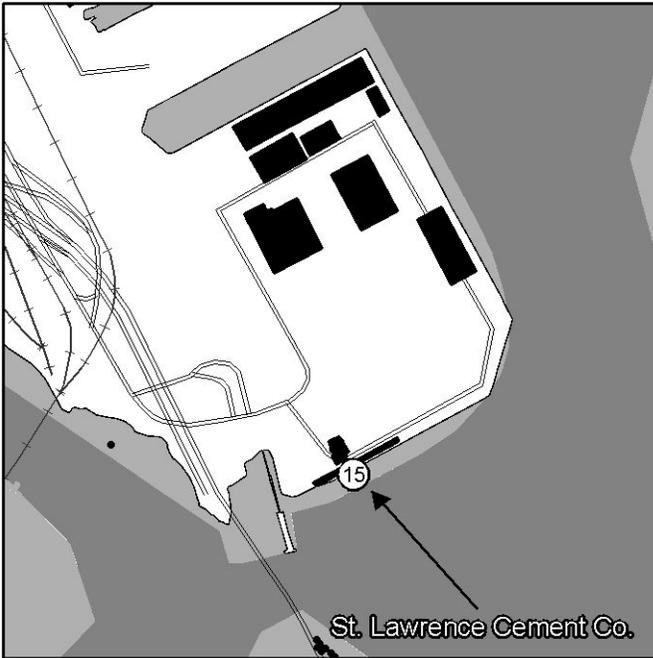
|                                    |  |
|------------------------------------|--|
| <b>Number of Employees:</b>        | N/A  |
| <b>Year Company Established:</b>   | 1991   |
| <b>Location:</b>                   | 1100 Port Terminal Drive Duluth Minnesota                        |
| <b>Current Use:</b>                | Mooring vessels  |
| <b>Roadway Access:</b>             | Port Terminal Drive  |
| <b>Rail Access:</b>                | Canadian Pacific   |
| <b>Dock Facilities:</b>            | Length: Berth 5 – 550 feet; Berth 6 - 696 feet<br>Depth: 30 feet |
| <b>Access to Shipping Channel:</b> | Duluth Harbor Basin - southern section                           |
| <b>Adjacent Land Uses:</b>         | Maritime and industrial  |



**Map Reference # 15**

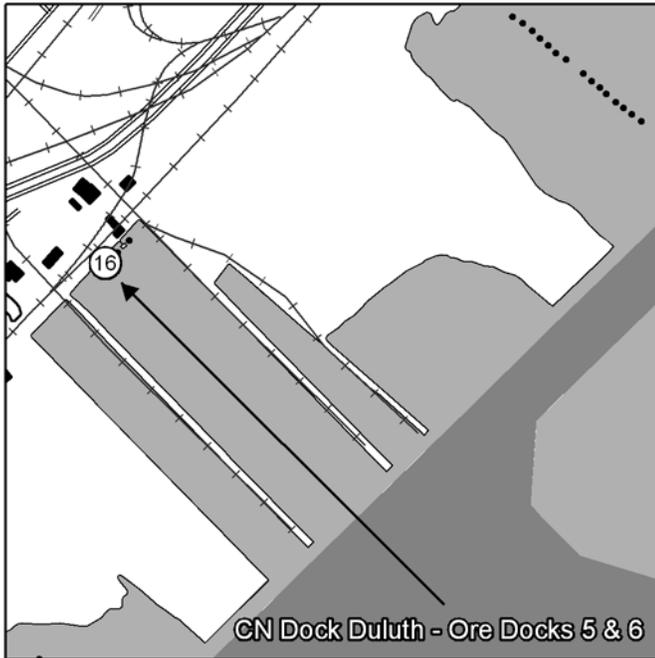
**St. Lawrence Cement Co.**

|                                    |   |
|------------------------------------|---|
| <b>Number of Employees:</b>        | 6   |
| <b>Year Company Established:</b>   | 1982                                      |
| <b>Location:</b>                   | 1100 Port Terminal Drive Duluth Minnesota |
| <b>Current Use:</b>                | Receipt of cement                         |
| <b>Roadway Access:</b>             | Port Terminal Drive                       |
| <b>Rail Access:</b>                | Canadian Pacific                          |
| <b>Dock Facilities:</b>            | Length: 696 feet<br>Depth: 27 feet        |
| <b>Access to Shipping Channel:</b> | East Gate Basin (North)                   |
| <b>Adjacent Land Uses:</b>         | Maritime, industrial, and recreation      |



## CN Docks Duluth – Ore Docks 5 & 6

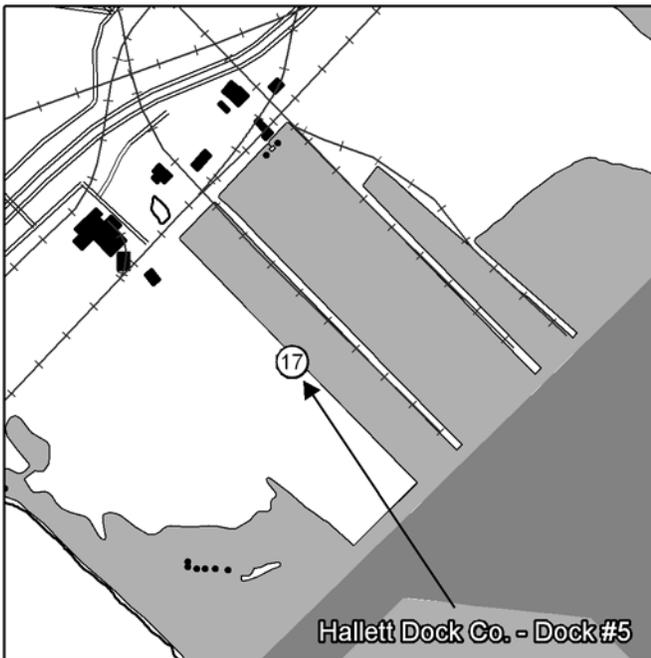
**Number of Employees:** 50  
**Year Company Established:** 1890  
**Location:** Foot of 35th Avenue West  
**Current Use:** Shipment of taconite and receipt of limestone, coal and other dry bulk commodities  
**Roadway Access:** Private driveway from Oneota Street  
**Rail Access:** Canadian National  
**Dock Facilities:** Length: Dock 5 – Both sides are 2,438 feet  
Dock 6 - 1,378 feet on NE side; 2,438 feet on SW side  
Depth: Dock 5 – 28 feet  
Dock 6 - 30 feet  
**Access to Shipping Channel:** North Channel - Eastern Section  
**Adjacent Land Uses:** Maritime and industrial



**Map Reference # 17**

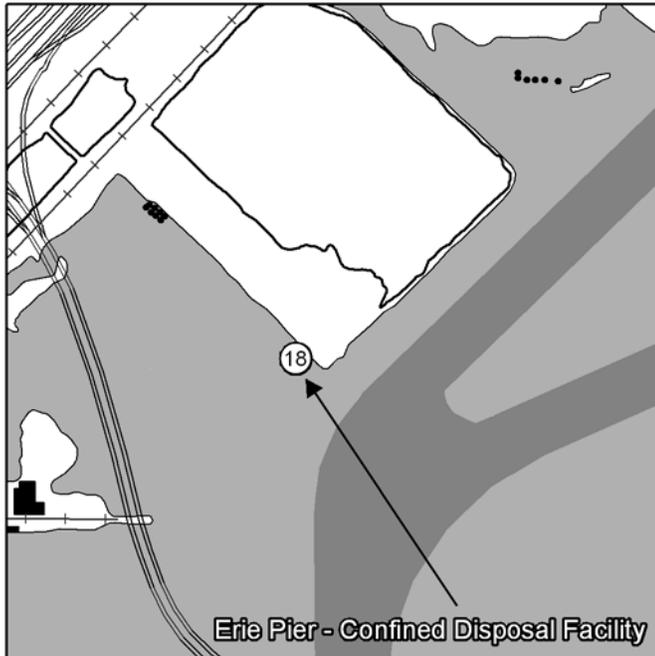
## Hallett Dock Co. – Dock #5

|                                    |  |
|------------------------------------|--|
| <b>Number of Employees:</b>        | 20                                     |
| <b>Year Company Established:</b>   | 1963                                   |
| <b>Location:</b>                   | Foot of 37th Avenue West               |
| <b>Current Use:</b>                | Receipt and shipment of bulk materials |
| <b>Roadway Access:</b>             | Private road from Oneota Street        |
| <b>Rail Access:</b>                | Burlington Northern Sante Fe           |
| <b>Dock Facilities:</b>            | Length: 2,400 feet<br>Depth: 27 feet   |
| <b>Access to Shipping Channel:</b> | North Channel - eastern section        |
| <b>Adjacent Land Uses:</b>         | Maritime and industrial                |



## Erie Pier – Confined Disposal Facility

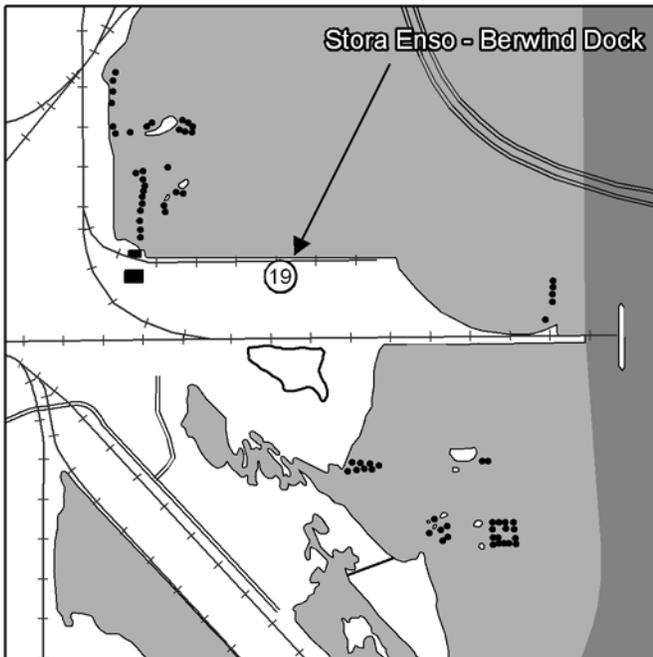
|                                    |   |
|------------------------------------|---|
| <b>Number of Employees:</b>        | N/A   |
| <b>Year Company Established:</b>   | Operated by the Duluth Seaway Port Authority since 1976 |
| <b>Location:</b>                   | Foot of 45 <sup>th</sup> Avenue West                    |
| <b>Current Use:</b>                | Receipt, storage and recycling of dredge materials      |
| <b>Roadway Access:</b>             | Service road from Oneota Street                         |
| <b>Rail Access:</b>                | None  |
| <b>Dock Facilities:</b>            | Length: 300 feet<br>Depth: 15 feet                      |
| <b>Access to Shipping Channel:</b> | North Channel - Western Section                         |
| <b>Adjacent Land Uses:</b>         | Maritime and industrial                                 |



## Stora Enso - Berwind Dock

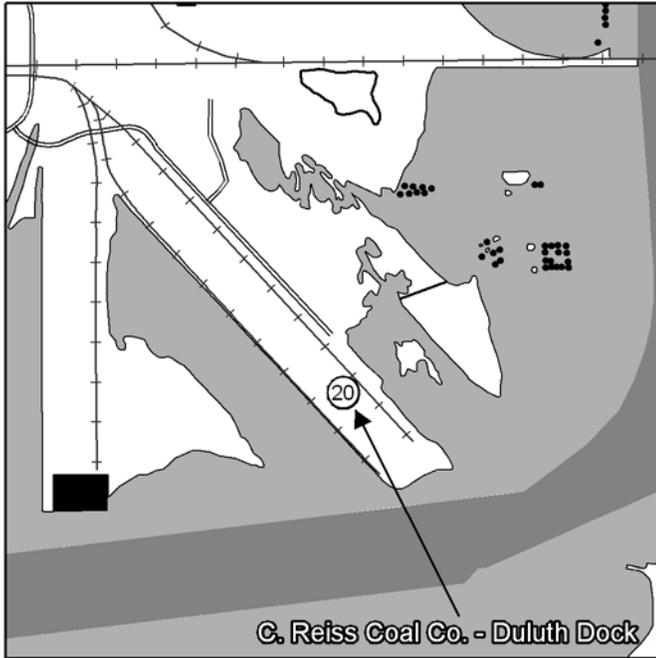
*(Not Active)*

|                                    |  |
|------------------------------------|--|
| <b>Number of Employees:</b>        | 240  |
| <b>Year Company Established:</b>   | 1987   |
| <b>Location:</b>                   | 100 North Central Avenue                       |
| <b>Current Use:</b>                | N/A  |
| <b>Roadway Access:</b>             | Service roads from Waseca Industrial Boulevard |
| <b>Rail Access:</b>                | None   |
| <b>Dock Facilities:</b>            | Length: 300 feet<br>Depth: 12 – 18 feet        |
| <b>Access to Shipping Channel:</b> | Upper Channel                                  |
| <b>Adjacent Land Uses:</b>         | Maritime and industrial                        |



## C. Reiss Coal Co. – Duluth Dock

|                                    |   |
|------------------------------------|---|
| <b>Number of Employees:</b>        | N/A                                     |
| <b>Year Company Established:</b>   | N/A                                     |
| <b>Location:</b>                   | 50th Avenue West and Leisure Street     |
| <b>Current Use:</b>                | Receipt of miscellaneous bulk materials |
| <b>Roadway Access:</b>             | Private driveway from Liesure Street    |
| <b>Rail Access:</b>                | Burlington Northern Sante Fe            |
| <b>Dock Facilities:</b>            | Length: 2,854 feet<br>Depth: 29 feet    |
| <b>Access to Shipping Channel:</b> | Minnesota Channel – Eastern Section     |
| <b>Adjacent Land Uses:</b>         | Recreation and industrial               |

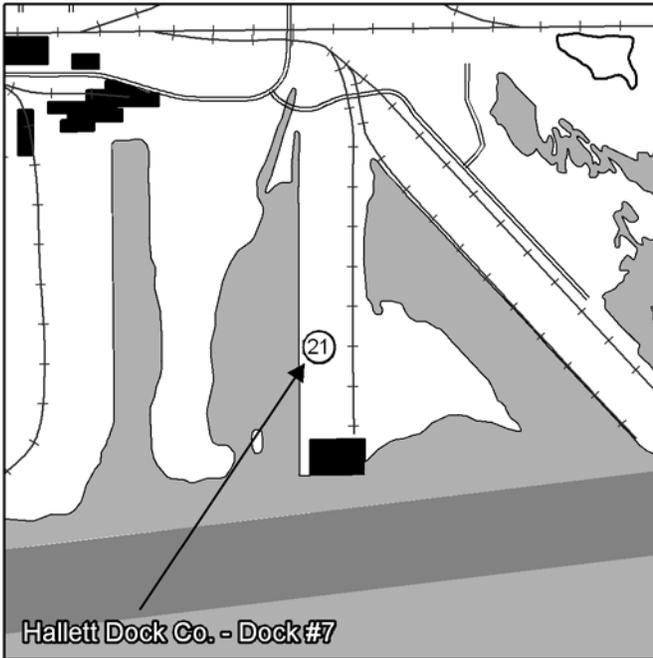


Map Reference # 21

### Hallett Dock Co. – Dock #7

|                                    |  |
|------------------------------------|--|
| <b>Number of Employees:</b>        | 20   |
| <b>Year Company Established:</b>   | 1963   |
| <b>Location:</b>                   | 500 South 59th Avenue West                   |
| <b>Current Use:</b>                | Receipt and shipment of bulk materials*      |
| <b>Roadway Access:</b>             | Private driveway from Waseca Industrial Road |
| <b>Rail Access:</b>                | Burlington Northern Sante Fe                 |
| <b>Dock Facilities:</b>            | Length: 2,000 feet<br>Depth: 23 feet         |
| <b>Access to Shipping Channel:</b> | Minnesota Channel – Eastern Section          |
| <b>Adjacent Land Uses:</b>         | Industrial                                   |

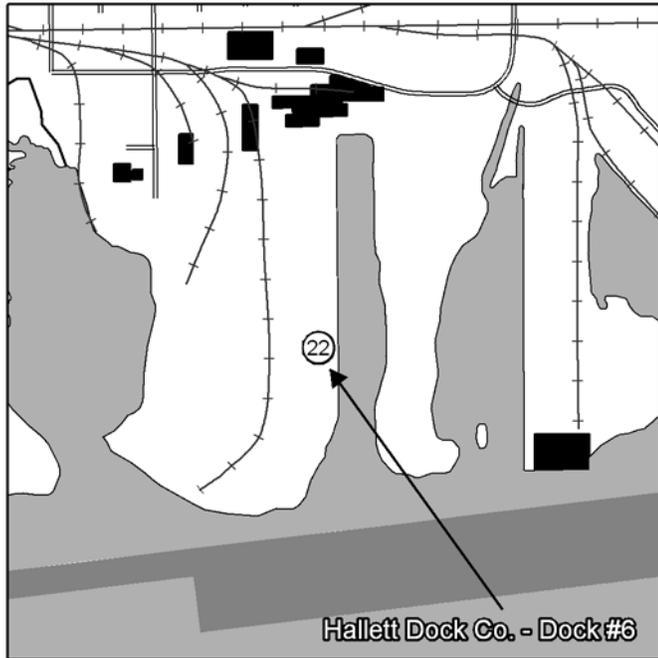
*\*The current use will change due to the remedy chosen to mitigate the adjacent Superfund site. Limited maritime options will result.*



## Hallett Dock Co. – Dock #6

**Number of Employees:** 20  
**Year Company Established:** 1963  
**Location:** 500 South 59th Avenue West  
**Current Use:** \*Receipt and shipment of bulk materials  
**Roadway Access:** Via private driveway from Waseca Industrial Road  
**Rail Access:** Burlington Northern Sante Fe  
**Dock Facilities:** Length: 2,100 feet  
Depth: 23 feet  
**Access to Shipping Channel:** Minnesota Channel – Eastern Section  
**Adjacent Land Uses:** Industrial

*\*The current use will change due to the remedy to mitigate the adjacent Superfund site. This dock facility will no longer be available for maritime activity.*



# The Natural Environment

Land use activities throughout the Duluth-Superior harbor have significantly influenced the natural environment. Some past land use activities have resulted in the removal and filling of area wetlands, contamination of soils, and the elimination or reduction of plant and animal species. With a greater understanding about the role the natural environment plays, better development and management standards are now being used to minimize the impacts to the natural environment.

## Wetlands

The lower St. Louis River was historically very shallow from Grassy Point downstream. It has been reported that dredging and filling have displaced 7,000 acres of wetlands and shallow water habitat since harbor development began. Currently, the study area contains a large amount of wetlands (see Map 6). Wetlands in Minnesota are regulated under a variety of local, state, and federal programs. Oftentimes two or more of these programs cover the same wetland. In some cases, various portions of the same wetland will be regulated by different programs. According to Minnesota Statutes Chapter 645.44 Subdivision 13a, wetlands in Minnesota are defined as “lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this definition, wetlands must have the following three attributes:

- Have a predominance of hydric soils;
- Are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions; and
- Under normal circumstances, support a prevalence of such vegetation.”

The three major wetland regulatory programs of statewide importance are the Department of Natural Resources Public Waters Work Permit Program, the Wetland Conservation Act, and the federal Section 404 permit program administered by the United States Army Corps of Engineers.

### Department of Natural Resources Public Waters Work Permit Program

The basic rule is that a public waters work permit must be obtained from the DNR for work affecting the course, current, or cross-section of public waters, including public waters wetlands. This would include, for example, work involving the draining, filling, excavating, and placing structures in public waters wetlands.

It is important to distinguish between those provisions that refer to “public waters wetlands” which are regulated as public waters under DNR’s public waters permits program and those provisions that refer to “wetlands” which are regulated under the Wetland Conservation Act.

"Public waters wetlands" means all types 3, 4, and 5 wetlands, as defined in United States Fish and Wildlife Service Circular No. 39 (see Appendix pages 100-101), not included within the definition of public waters, that are ten or more acres in size in unincorporated areas or 2-1/2 or

more acres in incorporated areas. Public waters wetlands, along with other public waters, have been inventoried by DNR and are shown on DNR's map of public waters and wetlands for each county. These maps do not show precise wetland locations or boundaries. The maps are filed with the auditor of each county and can be viewed at:

[www.dnr.state.mn.us/waters/watermgmt\\_section/pwi/maps.html](http://www.dnr.state.mn.us/waters/watermgmt_section/pwi/maps.html).

### Wetland Conservation Act

The Minnesota Legislature adopted the Wetland Conservation Act (WCA) in 1991 to protect wetlands not protected under DNR's public waters permit program and provide no net loss of Minnesota's remaining wetlands. Wetlands covered by the WCA are those that meet the definition above from the Minnesota Statutes. The basic requirement is that "wetlands must not be drained or filled, wholly or partially, unless replaced by restoring or creating wetland areas of at least equal public value under an approved replacement plan." The WCA applies to all wetlands, except public waters wetlands shown on DNR's inventory maps.

Responsibility for administration of the WCA is shared by both local and state government. The local government unit (LGU) is responsible for making the initial regulatory determinations for the program. The Board of Water and Soils (BWSR) promulgates administrative rules for the program, provides training to LGUs, participates on technical evaluations panels, hears appeals from local government determinations, and assures proper implementation by LGUs. DNR conservation officers issue enforcement orders. For projects on state land, the agency with administrative responsibility for the land is responsible for administering the WCA.

### United States Army Corps of Engineers Section 404 Permit

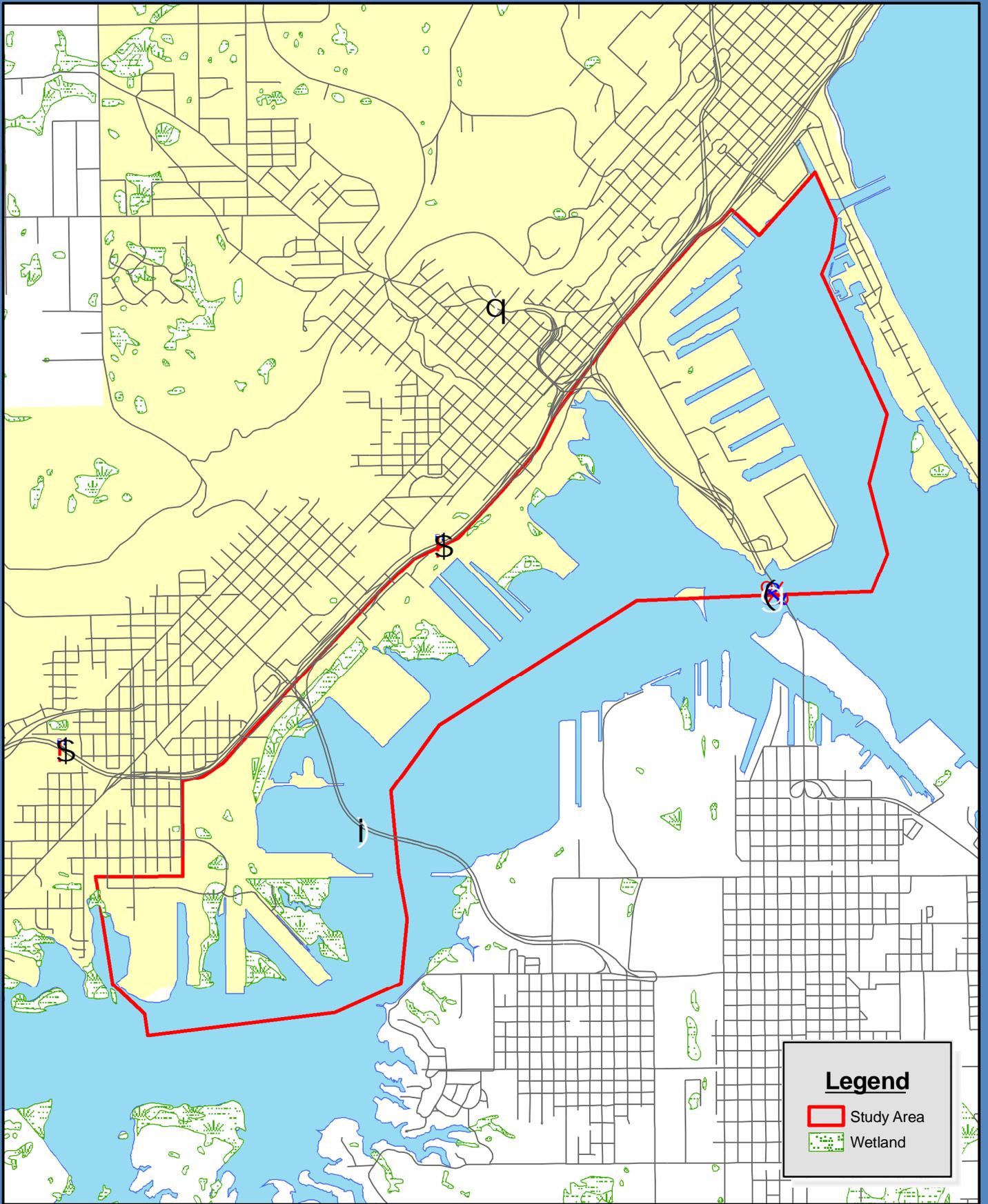
A permit must be obtained from the United States Army Corps of Engineers for non-exempt discharges of dredged or fill material into waters of the United States, including jurisdictional wetlands. The program is administered in conjunction with United States Environmental Protection Agency. The U.S. Army Corps of Engineers (Corps) protects and regulates all "navigable waters of the U.S." including wetlands as provided by the federal Clean Water Act.

Statutory authority is provided by Section 404(a) of the Clean Water Act and Section 10 of the Rivers and Harbors Act. An overview of Section 404 can be found at:

<http://www.epa.gov/owow/wetlands/facts/fact10.html>.

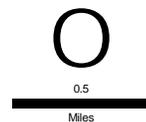
Corps of Engineers regulations define "wetlands" as follows: "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

Corps of Engineers and Environmental Protection Agency regulations specify the standards that are used for evaluating permit applications. Some of the key features of these regulations include the following:



Map 6

# Duluth Port Land Use Plan Wetlands



**Back of Map 6**  
**Duluth Waterfront Wetlands**

- The decision to issue a permit will be based on an evaluation of the impacts on the public interest.
- There is a presumption against filling wetlands for projects that are not “water dependent.”
- A discharge will be prohibited “if there is a practicable alternative to the proposed discharge that would have less adverse impact on the aquatic ecosystem.”

## **Aquatic Habitat**

The St. Louis River Citizens Action Committee facilitated the development of the *Lower St. Louis River Habitat Plan* (May 2002). This plan set out to examine the aquatic and terrestrial habitat of the lower St. Louis River. Shown below is an excerpt from the habitat plan describing the six types of aquatic habitat found adjacent to the study area (see Map 7) as well as their condition and conservation goals as outlined in the plan.

It is important to recognize that the conservation goals described here represent an ideal from an ecological perspective, and that it may not be practical to achieve every goal to its full extent. Some goals were established in a circumscribed fashion, because it is not the intent of this plan to recommend the restoration of the entire estuary and its surroundings to a presettlement condition. Where a goal does recommend something closer to presettlement condition (for example, in the estuarine wetlands and forested lands that do remain), it is important to recognize that practical considerations are expected to play a role in where, how, and to what extent those goals are achieved.

In the following descriptions, the current state of health of the conservation targets is summarized with qualitative rankings of “Good,” “Fair” or “Poor.” A **Good** ranking indicates that a habitat or community closely resembles presettlement conditions, or that a species is secure and reproducing in the Lower St. Louis River. The supporting ecological processes are operating within or close to the natural range of variation. A **Fair** ranking indicates some alteration from presettlement conditions. The species composition, physical setting, age class distribution, or other characteristics of a habitat or community may be somewhat altered and supporting ecological processes are somewhat outside the natural range of variation. A Fair ranking for an individual species indicates it is either in decline or it has declined but stabilized. A **Poor** ranking indicates a habitat or community that shows significant alteration from presettlement conditions, or a species with a very low or non-existent local population. Ecological processes are significantly outside the natural range of variation.

### Lower Estuary (Industrial Harbor) Flats

The industrial harbor flats, located between Grassy Point and the Duluth and Superior entries, are similar to the flats of the upper estuary, but they have been more heavily altered by industrial and commercial activity. They cover roughly 2,400 acres. The shoreline has been greatly modified, and the subsurface topography is complex with old river channels and borrow pits. Lake level

fluctuations exert the greatest influence on water level in this habitat. This habitat may have once held the highest mussel abundance in the estuary; it is now one of the only areas where observers have documented that native mussels are being killed by the zebra mussel infestation. Extensive submergent and emergent wetland vegetation was likely present in this habitat prior to the estuary's industrial and commercial development, but very little vegetation remains today.

*Current Condition:* Poor

*Conservation Goal:* Avoid the loss or further degradation of any of this aquatic habitat. If practical, restore some portion of the flats to an appropriate vegetated condition. As with the dredged channel, slips, and industrially-influenced bays, restoring this entire area to a good ecological condition requires a significant financial investment, and the importance of commercial shipping may weigh against this. Ensure that native species continue to utilize this habitat at current or higher levels.

#### Industrial Slips

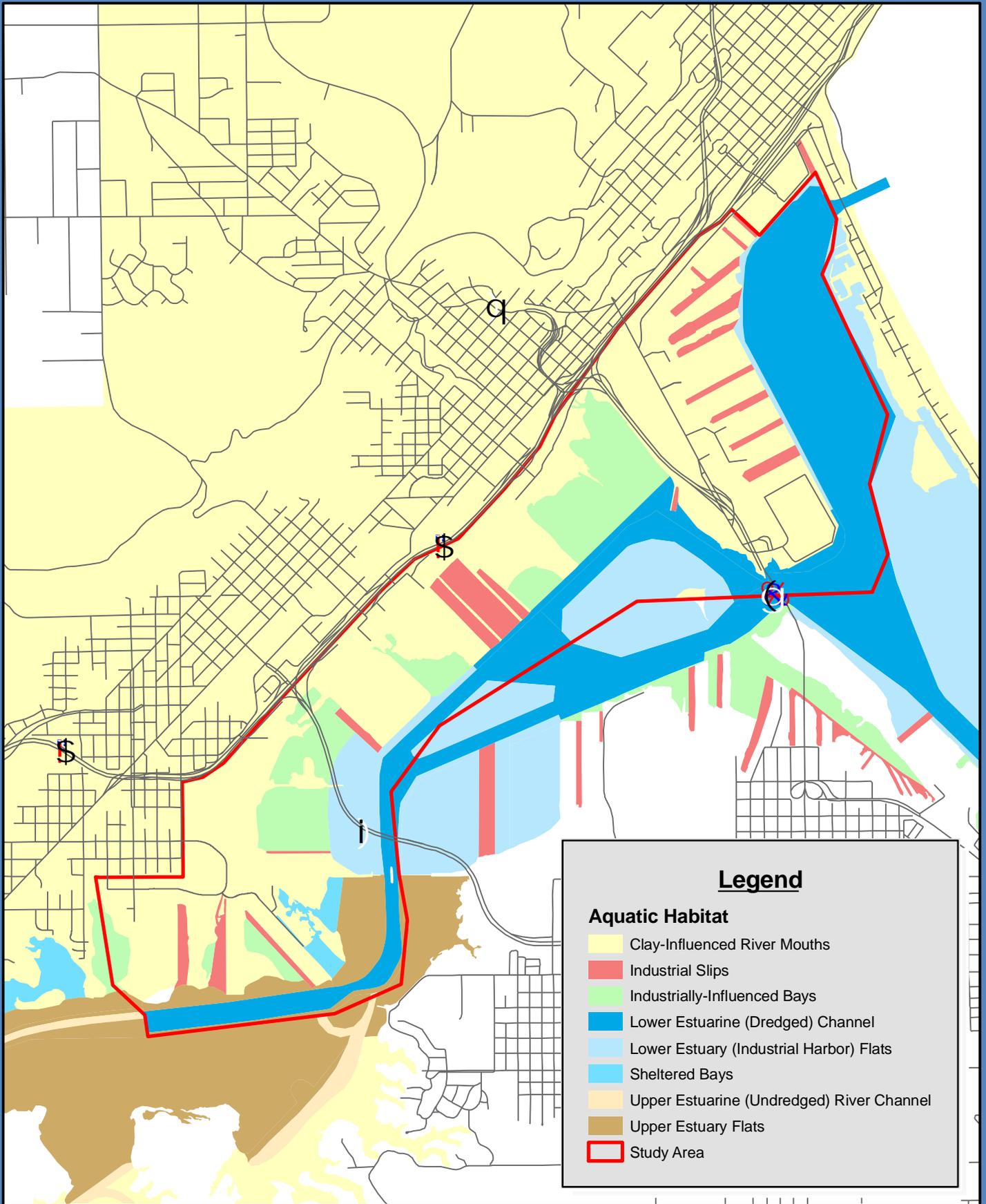
Industrial slips are located along the shoreline of both St. Louis Bay and Superior Bay; the level of commercial use varies between slips. Slips where ships regularly move in and out experience water displacement but very little unidirectional water flow. The water is frequently disturbed and turbid in the most active slips. Substrates may be sandy and scoured, or they may contain more silty sediments with varying levels of contaminants (e.g., PAHs, mercury) or industrial materials. There is little vegetation within the slips, primarily due to water depth, but wetland vegetation is present at the shallow heads of some slips. Despite the poor conditions, even active slips are used by fish and water birds.

*Current Condition:* Poor

*Conservation Goal:* Since shipping is an important industry in the Twin Ports area, the minimum goal is to avoid the loss of any open water or wetland components of these habitats (due to filling or other activities). In addition, some abandoned slips should be identified for restoring the aquatic habitat to a fair to good condition. Ensure that native species continue to utilize this habitat at current or higher levels. Remediate contaminated sediments.

#### Industrially-Influenced Bays

Industrially-influenced bays are found on both sides of the river. The bays are generally 4-5 feet deep, with varying occurrences of emergent and submergent aquatic vegetation. Lake level fluctuations have the strongest influence on water level and flow in these bays. Many bays have high concentrations of industrial debris such as rebar, concrete, and wood, and some sediments are highly contaminated with PAHs, mercury, lead, PCBs, and other toxins. Exposure to the contaminants associated with the sediments adversely affects many organisms and degrades the habitat. Consequently, these bays are in very poor health..



**Legend**

**Aquatic Habitat**

- Clay-Influenced River Mouths
- Industrial Slips
- Industrially-Influenced Bays
- Lower Estuarine (Dredged) Channel
- Lower Estuary (Industrial Harbor) Flats
- Sheltered Bays
- Upper Estuarine (Undredged) River Channel
- Upper Estuary Flats
- Study Area

Source: St. Louis River Citizens Action Committee, Lower St. Louis River Habitat Plan May 2002

Map 7

**Duluth Port Land Use Plan  
Aquatic Habitat**



**Back of Map 7**  
**Duluth Waterfront Aquatic Habitat**

*Current Condition:* Poor

*Conservation Goal:* At a minimum, avoid the loss of any open water of these bays. Restore industrially influenced bays to habitat similar to the sheltered bays (in good condition) whenever possible. This includes ensuring a diversity of native emergent, floating leaved, and submergent vegetation, as well as increased diversity of native fish and bird species utilizing this habitat type. Remediate contaminated sediments

#### Lower Estuarine (Dredged) Channel

From Stryker Bay to the Duluth and Superior entries, the river channel is dredged regularly to maintain a depth of 27 feet. This creates frequently disturbed deep-water habitat. It is used by some fish as wintering habitat, and it is an important feeding area for fish-eating birds. Water quality is greatly improved compared to the period between the late 1800s and the 1970s, but further improvements are necessary. This habitat contains the St. Louis River/Interlake/Duluth Tar Superfund site, a discrete area of highly contaminated sediment. This portion of the channel is in poor ecological health, but the current economic importance of commercial shipping makes it impractical to consider any restoration at this time.

*Current Condition:* Poor

*Conservation Goal:* Implement continued improvements in water quality and replicate the natural hydrologic regime to the extent possible. Avoid any loss of this open water habitat. Avoid further degradation of this habitat. Ensure that native species continue to utilize this habitat at current or higher levels.

#### Clay-Influenced Bay

Allouez Bay, southeast of the Superior Entry, is unique within the estuary. It is a shallow, protected bay, with little water exchange between the bay and the lake. However, lake level fluctuations are the primary determinant of water level in the bay. Two small surface runoff-dominated tributaries—Bear Creek and Bluff Creek—empty into the bay. There is abundant emergent and submergent vegetation, which provides excellent habitat for fish and waterfowl. Mudflats, which are used by a variety of bird species, are also present. Many species of fish spawn in Allouez Bay, including northern pike, muskellunge, bluegill, black crappie, smallmouth bass, and yellow perch. The exotic ecotype of common reed (*Phragmites australis*) is present in Allouez Bay, but it is not yet common.

*Current Condition:* Fair/Good

*Conservation Goal:* The relatively good quality of this habitat should be maintained and enhanced. Reduce turbidity to its natural range of variation; restore the natural hydrologic regime of the tributaries feeding this bay. Ensure the continued diversity of native aquatic plants; non-native plant species should not be present. Enhance the diversity of native fish and bird species utilizing this habitat.

### Clay-Influenced Tributaries

These aquatic habitats were identified as targets as part of the Great Lakes aquatic ecoregional planning process. They include tributaries such as the Red River and Little Pokegama River, as well as the larger Nemadji River. Bluff Creek and Bear Creek are also included in this habitat type. They are defined by a broader set of physical characteristics than the other estuarine aquatic habitats. Their health is determined in part by their own hydrologic regime, not by Lake Superior or the St. Louis River. They are first- or second-order, medium- to low-gradient, groundwater- and surface water-influenced streams, flowing through lacustrine red clay deposits. These tributaries provide habitat for a variety of the native fish found in the estuary. The surface water hydrology of these streams has been altered by ditches, wetland draining, and other hydrologic modifications in the watersheds. Changes in the composition of the surrounding forest have resulted in excessively high flows and extremely low flows, which in turn cause excessive streambank erosion, increased sedimentation, and habitat impairment. Ditching and developed areas create higher peak flows and increased sediment loads in these streams.

*Current Condition:* Variable—Fair to Poor

*Conservation Goal:* The hydrology and related sediment loads within the respective watersheds should be managed to more closely resemble presettlement conditions. Ensure that native species continue to utilize this habitat at current or higher levels. Restore in-stream habitat where degraded.

It is not the intent of the *Lower St. Louis River Habitat Plan* return land within our study area to presettlement conditions but to inventory the aquatic habitat conditions and improve the habitat where feasible.

### **Contaminated Areas**

#### Harbor

The Duluth-Superior Harbor is one of the most heavily used ports in the Great Lakes basin. Historic and ongoing land use and water-related activities in the harbor have contributed a variety of nutrients and chemicals to the St. Louis River. In 1987, concerns over environmental quality conditions prompted the designation of the lower St. Louis River (from Cloquet, Minnesota to its entrance to Lake Superior) as one of 43 Great Lakes areas of concern (AOC). AOCs are geographic areas that fail to meet the requirements of the objectives of the Great Lakes Water Quality Agreement where such failure has caused or is likely to cause impairment of beneficial use or the area's ability to support aquatic life. Remedial Action Plans (RAPs) have been established as the principal mechanism for addressing concerns related to impaired uses in the most severely impacted areas in the Great Lakes basin. Specifically, the terms of the Great Lakes Water Quality Agreement necessitate the preparation of RAPs for each AOC. The RAPs are prepared in a staged approach, including:

- Stage I – Identify impaired uses, and identify the sources of the stresses from all media in the AOC

- Stage II – Identify proposed remediation actions and their method of implementation
- Stage III – Document evidence that impaired uses have been restored.

The RAP process must embody a comprehensive ecosystem approach and include substantial citizen participation. The International Joint Commission (IJC), through a formal protocol agreement between Canada and the United States, was charged with reviewing the RAPs for each AOC and assuring that they met these basic criteria. To facilitate effective citizen participation, the St. Louis River Citizen Action Committee became the independent, nonprofit Citizens Action Committee (CAC) in 1997. The CAC has played an essential role in the further development and implementation of the RAP process. The *Lower St. Louis River Habitat Plan* is part of the body of work completed by the CAC that is designed to restore impaired uses in the St. Louis River estuary.

Several local, state, and federal agencies have produced reports identifying contaminated locations. One of these reports is the *Sediment Assessment of Hotspot Areas in the Duluth/Superior Harbor*. Some sites within our study area with known contamination include Slip C near the north end of the study area, an area from Rices Point to the east edge of the DM&IR taconite facility, a small area adjacent to the DM&IR property, a large area between the Grassy Point Draw and Erie Pier, and the Stryker Bay Superfund Site (see Map 8).

#### Landside

In addition to the contamination of sediments within the harbor, landside contamination has primarily occurred due to human activity. Within the project boundary of the Port Plan, a number of known contaminated sites exist and are usually referred to as brownfields (see Map 8). Brownfields are sites with the potential for development or reuse, but remain unused or underused because of known or suspected environmental contamination. The Minnesota Pollution Control Agency (MPCA) is the state agency that administers a brownfields rehabilitation program. They have created a contaminated land database, which is located at [www.pca.state.mn.us/backyard/neighborhood.html](http://www.pca.state.mn.us/backyard/neighborhood.html) and contains interactive maps for locating brownfields. The inventory includes federal and state brownfield sites, landfills, former dump sites as well as permitted solid waste sites.

#### **Cleanup Strategies**

In connection with contaminated sediments and brownfields, there are federal, state and local resources available to help identify and remediate contaminated areas.

#### SLRIDT

The most visible project in recent years is the St. Louis River/Interlake/Duluth Tar (SLRIDT) superfund site. This site is located in the West Duluth neighborhood approximately four miles upstream from Lake Superior and had been polluted from many years of industrial operations dating back to the 1890s. Coal tar and other tar products were produced on the site until the late 1940s. Sediment sampling in 1979 by the MPCA discovered Polynuclear Aromatic Hydrocarbons (PAHs), considered hazardous substances under state and federal Superfund laws. In 1983 the site was added to the National Priorities List (Federal Superfund list).

The Superfund site was divided into three operable units: tar seeps, soils, and sediment. The tar seeps can be defined as shapeless, black residues from the coking process and other industrial activities characterized by high concentrations of PAHs. The selected remedy for the tar seeps operable unit was completed in 1994, and included excavation of the tar seep wastes and transportation of the wastes to be burned off-site for energy recovery.

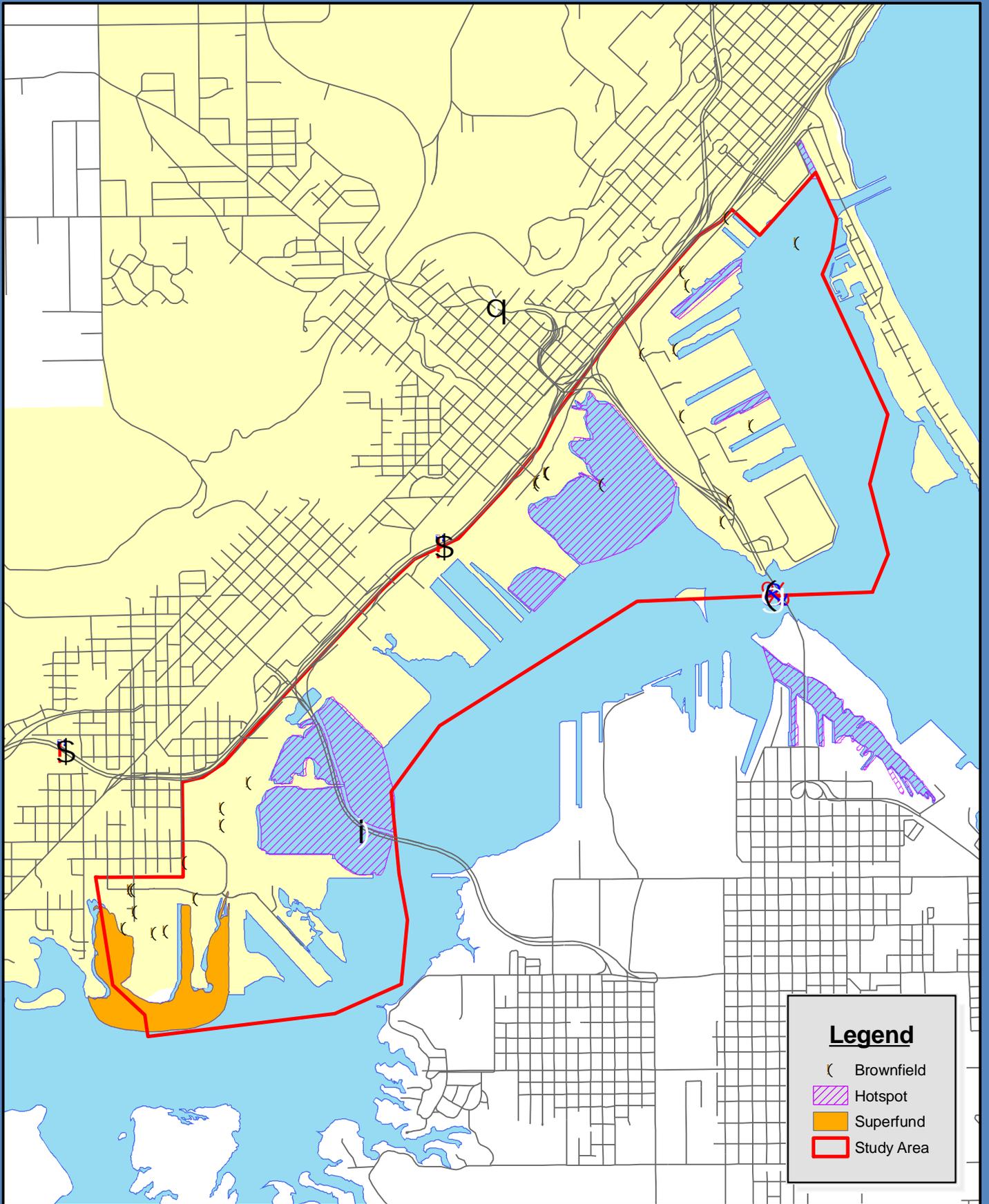
The contamination in the soils operable unit was primarily PAH compounds, although volatile organic compounds (VOCs) were also present in some areas. The remediation was completed in October 1997 using a combination of on-site incineration and landfilling. Because the current and future use of the upland portion of the SLRIDT site is industrial, remedial actions included cleaning up the contaminated soil to accommodate an industrial setting. As a result, property use restrictions were developed by the MPCA for recording by the landowner with the property records. Groundwater monitoring is also being addressed as part of a five year review.

A proposed remedy was identified for the sediment operable unit in 1998. The responsible parties proposed to study additional alternatives and technologies. Further study was completed between 2000 and 2003 with additional alternatives being investigated. A record of decision (ROD), approved by the MPCA Board in 2004, describes the selected remedy for the sediment operable unit. The proposed plan for sediment cleanup is a hybrid combination of dredging and capping sediments in place with a total price tag of \$43-47 million. Initial cleanup activities began in the fall of 2004.

#### Sediment Data

Over the years, there have been a number of sediments studies conducted in the St. Louis River estuary. These studies have generated of large amounts of sediment data that has historically been managed piecemeal. To assist in managing this data and making it more available and useful, MPCA has developed a *GIS-based sediment quality database*. The creation of this database for the St. Louis River AOC will allow the tracking of critical pollutants and will facilitate efforts to reduce use impairments listed in the St. Louis River RAP. This database will also serve as a model for other Great Lakes AOCs to utilize for managing contaminated sediment data. A primary goal of this project is to manage the data to make it more accessible to stakeholders and the public.

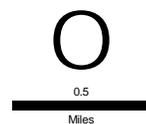
Currently the *GIS-based sediment quality database* has had three phases completed and a fourth phase has recently received funding. The objective of Phase I was to develop a sediment quality database for the St. Louis River AOC with a GIS-based mapping component and to provide training to stakeholders. Phase II incorporated more sediment quality data as well as adding additional geographic data. Phase III of the database includes more sediment quality data sets from the Minnesota side of the AOC, including benthic invertebrate community data. Phase IV will add sediment quality data and geographic information from the Wisconsin side of the harbor.



Source: MPCA

Map 8

## Duluth Port Land Use Plan Contaminated Areas



# **Back of Map 8**

## **Contaminated Areas**

## Brownfields

MPCA administers financial assistance programs and provide technical assistance to facilitate the identification and cleanup of brownfield sites. Reimbursement, grants, loans, tax incentives, or a combination of financial assistance is available. Technical assistance is available from state regulatory programs that provide oversight during the investigation and remediation (i.e. cleanup) of contamination. State regulatory programs also provide liability protection and written assurances that are often critical to success in negotiating brownfield property transfers and financing packages. For funding options for brownfield assessment and cleanup see page 82.

The state regulatory programs that offer technical assistance and liability assurances include the Voluntary Investigation and Cleanup (VIC) Program and the Petroleum Brownfields Program. These state programs help parties who are voluntarily addressing contamination at brownfield sites to make decisions about when site cleanup is needed and how to accomplish site cleanup goals.

Locally, the City of Duluth has been involved in identifying and cleaning up brownfields. The city applied for and received a grant from the U.S. EPA for a Brownfields Assessment Pilot Program. Initially the pilot program was to cover properties in the Rices Point area as well as adjacent areas near Bayfront Park. Not enough property owners came forward in these areas so the program was expanded to other areas in the city. Eventually seven properties were identified with four of them in the port plan study area.

The process for this pilot program has four steps: site selection, phase 1 assessment, phase 2 assessment, and development remedial action plan. Not all sites selected make it through all four steps. Site selection identifies high-priority sites that can be successfully addressed within limitations of grant and future funding. Phase 1 assessments review historic/regulatory information and inspect site to determine if contamination is likely. Phase 2 assessments include sampling and site characterization to confirm nature and magnitude of contamination. A development remedial action plan (DRAP) is a design solution that addresses risk from contamination in light of anticipated reuse.

The following table shows the four selected sites (see Map 9, next page) within the port plan study area and how many subsequent steps of the process they made it through.

| <b>Property</b>                | <b>Ownership</b> | <b>Phase I</b> | <b>Phase II</b> | <b>DRAP</b> |
|--------------------------------|------------------|----------------|-----------------|-------------|
| Bayfront Area                  | Public           | X              | X               |             |
| Canadian Pacific - Rices Point | Private          | X              |                 |             |
| ISD 709 – Garfield Garage      | Public           | X              |                 |             |
| Canadian Pacific – West Duluth | Private          | X              | X               |             |

## Map 9: Duluth Brownfields Assessment Pilot Program Sites



### Dredging

In the Duluth-Superior port, the federally authorized shipping channel (see Map 10) is maintained at a charted depth of 27 feet from the Duluth and Superior entries upstream to and including the north channel eastern section, cross channel, and south channel eastern section. From this area, it is maintained to a charted depth of 23 feet for approximately two miles upstream. The Army Corps of Engineers has developed a Dredged Material Management Plan (DMMP) for the Duluth-Superior Harbor (1998). This plan is intended to assist the Army Corps of Engineers and local jurisdictions in identifying potential uses for dredged materials over the next 20-year period. Since its completion the plan has been used as a base for determining costs since one of the recommended methods of dredge disposal includes filling deep holes in the harbor. Both Minnesota and Wisconsin prohibit open water disposal of dredge materials. The State of Minnesota would consider in-water disposal provided that beneficial habitat would result.

### Regulations

Dredging activities within the Duluth Harbor must be permitted and approved by the Army Corps of Engineers and/or the Minnesota Pollution Control Agency. Federal regulations relating to dredging activities include Section 10, Section 404 and Section 401 permits. As part of the Section 404 permitting process, the Corps has initiated a GPLOP 98 process that now replaces the Section 404 nationwide permitting process in Minnesota. Additional detail on dredging regulations can be found at [www.mvp.usace.army.mil/regulatory/](http://www.mvp.usace.army.mil/regulatory/)

Currently, the Duluth office of the MPCA is in the process of streamlining the dredge permitting process for the St. Louis River. This effort includes coordinating with the local Wisconsin DNR office to make both processes similar between the two states. The flowchart on the following page outlines the permitting process.

### Beneficial Reuse

Dredging within the Superior Harbor requires a plan for disposal or disposition of the dredged material. For decades, the majority of dredged material has been deposited at the Erie Pier Confined Disposal Facility (CDF). More recently, however, the dredged materials have been used for beneficial use. Beneficial use is the use of dredged materials as a resource rather than disposing of it as a waste. For many of the maintenance dredging activities, sand is dredged from the harbor and sorted at the Erie Pier for use in local construction projects. In addition, dredged material is used as beach/near-shore nourishment or habitat creation or restoration. The beneficial use of dredged material assists in limiting the amount of materials to the CDF and can improve the environmental quality of aquatic and plant life.

Two beneficial reuse projects that have been studied over the years are the Hearing Island Habitat Creation and the 21<sup>st</sup> Avenue West Channel Habitat Creation. Both of these projects would create shallow water habitat for wildlife refuge and fish habitat.

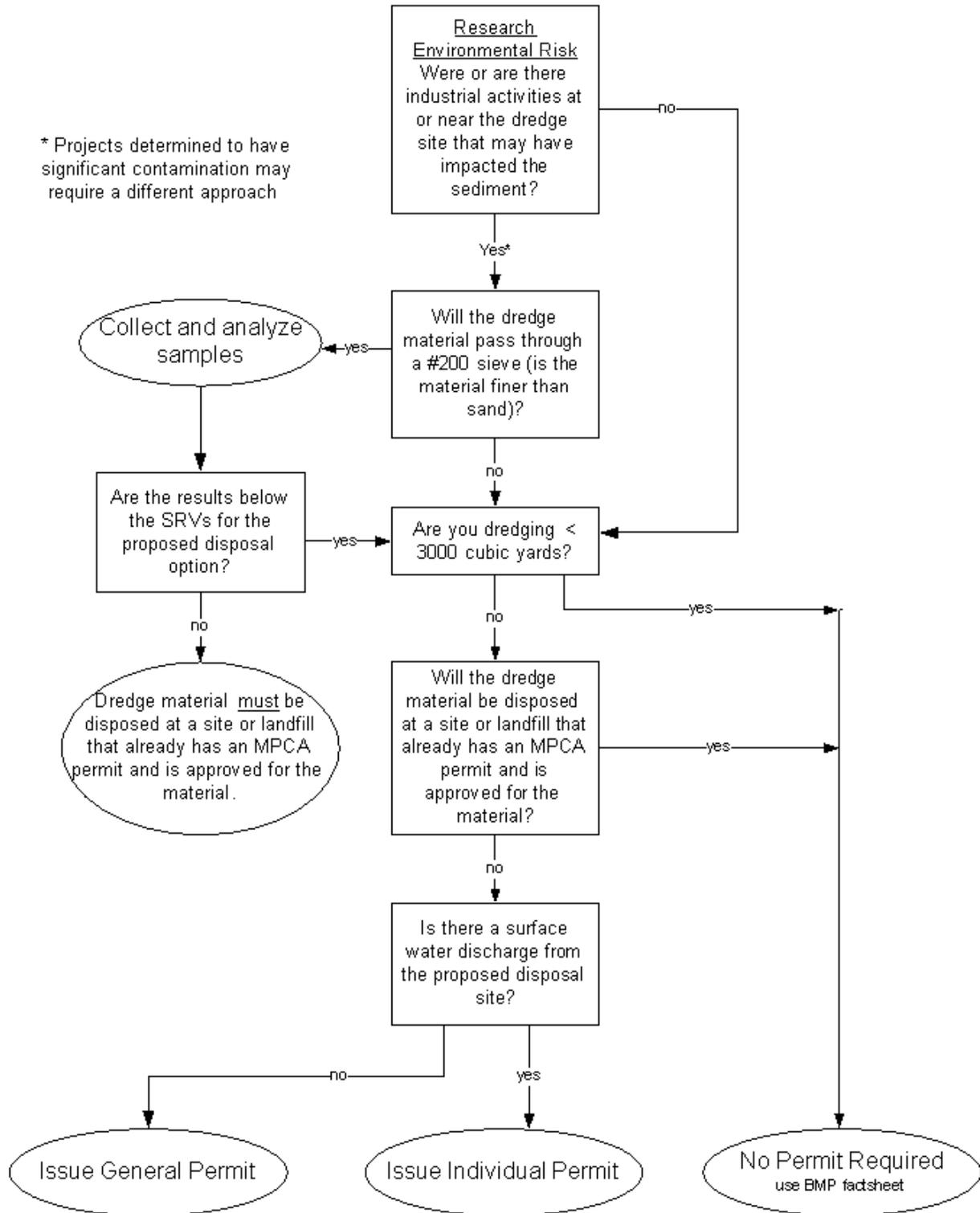
### **Conclusions**

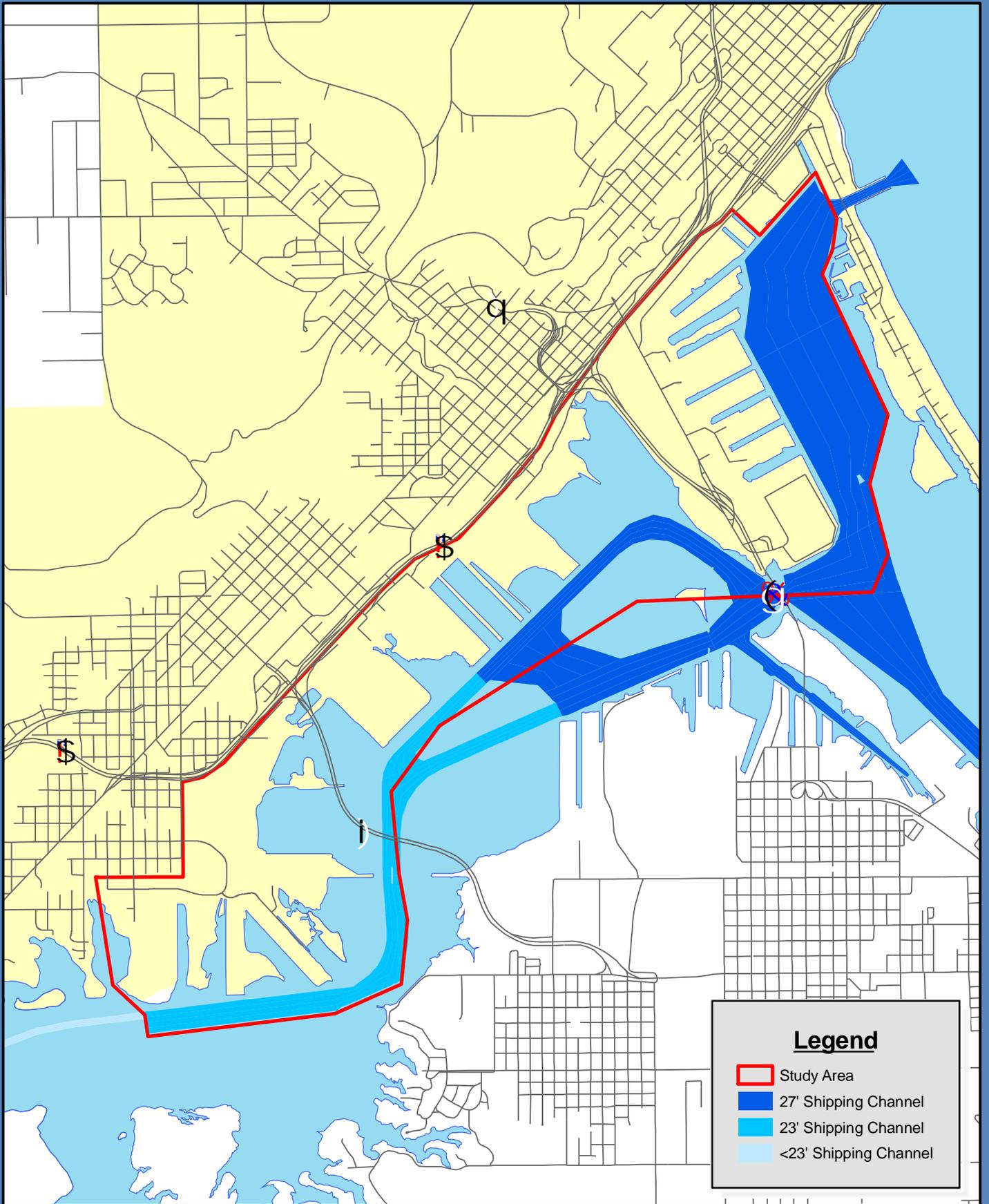
Historic land use activities throughout the Duluth-Superior harbor have significantly influenced the natural environment. Past land use activities have resulted in the removal and filling of area wetlands, contamination of soils, and the elimination or reduction of plant and animal species. It is important that as land use activities occur, developments consider impacts and utilize methods that enhance the quality of the natural environment. Areas with existing harbor infrastructure with proximity to the federally designated shipping channel should be preserved for maritime uses. Areas that still include high quality habitat should be avoided for future development.

DRAFT  
4/11/05

### Permit Decision Flowchart for Dredge Facilities

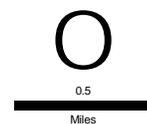
\* Projects determined to have significant contamination may require a different approach





Map 10

**Duluth Port Land Use Plan  
Federally Authorized Shipping Channel**



**Back of Map 10**  
**Federally Authorized Shipping Channel**

## Future Land Use

The goal in looking at future land uses is to identify a configuration of land uses that provides compatibility between uses, protects natural and economic resources, and provides opportunities for future development. This arrangement of land uses would utilize the Duluth waterfront to its highest use and accommodate appropriate interests in waterfront development. It would protect the existing businesses, which provide a large number of jobs and provide opportunities for future recreation, commercial, and industrial development.

Another factor in looking at future land uses along the Duluth waterfront is to protect and preserve the utility of the federally authorized shipping channel (see Map 10 ). This channel is maintained to accommodate maritime freight activities. Using channel front lands for other purposes takes away future opportunities to utilize the shipping channel.

In developing a vision for future land uses, a number of inputs were considered. A future land use suitability analysis was conducted that looked at five types of development – commercial, industrial, maritime industrial, recreation, and residential. Other information included input from port stakeholders, interview responses from port businesses, the Public Trust Doctrine, current zoning, and location of existing businesses. The Study Committee considered all of these inputs as they developed the Future Land Use map (Map 11 on page 75).

### Future Land Use Suitability Analysis

To determine the most suitable locations for residential, recreation, commercial, maritime industrial, and non-maritime industrial land uses, MIC staff compiled a large amount of geographic data and incorporated the analytical capabilities of Geographic Information Systems (GIS).

A number of factors influence what land is most suitable for certain types of development. Proximity to roads, water, sewer, wetlands, and flood plains can have some bearing on land use. Much of the geographic data that was collected for this study illustrates the location of these factors. Utilizing GIS, all of these factors can be analyzed together to illustrate the locations most suitable for certain land uses.

Working with geographic information in numerous data layers can be challenging, especially when each of those data layers can impact the final outcome of the analysis. In order to organize the data and assess its relative importance in the final analysis, a suitability model is often used. The suitability model has the capability of considering large amounts of geographic information. This information is entered into the model and the importance of the different data layers is ranked or weighted.

Ranking involves placing information, such as wetlands and proximity to water and sewer, into separate classes. These classes are assigned numerical values based on their relative importance. The numerical values can be considered the ranking or weighting of the information. As an example, industrial development requires proximity to water and sewer but should not be located

in a wetland. The weighting could reflect this by giving areas within 500 feet of water and sewer a high numerical value and wetlands a low or negative value depending on the scale. The model results should show areas near water and sewer to be more suitable than wetland areas in this instance.

The following list is the geographic data that were used in this analysis:

- Sanitary Sewer
- Water Lines
- Gas Lines
- Rail Lines
- Roads
- Maintained Shipping Channel
- Port Facilities
- Wetlands
- Brownfields
- Endangered Species
- Current Land Use
- Filled Land since 1861

Suitability Analysis is a tool that can allow the user to replicate real world situations. The results of the analysis were used as a starting point in developing the Future Land Use Map. Other social, cultural, economic, and political issues were also considered.

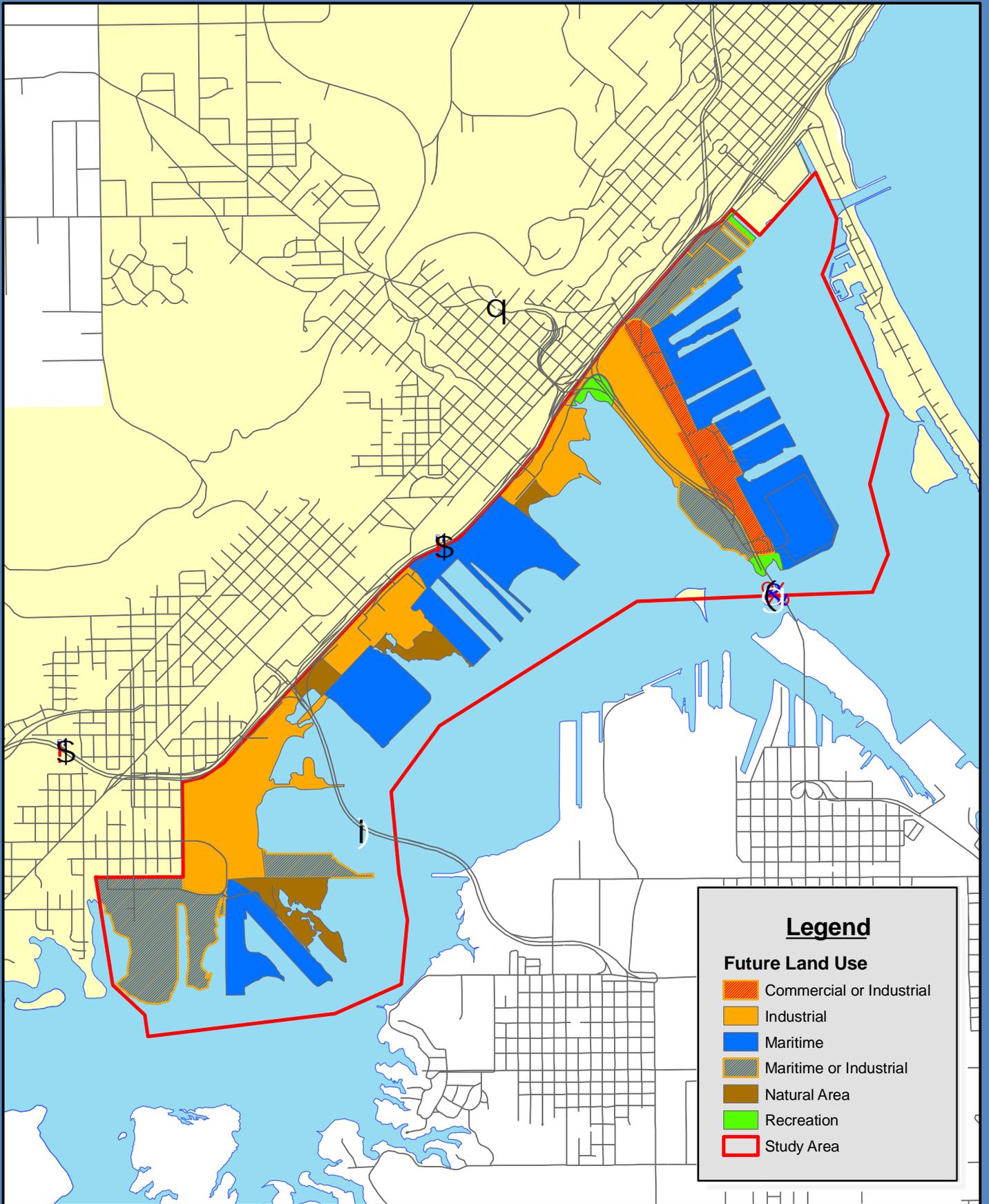
### **Future Land Use Map**

A number of factors were taken into account in the future land use discussion. In addition to the suitability analysis discussed above additional information was considered. The following list outlined the discussion of the subcommittee as the Future Land Use Map was being generated.

Inputs considered in development of Future Land Use Map:

- Suitability analysis results
- Results of stakeholder input
- Current land use
- Public trust doctrine
- Current trends in transportation markets
- Land use compatibility issues
- Subcommittee input

An interactive GIS session was conducted with the Study Committee to help facilitate the development of the Future Land Use Map. The results of the Future Land Use Suitability Analysis were available as well as all the input data and aerial photography of the study area. The Study Committee was able to request display of the model results in conjunction with any other layer of geographic data. An area-by-area discussion took place as the most appropriate future land uses were discussed. The results of the discussion were compiled by MIC staff and were edited by review of the subcommittee. The final result is displayed on Map 11.



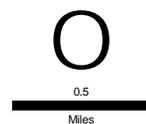
**Legend**

**Future Land Use**

-  Commercial or Industrial
-  Industrial
-  Maritime
-  Maritime or Industrial
-  Natural Area
-  Recreation
-  Study Area

Map 11

**Duluth Port Land Use Plan  
Future Land Use**



**Back of Map 11**  
**Duluth Port Future Land Use**

The Future Land Use Map was developed with the objective of promoting compatible land uses, protecting and enhancing existing maritime businesses, preserving natural features, redeveloping under-utilized or idle facilities, and providing opportunities for the public to access the waterfront. It is important to protect the value of the federally authorized shipping channel and preserve waterfront areas for uses that require access to the shipping channel. The intent of this map is to serve as a land use guide and provide a quick visual reference for appropriate port land uses.

The definitions for the land use categories used in the Future Land Use Map are as follows:

- **Commercial or Industrial:** This category includes both Commercial and Industrial land uses. The commercial land uses are wholesale, retail, office, entertainment, or services, plus related contiguous accessory uses such as parking areas and service drives. See the following definition for industrial land uses.
- **Industrial:** Land uses that are predominately for manufacturing or on which materials or articles are processed or semi-processed, but not retailed, including related storage areas, and warehousing.
- **Maritime:** Land uses that are dependent on proximity to the federally designated shipping channel with facilities normally used in connection with water transportation or navigation purposes.
- **Maritime or Industrial:** This category combines the two categories listed above.
- **Natural Area:** This land use category is intended to preserve land in its natural state. The purpose is to preserve the ecological function of the land area.
- **Recreation:** This category includes areas that are non-developable or are currently dedicated to recreation uses.

### **Opportunities and Under-utilized Facilities**

A site-by-site review of the Duluth waterfront was conducted in an attempt to identify under-utilized sites and opportunities for redevelopment. The following text contains a brief description of sites that may have reuse or intensified use potential. A number of facilities may not be used to their current capacity due to a number of transportation market forces. Given that changes in the global economy can alter demand for transportation, the Duluth-Superior port needs to remain flexible to accommodate demand for water transportation.

#### Garfield Docks C & D

Located on Rices Point near the Clure Public Marine Terminal this 28+ acre site has a 1200 foot dock and 1800 foot dock. Two idle grain elevators were demolished to prepare the site for a future bulk cargo facility. One project currently under study is to develop a clay handling facility on this site. The clay products are used as an input in the paper making process and are currently being shipped by rail from Georgia.

The existing road access to this site is substandard, however a \$5.2 million road and rail project is scheduled to begin during the fall of 2005. The development of the Helberg Drive project will

bring a second access to the port terminal area as well as improve rail access in the area. Helberg Drive improvements could also provide redevelopment opportunities to areas of Rices Point not located along the waterfront.

#### Stora Enso – Berwind Dock

This dock does not have deep draft access from the federally designated shipping channel. The opportunities for shipping freight would include shallow draft ships and barges.

#### **Future Facility and Development Considerations**

- **Fumigation Yard** – A central site is needed in the Duluth-Superior port area to conduct fumigation of grain cars. Currently some local rail companies will not allow this service on their property and some grain elevators do not have space and track available on their locations. A central facility would provide a site to conduct fumigation of rail cars from all area grain elevators.
- **Additional Wintering Dockage** – The port of Duluth-Superior currently provides winter dockage and maintenance services to as many as 15 Great Lakes ships. These maintenance operations generate economic benefits in the form of jobs and contracts for local companies. Opportunities may exist for additional ships to berth along the Duluth waterfront.
- **Grain Off-Loading Facility**
- **Marine Intermodal Facility** – examine results of Twin Ports Intermodal Study
- **Expansion of Existing Marina Facilities**

# Funding

The information in this section describes funding sources that can be used for port related infrastructure improvements and contaminated land cleanup. The information is organized by the agency that administers each program.

## **Minnesota Department of Transportation (MnDOT)**

### Minnesota Port Development Assistance Program

The Minnesota Port Development Assistance Program is designed to help public ports modernize physical infrastructure. It is a grant program to aid Port Authorities on the Mississippi River and Lake Superior that handle waterway freight, for infrastructure rehabilitation and improvement. Funds are made available through direct appropriation from the Minnesota Legislature; therefore, allocations of funding vary from year to year.

The grant program funds up to 80% of a projects identified by Port Authorities, with the authority responsible for the balance. It will pay for final design and the actual physical construction. It will not pay for studies, planning or initial design work.

MnDOT does not have specific criteria for project selection for the Port Development Program. However, it does require the Port Authority to fill out an application that describes the need for the project and identifies potential economic impacts (new jobs, job retention). In addition, MnDOT works with the ports to prioritize the list of all submitted projects. Together, they identify the highest-priority projects and develop a funding proposal to submit to the legislature. This program is patterned after the Wisconsin Port Assistance program.

### Minnesota Rail Service Improvement Program (MRSI)

The Minnesota Rail Service Improvement Program (MRSI) was created in 1976 with the purpose of granting funding or loans to rail users and rail carriers. This funding is provided to improve deteriorating rail lines in order to increase rail-shipping opportunities. It is also used to preserve and maintain abandoned rail corridors for future transportation use. Recently, funds have been used for improving, extending and moving rail sidings, construction of grain storage bins, fertilizer storage, building warehouses along the rail siding, and improving the speed of loading into rail cars. The success of this program has enabled it to fund itself for the last 25 years. Included in MRSI are five subprograms:

#### Rail Line Rehabilitation Program

This program provides low or no-interest loans to rehabilitate and preserve rail lines. The state may loan up to 70% (80% if the line is owned by a regional rail authority) or the total project cost. Rail users must loan at least 10% of the project cost to the rail carrier, with the rail carrier covering at least 20% of the total cost. Upon completion of the rail rehabilitation project, the railroad repays the state on a formula, based on usage, or a predetermined fixed amount. Terms of repayment are negotiated between the user and carrier and must be approved by MnDOT.

### Rail Purchase Assistance Program

This program helps regional rail authorities purchase rail lines if a financial analysis shows that the line can operate at a profit, that purchase cost and necessary rehabilitation will not exceed benefits, and that the regional railroad authority is capable of operating the rail line or can contract with an operator to do so and still be profitable.

### Rail User and Rail Carrier Loan Guarantee Program

This program helps shippers and carriers to obtain loans for rail rehabilitation and capital improvements by guaranteeing up to 90 percent of the loan.

### Capital Improvement Loans

Loans are available through this program to assist users in improving the efficiency of their rail transportation. To improve rail service and facilities, loans are available for up to \$200,000, or up to 100 percent of the project; whichever is less. Capital improvement loans are available to improve rail service through construction or improvements to rail line segments (i.e., side track and team track connections). MnDOT uses the capital improvement portion of the MRSI program on a regular basis, whereas other programs: The Rail Line Rehabilitation Program, Rail Purchase Assistance Program, Rail Bank Program, and The Rail User and Rail Carrier Loan Guarantee Program, are used on an as-needed basis.

### Rail Bank Program

This program is used to acquire and preserve abandoned rail lines for future state, public, and commercial transportation. It can also be used in the case of transmission needs i.e. transit, trails and pipelines.

Since 1976, the MRSI program has received \$9.6 million in state general funds and \$25.5 million in general obligation bonds. There is no ongoing or regularly allocated federal funding. However, over \$21.7 million in federal funding has been targeted to specific projects, some of which have been used to improve rail corridors. Funding at the state level depends on legislative appropriations. Historically, funding has been irregular and subject to general fund availability and bonding allocations. Recently, funds have been used for improving, extending and moving rail sidings, construction of grain storage bins, fertilizer storage, building warehouses along the rail siding, and improving the speed of loading into rail cars. The success of this program has enabled it to fund itself for the last 25 years.

## **Minnesota Department of Commerce**

### Petrofund

In response to federal legislation regarding the cleanup of leaking underground petroleum tanks, the Minnesota State Legislature created the Petrofund in 1987. Federal regulations require all owners and operators of regulated underground petroleum storage tanks to show that they have up to \$1 million immediately available to respond to a petroleum tank leak or liability to a third

party. The Petrofund makes financial assistance available to help tank owners and operators fulfill these requirements. It was also created to address historical petroleum contamination throughout the state. Minnesota owners and operators of petroleum storage tank are eligible to apply for up to \$1 million of if they have incurred investigative or cleanup costs, or if they owe damages to a third party.

Since 1999 the Petrofund program has included reimbursement for costs associated with upgrading or decommissioning bulk petroleum storage tank facilities. These are defined as above ground or underground tank facilities with storage capacity between 1,100 gallons and 1million gallons; and that are used to dispense petroleum into cargo tanks for transportation and sale at another location.

Please note that current Minnesota law abolishes the Petrofund on June 30, 2007.

#### Contamination Tax

This tax tool from the Minnesota Department of Revenue provides for a reduction in property tax on contaminated property to as low as 12.5 percent of contamination value. The Minnesota contamination tax imposes a tax on the contamination value of taxable real property. The contamination value is the amount of market value reduction granted by an assessor or other authority for property taxes because the property is contaminated. It is limited to the estimated cost of cleanup. The contamination tax is equal to a percentage multiplied by the contamination net tax capacity of the property. The statute imposes a range of tax rates on the contamination value of the property, depending upon the status of cleanup and whether the owner or operator of the property is a responsible party under state Superfund law or pesticide liability law.

In order to qualify, an entity must have prepared and begun implementing an MPCA or Minnesota Department of Agriculture approved RAP and initiated implementation. If contamination at the site is asbestos, an asbestos-abatement plan must be in place. Property tax proceeds are used for contamination cleanup grants.

#### **Minnesota Department of Natural Resources**

The Minnesota DNR's mission is to work with citizens to conserve and manage the state's natural resources, to provide outdoor recreation opportunities, and to provide for commercial uses of natural resources in a way that creates a sustainable quality of life. The department offers a wide variety of financial assistance programs to cities, counties, townships, non-profits, schools, private individuals and others.

#### Minnesota's Lake Superior Coastal Program

The purpose of Minnesota's Lake Superior Coastal Program (MLSCP) is to preserve, protect, develop and where possible, restore or enhance coastal resources along Minnesota's North Shore of Lake Superior. The program is administered through MN DNR Waters and is based out of an office in Two Harbors. It was established in 1972 by the Coastal Zone Management Act, a national program administered through the National Oceanic and Atmospheric Administration (NOAA).

Suitable projects include those that preserve or restore specific areas as designated in Minnesota's Coastal Program because of their conservation, recreational, ecological or aesthetic values, redevelopment of deteriorating under-utilized urban waterfronts, public access to beaches and other coastal areas, land and easement purchases, low cost construction of paths, fences, parks, rehabilitation of historic buildings and structures, shoreline stabilization, engineering plans, education and interpretation. Projects must be located within the Lake Superior Coastal Program Boundary. \$100,000 is the maximum funding limit with a 50% match required for projects on a reimbursement basis. Eligible Minnesota communities apply for funding as a tool to implement existing programs and plans. Special projects include training and education needs, interpretive displays, cultural and ecological inventories, research and restoration, and demonstration projects.

### **Minnesota Pollution Control Agency**

#### Small Business Environmental Loan Program

The Small Business Environmental Improvement Loan Program provides low-interest loans to small businesses for financing environmental projects including equipment upgrades and costs associated with the investigation and cleanup of hazardous materials.

Existing businesses that have fewer than 50 full-time employees, after-tax profits of less than \$500,000 and a net worth of less than \$1,000,000 are eligible. Projects must be pre-approved by the MPCA. Loans range from \$1,000 to \$50,000 per project and can be used for site investigations and cleanups and capital equipment purchases that meet or exceed environmental rules and regulations.

#### Brownfields Assistance

MPCA provides two key forms of assistance: First, and most importantly, they operate two environmental programs that have the primary goal of assisting parties who wish to purchase, investigate and if needed, cleanup a property for redevelopment. The second type of assistance allows parties engaged in brownfield redevelopment to receive grant funding from the MPCA for site investigation.

The MPCA's Voluntary Investigation and Cleanup (VIC) Program and Voluntary Petroleum Investigation and Cleanup (VPIC) Program were created to address the technical and liability issues associated with buying, selling, or developing property with known or suspected contamination. The key difference between the two programs is that VIC was designed for sites contaminated by hazardous substances, while VPIC was set up for sites contaminated by petroleum. The VIC and VPIC Programs provide technical review and approval of site investigations and cleanup plans so that landowners, lenders, and developers can be assured that the extent of environmental problems at a site are reasonably well known and the costs of site cleanup may be calculated. In addition, parties cooperating with the MPCA and conducting site investigations and cleanup may be able to obtain liability assurance letters for contamination identified at their sites.

The MPCA conducts site investigations at brownfield properties through its Targeted Brownfield Assessment (TBA) Program. The MPCA's TBA program, funded with a grant from the EPA, provides the MPCA with funding to hire consultants to perform Phase I and Phase II environmental site assessments at suitable brownfield sites. The grant also pays for MPCA staff time. There is no fee associated with this service.

### **Minnesota Environmental Initiative**

Minnesota Environmental Initiative builds innovative partnerships to develop solutions to Minnesota's environmental problems. They work with nonprofit, business and government partners to develop consensus on critical issues and move collectively toward action that has positive environmental impacts

#### Resources for Redevelopment (R4R)

Resources for Redevelopment (R4R) fosters neighborhood improvements and community revitalization through brownfield redevelopment projects. As the non-profit Minnesota Environmental Initiative's land use program, R4R focuses on creating unique options for reusing and redeveloping properties with suspected contamination across the state. R4R's goal is to facilitate the reuse of properties for affordable housing, nonprofit facilities, green space, natural areas and other open spaces.

Those who may apply include: Nonprofit organizations, community groups, local units of government, and state agencies. Applications are accepted on a continuing basis. R4R program staff should be consulted prior to submitting an application. Funding is leveraged with in-kind consulting and legal services on a project-by-project basis.

Through collaboration, R4R can provide partners with assistance with project management, environmental site assessment and investigation, written liability assurances from the MPCA and development of a RAP. R4R can also assist with cleanup, green space design and green space implementation on a limited basis.

Sites must be developed into neighborhood facilities or amenities – places for communities or nonprofits to provide services, affordable housing or green space. Members of the area affected by the redevelopment project must be given meaningful opportunities to provide input on the project.

### **Minnesota Department of Employment and Economic Development (DEED)**

#### Contamination Cleanup Grant and Contamination Investigation and Response Action Plan Development Grant Programs

DEED administers two grants targeting brownfield sites with well-developed redevelopment plans and partners. For both grants, a key element is the existence of a redevelopment plan that is supported by the community and will be completed in a timely manner.

One grant helps fund the investigation for contamination and the development of a Response Action Plan (RAP) for site cleanup (Contamination Investigation and Response Action Plan Development Grant). The other grant helps fund the implementation of an approved RAP and/or the site investigation (Contamination Cleanup Grant). Because site investigation costs can be considerable, the first grant was created to give eligible parties a helping hand with costs on the way to developing a completed RAP.

Cities, economic development authorities, housing and redevelopment authorities, port authorities or counties are eligible. Private parties can partner with public entities to achieve a redevelopment objective. The development authority must provide at least a 25 percent local match. There is \$19.4 million available per biennium to fund these programs and amounts vary with each project.

At least 25 percent of available funds must be spent in greater Minnesota, unless there are not enough applications received from greater Minnesota. The grants can be used for investigation and cleanup. However, grants for cleanups cannot exceed 75 percent of estimated project costs. Grants for investigations can cover up to 75 percent or \$50,000, whichever is less. There is a semiannual application cycle. Deadlines are November 1 and May 1.

#### Minnesota Cleanup Revolving Loan Fund Program (RLF)

Minnesota communities can tap into DEED's financial and technical assistance programs to help spur business growth and meanwhile address important revitalization issues. The Minnesota Cleanup Revolving Loan Fund was created with funds granted by the EPA in 2003 to provide low-interest loans to clean up contaminated sites. Loans are targeted at economic development projects showing the greatest need, exhibiting long-term project viability and demonstrating repayment capacity. DEED also offers technical assistance for redevelopment projects and activities, including housing and commercial rehabilitation, wastewater treatment facilities and drinking water systems, and contaminated site clean-up.

Those eligible include cities, counties, developers, subunits of local governments including economic development authorities, housing and redevelopment authorities, port authorities, and profit and nonprofit organizations. Several conditions apply:

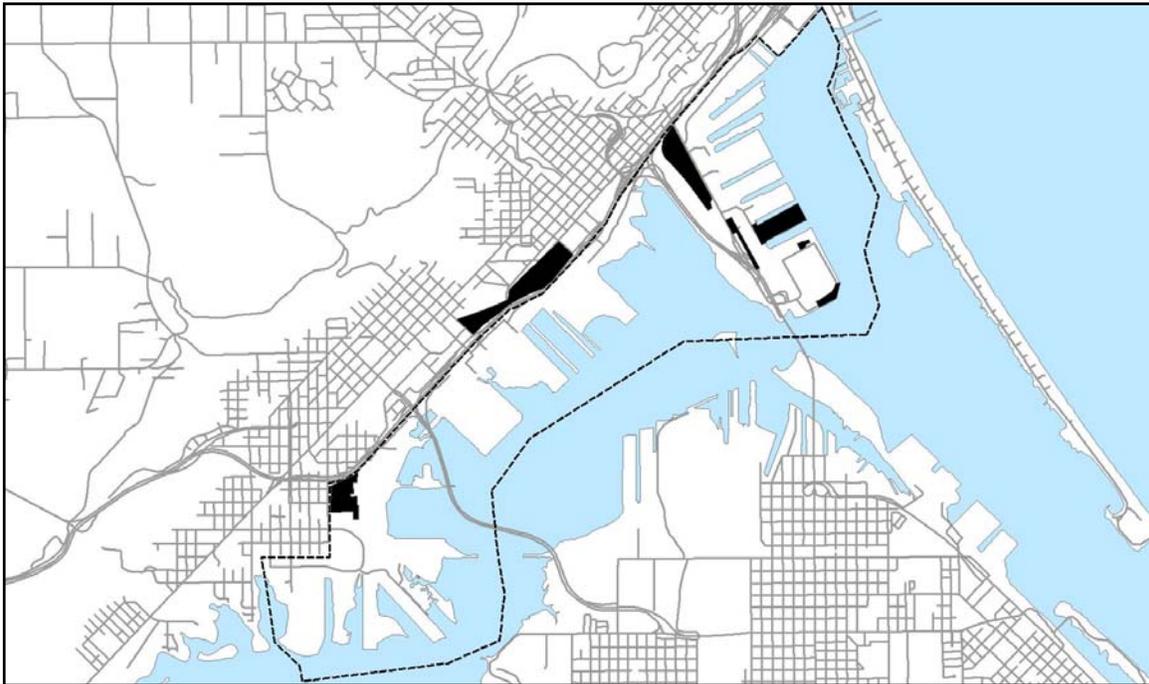
- Applicant must own or demonstrate legal control of the site
- Site must be enrolled in the appropriate MPCA VIC and/or VPIC Program
- Site must have a pre-approved RAP for cleanup of contamination defined under Minnesota Statutes 115B.02
- Applicant cannot have caused or exacerbated the contamination under EPA guidelines.
- Site cannot be scheduled for funding through the federal or state Superfund programs during the current or next fiscal year
- Site cannot be proposed for listing or be listed on the EPA National Priorities List
- Applicant cannot be a generator or transporter of contamination at the site
- Site is contaminated with hazardous substances, pollutants or contaminants defined under Minnesota Statutes 115B.02.

Loan funds may be used to pay for any portion of costs for a project with an approved Remedial Action Plan (RAP) for the cleanup of soil and/or ground water affected by the release of hazardous substances, pollutants or contaminants. Funds may also pay for demolition of buildings, if necessary, to implement a RAP and cleanup-related site sampling and monitoring and costs associated with meeting requirements for public participation in project review. Loans are available year-round on a first-come, first-served basis. Originally, \$900,000 was capitalized for loan funds and all loan payments are reinvested into the program.

### **Job Opportunity Building Zones (JOBZ)**

The goal of the JOBZ program is to stimulate economic development activity in rural Minnesota by providing local and state tax exemptions. Tax exemptions include corporate franchise tax, income tax for operators or investors, including capital gains tax, sales tax on goods and services used in the zone if the goods and services were purchased during the duration of the zone, property tax on commercial and industrial improvements but not on land; wind energy production tax and employment tax credit for high paying jobs. The state played a lead role in designating the zones and local entities are responsible for business development and marketing of the zones. There are six zones within the port plan study area and one directly adjacent.

**Map 12: JOBZ Sites in Duluth Port Land Use Plan Study Area**



## **U.S. Department of Transportation**

### Transportation Infrastructure Finance and Innovation Act

The Transportation Infrastructure Finance and Innovation Act (TIFIA) provides Federal credit assistance to major transportation investments of critical national importance such as intermodal facilities, border crossing infrastructure, highway trade corridors, and transit and passenger rail facilities with regional and national benefits. The TIFIA credit program is designed to fill market gaps and leverage substantial private investment by providing supplemental and subordinate capital.

Projects such as inter-city passenger bus and rail facilities and publicly owned intermodal freight transfer facilities (except seaports or airports) on or adjacent to the National Highway System are eligible. Also qualified is any type of project that is eligible for Federal assistance through existing surface transportation programs (highway projects and transit capital projects).

Each project must meet certain objectively measurable threshold criteria to qualify. It must cost at least \$100 million or 50% of the State's annual apportionment of Federal aid funds whichever is less. The project also must be supported in whole or in part from user charges or other non-Federal dedicated funding sources and be included in the State's transportation plan.

# Duluth Port Land Use Policies and Recommendations

All of the information in this document was essential in developing the policies and recommendations contained in this final chapter. A brief summary of previous chapters is included here to highlight information that has been presented to this point. After careful consideration of the information assembled throughout this planning process, recommended policies were designed to promote land use in the study area that will enhance and protect the economic and natural resources of the Duluth waterfront.

## Plan Summary

The **introduction** to this plan provides a description of the port history, a brief account of the economic impact, and an explanation of the planning methodology. The port history section was assembled to illustrate how the port of Duluth-Superior developed over time. As the port evolved, iron ore, coal and grain facilities located to ship these bulk commodities to other Great Lakes ports as well as destinations throughout the world. The economic impact information demonstrates the importance of the port to the regional economy and the large number of jobs created by the movement of freight through the port. The planning methodology utilized in this process was developed initially for the Superior Port Land Use Plan. This methodology was replicated for this plan and the two plans will be combined to form the Duluth-Superior Port Land Use Plan. Completing one side at a time allowed for a more in depth examination of information unique to each state. The introduction also explained the HTAC mission and its relationship to the planning process.

The **background documents** that were reviewed throughout this planning process represent a wealth of information and recent history of port planning issues and represent the hard work of many agencies, groups, and citizens. These planning documents examined the port on an area-wide basis as well specific sites as they address a wide range of issues. The large amount of resources that have been invested in planning for the port demonstrates its importance to our area.

The **stakeholder input** produced a variety of information on how groups and businesses view the port areas. One message communicated by stakeholders was that the port is important to the community because of the number of good paying jobs it provides. Promoting compatible land uses was also identified as important. Most groups and businesses would like to see consistency and continuity in how land use decisions are made along the port waterfront. Environmental protection was also a primary theme we heard from stakeholders. Moving freight by water transportation is the most fuel efficient and safest method of freight transportation.

The **Public Trust Doctrine** states that navigable waterways are held in trust for the public and any lands created when waterways are filled are required to have maritime, navigation-related, or public benefit uses when developed. This doctrine provides the legal support for protecting and managing lands held in trust for the public. While not as defined as Wisconsin's interpretation of the doctrine, Minnesota does have a number of state statutes and rules that address navigable waterways and public trust issues. The Minnesota Department of Natural Resources is the state

agency charged with protecting public rights in the commercial or recreational use of navigable waters. The Public Trust Doctrine generally provides opportunities for public use as well as assuring more efficient use of the federally designated shipping channel.

Descriptions of **current land uses** in the port area were compiled to help the reader understand how the port is currently functioning. The land uses descriptions were done utilizing the ARDC Land Use Classification System. A Current Land Use Map (Map 4 on page 27) was compiled for the study area. The chapter also includes a description of waterfront facilities that have docks and piers. Waterfront location maps and aerial photos for each facility are also included. The sources of information include the U.S. Coast Guard, U.S. Army Corps of Engineers, Duluth Seaway Port Authority and City of Duluth.

The **natural environment** was examined to identify areas better suited for development and areas appropriate for high quality habitat. Historic land use activities throughout the Duluth-Superior harbor have significantly influenced the natural environment. Past land use activities have resulted in the removal and filling of area wetlands, contamination of soils, and the elimination or reduction of plant and animal species. Wetlands, aquatic habitat, contaminated areas, and dredging activities were examined to gain a greater understanding about the role the natural environment plays. It is important that as land use activities occur, developments consider impacts to the natural environment and utilize methods that enhance and protect the quality of the natural environment.

The **future land use** chapter presents information to be considered in deciding future land uses for the study area. A future land use suitability analysis was conducted to identify areas more suitable for certain land use types. Geographic information such as the location of roads, rail, current land use, wetlands, brownfields, have a significant influence on future land use. Results of the suitability analysis were considered as the study committee developed the future land use map. The committee also looked at public trust information, results of the stakeholder input, current land use, trends in transportation markets, and land use compatibility issues. The future land use map is the central product of this planning process and is designed to present a visual guide that illustrates preferred future uses of port area land.

The **funding information** describes public funding programs that apply to port related transportation infrastructure improvements and cleanup of contaminated land. The programs include freight rail improvements, brownfields cleanup programs, economic development, coastal management, and transportation infrastructure. The programs are administered by Minnesota state agencies and the U.S. Department of Transportation.

### **Existing Policies**

A number of existing policies have been developed in prior planning efforts and are listed here to reinforce that this planning effort continues the support of these policies.

1. Acknowledge the value of wetlands, fish habitat, aquatic communities in the estuary and adopt a policy of “no net loss” for these valuable habitat areas in the harbor through preservation, mitigation, and enhancement.

2. Port area lands with the combined characteristics of adjacent deep water access, adequate rail and road access are to be designated for future maritime development after giving consideration to existing facilities and demand for port development.
3. The economic strength of the harbor is to be promoted. The general public should be educated on the importance of the port and its operations to the regional economy.
4. The maritime industrial activities that generate the greatest local economic impact should be given priority for development.
5. Port operations should be consolidated toward the harbor entrances whenever possible.
6. The City of Duluth should enhance public access to the waterfront in areas that do not conflict with existing waterfront businesses. Enhancements can include hiking trails, fishing piers and picnic areas. Pedestrian access to the waterfront should be encouraged in clearly identified areas.
7. Residential uses should be promoted in areas, where allowed, that do not conflict with existing waterfront businesses.
8. Utilities should be expanded in an efficient manner to provide service to existing facilities and new planned developments.
9. Encourage land use management strategies in the Nemadji River watershed that can reduce sedimentation of the federally-authorized shipping channel near the mouth of the Nemadji River.

### **Recommended Policies**

1. Land created by filling of navigable waterways should be used for the benefit of the public as defined in the Public Trust Doctrine. These uses include maritime freight movement and recreation uses that are dependent on waterfront access.
2. Land adjacent to the federally designated shipping channel should be conserved for harbor dependent land uses.
3. The purpose of the Future Land Use Map is to promote and protect compatible land uses in the study area. It is designed to bring consistency and continuity to land use decisions

in this area. The City of Duluth should incorporate the Future Land Use Map into its Comprehensive Plan.

4. Regulatory partners and other port stakeholders should take a holistic approach to cleaning up contaminated sediments in the entire St. Louis River Estuary. Other port stakeholders include all federal, state, and local agencies involved in port management activities as well as citizen groups, non-governmental organizations and responsible parties.
5. Uses inconsistent with the Future Land Use Map should be viewed as an interim use until an appropriate use is realized.
6. A subcommittee of the HTAC should be appointed every three years to review and update this plan.
7. Priority should be given to maritime commerce in the study area given its considerable impact.
8. Protect and enhance the utility of the federally-authorized shipping channel.
9. Encourage beneficial reuse of dredge materials from maintenance dredging. Further action should be taken to forward beneficial reuse projects. Examples include the Interstate Island Habitat Creation and the 21st Avenue Habitat Creation. Steps should be identified by the port community to advance these types of projects.
10. Identify opportunities for private, public or public/private partnerships to rehabilitate and reuse under-utilized dock structures for additional maritime commerce uses.
11. Identify opportunities for private/public partnerships that benefit the port. Examples are natural resource protection and enhancement or improvement of waterfront access.
12. Identify opportunities to assist maritime businesses in obtaining improved rail service.
13. As it is stated in the 2002 Lower St. Louis River Habitat Plan, protect critical habitat in the St. Louis River estuary. This can be accomplished through the use of local land use programs and state and federal programs.
14. Update the Memorandum of Understanding from the 1992 Duluth Comprehensive Port Development Plan to include at a minimum the City of Duluth, Duluth Seaway Port Authority, and Minnesota Department of Natural Resources.

## Action Plan and Implementation Schedule

| Recommendation   | Who   | When    |
|--|---|---------|
| Land created by filling of navigable waterways should be used for the benefit of the public as defined in the Public Trust Doctrine. These uses include maritime freight movement and recreation uses that are dependent on waterfront access.   | City of Duluth  | Ongoing |
| Land adjacent to the federally designated shipping channel should be conserved for harbor dependent land uses.   | City of Duluth  | Ongoing |
| The purpose of the Future Land Use Map is to promote and protect compatible land uses in the study area. It is designed to bring consistency and continuity to land use decisions in this area. The City of Duluth should incorporate the Future Land Use Map into its Comprehensive Plan. | City of Duluth  | Ongoing |
| Regulatory partners and other port stakeholders should take a holistic approach to cleaning up contaminated sediments in the entire St. Louis River Estuary.   | Federal, State and Local agencies involved in port management activities.<br>Citizens Groups<br>Non-Governmental Organizations<br>Responsible Parties | Ongoing |
| Uses inconsistent with the Future Land Use Map should be viewed as an interim use until an appropriate use is realized.  | City of Duluth  | Ongoing |
| A subcommittee of the HTAC should be appointed every three years to review and update the plan.  | HTAC  | 2008    |
| Encourage beneficial reuse of dredge materials from maintenance dredging. Further action should be taken to forward beneficial reuse projects. Examples are Interstate Island Habitat Creation and the 21 <sup>st</sup>  | Port Authority<br>Army Corps<br>HTAC Member   | 2006    |

|  |   |           |
|--|---|-----------|
| Avenue Habitat Creation. Steps should be identified by the port community to advance these type of projects.   | Groups<br>HTAC Dredging Subcommittee  |           |
| Identify opportunities for private, public or public/private partnerships to rehabilitate and reuse under-utilized dock structures for additional maritime commerce uses.  | Port Authority<br>Duluth Economic Development Authority (DEDA)  | Ongoing   |
| Identify opportunities for private/public partnerships that benefit the port. Examples are natural resource protection and enhancement or improvement of waterfront access.  | Port Authority<br>DEDA<br>Regulatory Agencies<br>Universities   | Ongoing   |
| Identify opportunities to assist maritime businesses in obtaining improved rail service.   | Port Authority<br>DEDA  | Ongoing   |
| As it is stated in the 2002 Lower St. Louis River Habitat Plan, protect critical habitat in the St. Louis River estuary. This can be accomplished through the use of local land use programs and state and federal programs. | Non-Governmental Units<br>St. Louis River Citizens Action Committee<br>Responsible State and Federal Agencies | Ongoing   |
| Update the Memorandum of Understanding from the 1992 Duluth Comprehensive Port Development Plan to include at a minimum the City of Duluth, Duluth Seaway Port Authority, and Minnesota Department of Natural Resources.     | MIC   | 2005-2006 |

## Appendices

### Appendix A: Minnesota Statutes and Rules Relating to Port Lands at the Duluth Port

#### What are statutes?

Statutes are laws that apply to all citizens and cover a variety of topics, including the following: the Legislature, the executive branch, state departments, the judiciary and courts, tax policy, public safety and police authority, towns, cities, counties, commerce and trade, private property and private rights, civil injuries and remedies, and crimes against people and property and the penalties associated with them.

All statutes have ongoing application and use. Session Laws are only effective for a limited period of time.

#### What are rules?

Administrative rules are not actually enacted by the Legislature. Rather, the Legislature merely gives the state agency or unit the authority to establish its own rules. For more information on the difference between rules and laws, visit the Web page [About Minnesota Rules](#).

An administrative rule is a general statement adopted by an agency to make the law it enforces or administers more specific or to govern the agency's organization or procedure.

An agency may adopt a rule only after the legislature has enacted a law granting this authority to the agency. An agency rule that is adopted under the rulemaking provisions of [Minnesota Statutes, chapter 14](#), has the force and effect of law. [Rulemaking in Minnesota: A Guide](#) explains each step of the rulemaking process in Minnesota.

#### How do laws, statutes, and rules differ?

Laws refer to all laws passed by the Legislature, which are subsequently bound in the Session Laws of that year. Statutes are a codification of those laws, which are compiled and published every year as Minnesota Statutes. By codifying laws into Minnesota Statutes, the laws are placed into context of statutes that have been on the books in previous years.

Sometimes, it is difficult to understand a law unless it is placed into the proper context in Minnesota Statutes. But remember that not all laws will become statutes. Some laws, such as ones passed for a specific town or city, and appropriation measures, aren't included in Minnesota Statutes. So you won't find the appropriations made by the 2000 Legislature in the same set of books that contain the Minnesota statutes prohibiting drunk driving. The appropriation bills are probably the best examples of laws that aren't statutes.

#### Why are some laws not included in statutes?

The main reason is that appropriation laws are applicable for only two years, whereas laws included in the statutes are intended to be permanent. And because local laws do not apply on a general level, they are not included in the statutes.

## **Chapter 103A: WATER POLICY AND INFORMATION**

### **103A.201 Regulatory policy.**

<http://www.revisor.leg.state.mn.us/stats/103A/201.html>

Subdivision 1. Policy. To conserve and use water resources of the state in the best interests of its people, and to promote the public health, safety, and welfare, it is the policy of the state that:

(1) subject to existing rights, public waters are subject to the control of the state; (2) the state, to the extent provided by law, shall control the appropriation and use of waters of the state; and (3) the state shall control and supervise activity that changes or will change the course, current, or cross section of public waters, including the construction, reconstruction, repair, removal, abandonment, alteration, or the transfer of ownership of dams, reservoirs, control structures, and waterway obstructions in public waters.

## **Chapter 458: WATER TRANSPORTATION FACILITIES**

### **458.59 Reclaiming wasted harbor land; sale and use.**

[www.revisor.leg.state.mn.us/stats/458/59.html](http://www.revisor.leg.state.mn.us/stats/458/59.html)

Subdivision 1. Policy. The use of submerged, eroded, or depleted tracts of land in harbors on navigable waters by a political subdivision or by a port authority to conserve, develop, reclaim, or protect the land so as to restore them to economic usefulness is a public use conferring a public benefit.

Subd. 1a. If tax-forfeit land. The commissioner of revenue may transfer such a tract forfeited to the state for taxes to a political subdivision or port authority for a purpose in subdivision 1 in accordance with section 282.01. A political subdivision or a port authority acquiring the lands may conserve, develop, reclaim or protect them in any manner considered suitable by its governing body. After restoring the lands to a state of economic usefulness, the political subdivision or port authority may use the lands itself, or lease them on any terms and conditions the governing body sees fit.

A lease of the lands must not be made without the approval of the governor and the state executive council.

Subd. 2. Seaway harbor land. State-owned tax-forfeited riparian or submerged lands located in harbors on the Great Lakes-St. Lawrence Seaway and lying within 1,500 feet of the established harbor line may be offered for sale or sold as tax-forfeited land under law. If the lands lie within a port district of a seaway port authority the offer for sale or sale must not be made without the approval by resolution of the seaway port authority and of the state executive council. This subdivision does not affect Laws 1963, chapter 827.

If the lands have been developed, improved or used for business or development purposes by persons, firms, or corporations who are using and occupying, and who have used and occupied, the property for business or development purposes for at least two years prior to sale, under a lease with the state or a governmental subdivision, then the person, firm, or corporation has the right, on the first day set for sale by the county auditor, to purchase the property at 125 percent of the appraised value.

HIST: 1957 c 849 s 10; 1965 c 473 s 1; 1973 c 582 s 3; 1985 c 265 art 8 s 1

## **Chapter 469: ECONOMIC DEVELOPMENT**

### **469.074 Duluth.**

Subdivision 1. **May own, operate, or contract for vessels.** The seaway port authority of Duluth may acquire, purchase, charter, lease, mortgage, or otherwise own and operate vessels as may be necessary or convenient. The authority may enter into joint vessel ownership contracts or joint ventures with others, contract with vessel owners and operators, and enter into contractual relationships necessary or convenient to acquire, purchase, charter, lease, or operate vessels.

### Subd. 2. **Old law does not apply to Minnesota point.**

The following quoted sentence from Minnesota Statutes 1961, section [458.59](#):

"No state owned tax forfeited land comprising riparian lands or submerged lands within the harbor line as duly established, and all such tax-forfeited lands lying within a distance of 1,500 feet thereof, located in harbors upon the Great Lakes-St. Lawrence Seaway shall be offered for sale or sold to any private person, firm, or corporation and all such tax forfeited lands are hereby withdrawn from sale to such private persons, firms, or corporations."

Does not apply to land located on Minnesota Point in the city of Duluth that is zoned residential under the zoning ordinance of the city. Before the land is offered for sale, the city council, the county board, and the port authority must approve the offering. A sale or conveyance of the land must not include riparian rights. The riparian rights are kept by the state.

HIST: 1987 c 291 s 75

## **Minnesota Rules - NATURAL RESOURCES DEPARTMENT**

### **6115.0190 FILLING INTO PUBLIC WATERS.**

Subpart 1. **Goals.** It is the goal of the department to limit the placement of any fill material into public waters in order to:

- A. minimize encroachment, change, or damage to the environment;
- B. regulate the quantity and quality of fill and the purposes for which filling may be allowed based upon the capabilities of the waters to assimilate the material; and
- C. maintain consistency with floodplain, shoreland, and wild and scenic rivers management standards and ordinances.

Subp. 2. **Scope.** Filling as used in this part involves placement of unconfined or loosely confined materials in public waters.

Subp. 3. **Prohibited placement.** Placement is prohibited in the following cases:

- A. to achieve vegetation control;
- B. to create upland areas, except where expressly provided herein;

- C. to stabilize beds of public waters which cannot support fill materials because of excessive depths of muck, steep bank, bed slope, or other conditions;
- D. to stabilize or impound the site of active springs;
- E. to dispose of rock, sand, gravel, or any other solid material resulting from activities carried out above the ordinary high water level;
- F. to construct a roadway or pathway, or create or improve land accesses from peripheral shorelands to islands, or to facilitate land transportation across the waters; however, when a project is proposed by a federal, state, or local government agency and this provision would prevent or restrict the project, or create a major conflict with other public purposes or interests, the commissioner may waive this provision if:
  - (1) there is no other feasible and practical alternative to the project that would have less environmental impact; and
  - (2) the public need for the project rules out the no-build alternative; or
- G. filling posted fish spawning areas.

Subp. 4. **No permit required.** No permit is required for the following activities unless prohibited under subpart 3:

- A. to install a beach sand blanket if:
  - (1) the sand or gravel layer does not exceed six inches in thickness, 50 feet in width along the shoreline, or one-half the width of the lot, whichever is less, and does not extend more than ten feet waterward of the ordinary high water level;
  - (2) the beach sand blanket does not cover emergent vegetation, unless authorized by an aquatic plant management permit; and
  - (3) local watershed district and local zoning officials are given at least seven days notice by the landowner;
- B. for one additional installation of a sand or gravel layer subsequent to an initial installation at the same location and not exceeding the same amounts and dimensions allowed under item A; or
- C. to place fill in a public watercourse having a total drainage area, at its mouth, of five square miles or less, if the watercourse is not an officially designated trout stream and the placement of fill does not result in:
  - (1) any diversions of water from the drainage area;
  - (2) any impoundment of waters by damming the watercourse; or
  - (3) any actions that would result in erosion and cause sedimentation of downstream waters as determined by the county or local soil and water conservation district.

Subp. 5. **Permits required.** Permits are required for the placement of fill in public waters, except as provided under subparts 3 and 4, and a project must meet all of the following requirements:

- A. the project does not exceed more than a minimum encroachment, change, or damage to the environment, particularly the ecology of the waters;
- B. the fill consists of clean inorganic material that is free of pollutants and nutrients;
- C. the existence of a stable, supporting foundation is established by appropriate means, including soil boring data where deemed necessary by the commissioner;

- D. where erosion protection is deemed necessary by the commissioner, the site conditions and fill material are capable of being stabilized by an approved erosion control method such as riprap, retaining wall, or other method which is consistent with existing land uses on the affected public water;
- E. the proposed project represents the minimal impact solution to a specific need with respect to all other reasonable alternatives;
- F. the size, shape, depths, shoreline, and bottom character and topography, and susceptibility of the beds of public waters to actions of wind, waves, and currents are such that the fill will be stable;
- G. adverse effects on the physical or biological character of the waters are subject to feasible and practical measures to mitigate the effects;
- H. the proposed filling is consistent with applicable floodplain, shoreland, and wild and scenic rivers management standards and ordinances for the waters involved; and
- I. the proposed filling is consistent with water and related land management plans and programs of local and regional governments, provided such plans and programs are consistent with state plans and programs.

STAT AUTH: MS s [103G.315](#); [105.415](#)

HIST: 8 SR 533; 25 SR 143; 27 SR 529

*Current as of 09/29/03*

#### **6115.0191 SPECIFIC STANDARDS; FILLING.**

Subpart 1. **In general.** In addition to compliance with the general standards in part [6115.0190](#), subparts 2 to 5, specific requirements for certain activities shall be met as follows.

Subp. 2. [Repealed, 27 SR 529]

Subp. 3. **Navigational access.** Filling to gain navigational access to waters shall be permitted only where access to navigable depths cannot be reasonably attained by utilizing a dock, the excavation of an offshore access channel, or other alternatives which would result in less environmental impact.

Fill for navigational access shall not extend beyond the edge of open water, shall not exceed side slopes greater than 2:1 horizontal:vertical, shall not exceed a maximum width of 15 feet at the base of the fill, and shall not extend to a water depth greater than four feet.

Subp. 4. **Shoreline lost by erosion.** Permits for filling to recover shoreland lost by erosion or other natural forces shall be granted if:

- A. the loss of shoreline is a threat to health and safety through the impending loss or damage to existing shoreline developments; or
- B. the loss of shoreline has occurred as a result of changes in water level or flow conditions caused by artificial manipulation of flows or levels of the waters involved within a period of not more than five years prior to the date when an application for filling is submitted.

The requirements of items A and B do not preclude the issuance of permits to recover up to 400 square feet of eroded area or to place riprap materials or use other structural means for protection of the shoreline to prevent continuous erosion.

**Subp. 5. Port development or improvement.** Filling necessary for port development or improvement is allowed only on those waters that are under the jurisdiction of established port authorities subject to the following:

- A. no filling is allowed to extend beyond the limits of federally established harbor lines, or when no harbor line has been established, beyond the maximum distance waterward which could be attained without obstructing navigational use of the waters;
- B. the proposed development is part of a comprehensive port development plan that has been approved by the commissioner; and
- C. adverse effects of the proposed filling on the physical and biological character of the area are subject to mitigation measures approved by the commissioner.

**Subp. 6. Fish and wildlife habitat.** Filling to restore or improve fish and wildlife habitat, except for filling in designated trout streams, shall be permitted provided plans are submitted showing the nature and degree of habitat to be benefited, and the project will not create other adverse effects such as flooding, erosion, sedimentation, or navigational obstructions.

**Subp. 7. Trout streams.** Filling in trout streams officially designated by the commissioner is allowed only if:

- A. the amount, method of placement, and location of the fill will not result in increased water temperatures, excessive sedimentation in the stream, or destruction of fish habitat; and
- B. there is no other feasible or practical alternative other than filling.

**Subp. 8. Other purposes.** Filling for other purposes not specifically listed shall be subject to the general standards in part [6115.0190](#), subparts 2 to 5 and submission of information to show that:

- A. the intended purpose of the fill is reasonable with respect to all other alternatives and there are no feasible and practical means to attain the intended purpose without filling; and
- B. the proposal will adequately protect public safety and promote the public welfare.

STAT AUTH: MS s [103G.315](#); [105.415](#)

HIST: 8 SR 533; 27 SR 529  
Current as of 09/29/03

## Appendix B: Wetland Types – U.S. Fish and Wildlife Service Circular 39

### Minnesota Statutes Chapter 103 Waters of the State 103G.005 Definitions

Subd. 17b. **Wetland type.** "Wetland type" means a wetland type classified according to Wetlands of the United States, U.S. Fish and Wildlife Service Circular 39 (1971 edition), as summarized in this subdivision.

(1) "Type 1 wetlands" are seasonally flooded basins or flats in which soil is covered with water or is waterlogged during variable seasonal periods but usually is well-drained during much of the growing season. Type 1 wetlands are located in depressions and in overflow bottomlands along watercourses, and in which vegetation varies greatly according to season and duration of flooding and includes bottomland hardwoods as well as herbaceous growths.

(2) "Type 2 wetlands" are inland fresh meadows in which soil is usually without standing water during most of the growing season but is waterlogged within at least a few inches of surface. Vegetation includes grasses, sedges, rushes, and various broad-leafed plants. Meadows may fill shallow basins, sloughs, or farmland sags, or these meadows may border shallow marshes on the landward side.

(3) "Type 3 wetlands" are inland shallow fresh marshes in which soil is usually waterlogged early during a growing season and often covered with as much as six inches or more of water. Vegetation includes grasses, bulrushes, spikerushes, and various other marsh plants such as cattails, arrowheads, pickerelweed, and smartweeds. These marshes may nearly fill shallow lake basins or sloughs, or may border deep marshes on the landward side and are also common as seep areas on irrigated lands.

(4) "Type 4 wetlands" are inland deep fresh marshes in which soil is usually covered with six inches to three feet or more of water during the growing season. Vegetation includes cattails, reeds, bulrushes, spikerushes, and wild rice. In open areas, pondweeds, naiads, coontail, water milfoils, waterweeds, duckweeds, waterlilies, or spatterdocks may occur. These deep marshes may completely fill shallow lake basins, potholes, limestone sinks, and sloughs, or they may border open water in such depressions.

(5) "Type 5 wetlands" are inland open fresh water, shallow ponds, and reservoirs in which water is usually less than ten feet deep and is fringed by a border of emergent vegetation similar to open areas of type 4 wetland.

(6) "Type 6 wetlands" are shrub swamps in which soil is usually waterlogged during growing season and is often covered with as much as six inches of water. Vegetation includes alders, willows, buttonbush, dogwoods, and swamp-privet. This type occurs mostly along sluggish streams and occasionally on floodplains.

(7) "Type 7 wetlands" are wooded swamps in which soil is waterlogged at least to within a few inches of the surface during growing season and is often covered with as much as one foot of water. This type occurs mostly along sluggish streams, on floodplains, on flat uplands, and in shallow basins. Trees include tamarack, arborvitae, black spruce, balsam, red maple, and black ash. Northern evergreen swamps usually have a thick ground cover of mosses. Deciduous swamps frequently support beds of duckweeds and smartweeds.

(8) "Type 8 wetlands" are bogs in which soil is usually waterlogged and supports a spongy covering of mosses. This type occurs mostly in shallow basins, on flat uplands, and along sluggish streams. Vegetation is woody or herbaceous or both. Typical plants are heath shrubs, sphagnum moss, and sedges. In the north, leatherleaf, Labrador-tea, cranberries, carex, and cottongrass are often present. Scattered, often stunted, black spruce and tamarack may occur.

## Appendix C: ARDC Land Use Classification System – Duluth Port Plan

### 1. Single Family Residential

Includes all individual, freestanding single family housing. Residential areas that are clearly not complete are classified as transitional.

### 2. Multi-Family Residential

Includes all multiple dwelling units such as duplexes, town homes, townhouses, and apartment complexes.

### 3. Commercial

Includes all retail services, large shopping centers or multi-tenant shopping centers, marinas, hotels/motels, health care facilities (nursing homes, medical clinics, or medical laboratories) except hospitals, and recreational services that are predominantly privately owned and operated for profit (theaters, bowling alleys, etc.), except golf courses. All buildings and parking lots are also included.

### 4. Light Industry

Structures and their associated grounds used for light industrial activities. Includes industrial parks, port facilities, heavy equipment yards, machinery repair, and junkyards.

41. Maritime

42. Non-Maritime

### 5. Heavy Industry

Structures and their associated grounds used for heavy fabrication, manufacturing, and assembling of parts which are, in themselves, large and heavy; or for processing raw materials such as iron ore, timber, or animal products.

51. Maritime

52. Non-Maritime

### 6. Public Semi-Public

Includes lands under and adjacent to hospitals, schools (public and private), churches, cemeteries, ice arenas, and all facilities of local, state, and federal governments, including mental institutions and penal facilities. All lands and parking lots within the boundaries of these institutions are included. Recreation areas associated with schools or churches are also included in this category.

### 7. Transportation

All activities associated with all modes of transportation. Includes railroads and adjacent yards, major 4-lane highways, airports, and hiking/biking/snowmobile trails.

71. Railroad

8. Park and Recreation

Includes all parks (city, regional, and state), playgrounds, zoos, gun clubs, golf courses, and similar areas. Parks are delineated using park maps, comprehensive plans or aerial photos.

9. Open Water

Permanent bodies of water such as lakes, rivers, reservoirs, stock ponds, and areas where photo evidence indicates that the areas are covered by water the majority of the time. Also included are harbor areas.

10. Transitional

Areas that are currently under a state of transition from one land use type to another. This may include undeveloped urban areas, areas with less than 25% vegetative cover, or any “other” land use that cannot be adequately defined through air photo interpretation.

11. Cultivated Land

Areas under intensive cropping or rotation, including fallow fields and fields seeded for forage or cover crops that exhibit linear or other patterns associated with current tillage.

12. Grassland/Pasture

Areas covered by grasslands, prairies and herbaceous plants; these may contain up to one-third shrub and tree cover. Some areas may be used as pastures and mowed or grazed. Included are fields that show evidence of past tillage, but now appear to be abandoned and grown over with native vegetation or planted with a cover crop.

13. Forested

Areas where two-thirds or more of the total canopy cover is composed of predominantly woody deciduous and coniferous species and areas of regenerated or young forest where commercial timber has been completely or partially removed by logging, other management activities or natural events; includes woodlots, shelterbelts, and plantations.

14. Brushland

Areas with a combination of grass, shrubs, and trees in which deciduous or coniferous tree cover comprises from one to two-thirds of the area, or shrub cover comprises more than one-third of the area. These areas are often found adjacent to pasture/grassland or forested areas and vary greatly in shape and extent.

15. Wetland

Lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. Vegetation varies, but common is the hydrophilic vegetation such as cattails and rushes. These areas also include hydric soils, lowland coniferous forest and peat-covered or peat-filled depressions with a high water table. Areas are often interspersed with channels or pools of open water.

16. Undeveloped

Primarily urban lands that have not had any development.

\*Note: parking lots are NOT considered transportation and should be included among the surrounding facility. Classifications were derived from Minnesota DNR, Metropolitan Council, American Planning Association Land Use, and previous ARDC classifications.



# Superior Port Land Use Plan

June 2003



Prepared by the Duluth-Superior Metropolitan Interstate Committee





# Superior Port Land Use Plan

June 2003

Prepared by the



Duluth and Superior urban area communities  
cooperating in planning and development  
through a joint venture of the  
Arrowhead Regional Development Commission  
and the  
Northwest Regional Planning Commission



To view this plan online  
or for more information  
please visit **[www.ardc.org](http://www.ardc.org)**

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Northwest Regional Planning Commission  
Wisconsin Department of Natural Resources



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Vacant, Rail Representative  
Vacant, Trucking Representative



*Guiding the Future of Transportation  
and Planning for the Twin Ports Area*

## ACRONYM GUIDE

|                            |   |
|----------------------------|---|
| <b>AOC</b>                 | Area of Concern                                 |
| <b>ARDC</b>                | Arrowhead Regional Development Commission       |
| <b>BEA</b>                 | Business Economic Areas                         |
| <b>BNSF</b>                | Burlington Northern Santa Fe                    |
| <b>CDF</b>                 | Confined Disposal Facility                      |
| <b>CLM Co.</b>             | Cutler-Magner Company                           |
| <b>CP</b>                  | Canadian Pacific                                |
| <b>DM&amp;IR</b>           | Duluth Missabe & Iron Range                     |
| <b>DMMP</b>                | Dredged Material Maintenance Plan               |
| <b>DNR</b>                 | Department of Natural Resources                 |
| <b>FRIIP</b>               | Freight Rail Infrastructure Improvement Program |
| <b>FRPP</b>                | Freight Rail Preservation Program               |
| <b>GIS</b>                 | Geographic Information Systems                  |
| <b>GPLOP</b>               | General Permit/Letter-of-Permission             |
| <b>HAP</b>                 | Harbor Assistance Program                       |
| <b>HTAC</b>                | Harbor Technical Advisory Committee             |
| <b>IJC</b>                 | International Joint Commission                  |
| <b>MIC</b>                 | Metropolitan Interstate Committee               |
| <b>MnDOT</b>               | Minnesota Department of Transportation          |
| <b>MOU</b>                 | Memorandum of Understanding                     |
| <b>NP Ore Dock</b>         | Northern Pacific Ore Dock                       |
| <b>NR</b>                  | Natural Resource (Chapter)                      |
| <b>NWRPC</b>               | Northwest Regional Planning Commission          |
| <b>OHWM</b>                | Ordinary High Water Mark                        |
| <b>PAH</b>                 | Polycyclic Aromatic Hydrocarbons                |
| <b>PCB</b>                 | Polychlorinate Biphenyls                        |
| <b>PTD</b>                 | Public Trust Doctrine                           |
| <b>RAP</b>                 | Remedial Action Plan                            |
| <b>RO/RO</b>               | Roll On / Roll Off                              |
| <b>St. Louis River CAC</b> | St. Louis River Citizen Action Committee        |
| <b>SAMP</b>                | Special Area Management Plan                    |
| <b>SAW</b>                 | Single Additive Weighting Model                 |
| <b>TEA</b>                 | Transportation Economic Assistance              |
| <b>TH</b>                  | Trunk Highway                                   |
| <b>TRANS</b>               | Transportation Administrative Code              |
| <b>UP</b>                  | Union Pacific                                   |
| <b>UW-Superior</b>         | University of Wisconsin Superior                |
| <b>WCMP</b>                | Wisconsin Coastal Management Program            |
| <b>WDNR</b>                | Wisconsin Department of Natural Resources       |
| <b>WisDOT</b>              | Wisconsin Department of Transportation          |

# Superior Port Land Use Plan

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### *Map Disclaimer*

*The information contained in the following maps is a compilation of data from various federal, state, county, regional, and municipal sources. Geographic information has limitations due to the scale, resolution, date and interpretation of the original source materials. Users should consult available data documentation (metadata) to determine limitations and the precision to which the data depicts distance, direction, location or other geographic characteristics. These maps and/or data are not legal survey documents to be used for describing land for the purpose of ownership or title.*

# Introduction

The Duluth-Superior port is located at the far western tip of Lake Superior 2,342 miles by ship from the Atlantic Ocean. This bi-state port is located in the cities of Superior, Wisconsin and Duluth, Minnesota. The naturally protected harbor on the lower reaches of St. Louis River consists of 19 square miles of land and water with 17 miles of dredged shipping channels protected by a natural sand peninsula. On average, 40 million metric tons of cargo moves through the port, making it the largest port on the Great Lakes and one of the premier bulk cargo ports in the United States. The primary bulk commodities shipped through the port are coal, iron ore, and grain. The port is a primary economic generator for the regional economy and employs over 2,000 people through its direct and spin-off activities.

## **Duluth-Superior Port History**

In 1852, railroad speculation caused the U.S. government to send representatives to survey the western end of Lake Superior. The next year a settlement emerged near the mouth of the Nemadji River in what now is the east end of Superior. The natural harbor in Superior Bay was an excellent site for the terminus of the proposed railroad and speculators hoped to plan a port town. Early settlers petitioned the State of Wisconsin to form Douglas County in 1854. The development of the Soo Locks in 1855 opened Lake Superior to further mineral exploration and, along with existing water routes, connected Duluth-Superior to New York City. The Duluth-Superior harbor became a base for supplies to the fur trade, mineral exploration, and lumber camps of the area.

The Lake Superior & Mississippi Railroad was completed connecting Duluth to Minneapolis and St. Paul by 1871. This time represented a boom for Duluth while Superior remained isolated. It was also around this time that Duluth residents decided to cut another entrance through Minnesota Point to improve access to their inner harbor along Superior Bay. Superior residents felt this action threatened the development and growth of their town and harbor and sought an injunction from the federal government to stop the new canal. By the time the injunction came from Washington, the canal was completed and ship traffic was already using the new Duluth entry. The addition of a rail line to Duluth and the new Duluth harbor entry brought most of the ingoing and outgoing freight to the newly developed inner Duluth harbor.

By 1882, Superior had its rail connection and was able to reclaim some of the freight shipments. The village of Superior, having gone through a series of phases of growth and decline, incorporated in 1887. At this time, a boom led to the development of numerous ore docks, grain elevators, and coal docks along the Superior waterfront. Lumber from northern Wisconsin and northeastern Minnesota was shipped to the growing cities of the Midwest. Cargo statistics for the port were first recorded in 1871 and showed that 273 ships visited the Duluth-Superior port that year. By 1880, 500 ships a year were visiting the port. By the turn of the century, over 5,000 ships per year were calling at the port and moving over 10 million tons of cargo. The port of Duluth-Superior port fueled a large population growth in the early 20<sup>th</sup> century with Superior becoming the second largest city in Wisconsin by 1900 and Duluth growing to nearly 100,000 by 1920.

The connection of western Minnesota and the Red River Valley to the Duluth-Superior port led to a large growth in grain shipments. By 1891, Duluth operated 13 elevators and shipped 20,000,000 bushels of grain, mostly the famous hard spring wheat. Another ten elevators were in operation in Superior. Grain production diminished somewhat at the turn-of-the-century, although by 1909, wheat shipments at Duluth-Superior rose to more than 54 million bushels with a value of over \$55 million. Between 1919 and 1935, the United States and Canada shipped one-third of the world's grain. Duluth-Superior harbor handled nearly 20 percent of all the grain that was shipped on the upper Lakes. By World War II, the Twin Ports operated 25 elevators with a combined storage capacity of 50 million bushels. Just after the war, grain shipments set a record of 4.1 million metric tons that would hold for the next 30 years. With the opening of the St. Lawrence Seaway in 1959, Duluth-Superior became a significant port of origin in the world grain market.

The discovery of high-grade iron ore in northeastern Minnesota led to the development of ore docks, first in Superior in 1892 and then Duluth in 1893. This began an era when ore shipments rose to 5 million metric tons by 1900 and 22 million metric tons by 1910. In that year, iron ore accounted for about half of all cargo tonnages shipped on the Great Lakes. High-grade iron ore from northeastern Minnesota fueled ship building for two world wars as well as the extended economic growth periods after World War II. By the mid 1950s, most of the highest grade iron ore was depleted and lower grade ore were beginning to be mined. This was the beginning of the inclusion of taconite into iron ore shipments. By 1967, processed taconite shipments surpassed natural ore because it was more uniform and economical to process.

Coal shipments at the Duluth-Superior port were historically inbound until the development of what is now Midwest Energy Resources Corporation in 1976. Coal was the leading inbound commodity from the 1870s through the 1960s. While some coal is still inbound, western low-sulfur coal is experiencing high demand because of its environmental importance. Midwest Energy, a subsidiary of Detroit Edison, moves as much as 16 million metric tons of coal through their facility each shipping season. They can load coal onto ships at a rate of 11,500 metric tons per hour. In 2000 and 2001, coal passed iron ore as the top commodity in tonnage shipped through the Duluth-Superior port.

In addition to grain, coal and ore, another important cargo proved to be lumber. At the turn of the century, cargoes of Minnesota and Wisconsin lumber grew to tremendous proportions. For the next ten years, about 400 million board feet of lumber (a million tons) were shipped from the harbor annually, making it the hub of the industry until 1920, when focus shifted to the Pacific Coast. Much of this lumber along with the iron ore shipped from the port helped develop the Midwest in its era of growth.

Congress combined the Duluth and Superior ports in 1896, and for the first time provided a joint appropriation of \$3 million for harbor improvements. During the next ten years, channels were enlarged and deepened to 20 feet. Large anchorage basins were created inside the harbor, and both the Duluth and Superior entries were rebuilt and enlarged.

The U.S. Army Corps of Engineers kept pace with the growing Twin Ports industry, widening, deepening, and extending channels to new locations as the harbor and vessels expanded to new size and capacity. Channels were deepened from 20 feet to 24 feet in the 1930s. With the development of the St. Lawrence Seaway system during the 1950s, many waterways in the Great Lakes were deepened to 27 feet deep to accommodate larger lake ships, as well as the ocean-going foreign vessels.

The opening of the St. Lawrence Seaway in 1959 introduced a new era as it brought greater numbers of oceangoing ships to the Duluth-Superior port. New trading opportunities were opened as the port now had access to world markets. Grain shipments increased from an average of 2.8 million metric tons in the 1950s to over 4 million metric tons in the 1960s to over 5.7 million metric tons in the 1970s. This increase in grain trade is quite significant given that grain is the highest-value commodity of the three main bulk commodities (ore, coal, and grain) that dominate port cargoes.

Recent port history has seen a decrease in the amount of grain and iron ore with an increase in coal shipments. Changes in national steel and grain markets combined with changes in the transportation market have moved transportation of some commodities to other waterways and modes of transportation.

### **Economic Impact of the Port**

The port of Duluth-Superior is one of the most important sectors of the regional economy. Klaers, Powers and Associates produced the *Port of Duluth-Superior Economic Impact of 2001 Shipping Season*. This document presents the estimated economic impact generated by transshipment of cargoes and private and public investment in port infrastructure during the 2001 shipping season.

The analysis is done using an input-output model customized for this area. The total economic impact for the 2001 shipping season was estimated at over \$210 million. This total was broken down into almost \$138 million in direct impact or the cost of transshipping goods and the capital investments. The other portion (over \$72 million) was indirect impacts plus induced impacts, or the purchase of goods and services from other economic sectors, along with the wages paid workers in the direct and indirect activities.

The port generated 1,227 jobs directly and 766 jobs indirectly in 2001. The port handled 36.5 metric tons of cargo in 2001 valued at \$1.9 billion. Coal was the leading cargo with 15.1 metric tons followed by iron ore (13.9 million tons), grain (3.8 million tons) and various dry bulk cargoes (3.4 million tons). This analysis points out how important the port of Duluth-Superior is to the regional economies of northwestern Wisconsin and northeastern Minnesota.

### **Planning Process**

The Superior Port Land Use Plan derived from the need to produce a port land use plan for the entire port. The Duluth-Superior port functions as one port even though it is located in two cities and two states. It is the intent of the MIC to develop a port plan covering the entire port by beginning with the Superior side and then completing the Duluth side. Compiling the Superior

side first allows the process to be developed and reproduced as the Duluth side is done. The two plans will be combined upon their completion to form the Duluth-Superior Port Land Use Plan. By completing one side at a time, information unique to each state can be considered in greater detail.

The planning process for the Superior Port Land Use Plan includes a number of elements: background research, data collection and analysis, public outreach, stakeholder input, and a study committee. Each of these elements is described in greater detail throughout this document. The study area for the plan is shown on Map 1 and extends from the Bong Bridge to Allouez Bay. It includes all water areas adjacent to the described land out to the Minnesota border. The land area goes inland to the first major roadway.

Background research was conducted in order to gain some insights into previous decisions on port management. A number of local plans were reviewed that addressed specific as well as port wide issues. State rules and laws were examined to gain a perspective on how Wisconsin governs its waterfront lands. Federal literature was also researched to gain an idea on how national forces are influencing water transportation.

An extensive geographic data collection and analysis effort was undertaken to provide an accurate depiction of current land use and to assist in developing a vision for future land use. Broad data categories including environmental, utilities, transportation, parcels and land use provided the input data for the land use analysis. The results of the data analysis were utilized as input information for determining best future uses of port land.

Throughout this planning process, a public outreach and stakeholder input efforts were carried out. Groups with port interests were identified by staff and subcommittee members and contacted with a request to present information and seek feedback from their members. Presentations describing the planning process and goals were made at their meetings and comments were taken. Stakeholder input is important to gain knowledge on the needs of businesses currently operating on the Superior waterfront. Businesses were interviewed to identify those needs and find out what these business operators see as the future of the Duluth-Superior port.

Information updates were presented to the Harbor Technical Advisory Committee (HTAC) throughout the planning process. The HTAC is an assemblage of stakeholders for the Duluth-Superior port that advises the Metropolitan Interstate Committee (MIC) on harbor-related issues. The HTAC's mission is to provide a forum for the discussion of harbor-related issues and concerns, promote the harbor's economic and environmental importance to the community, and provide sound planning and management recommendations to the MIC.

The HTAC's primary functions are threefold. First, to provide an interstate forum for the discussion and formulation of recommendations regarding harbor issues relevant to the Duluth-Superior urbanized area by private, local, state and federal officials who are directly concerned with their planning, programming and implementation. Secondly, to encourage participation in and coordination with comprehensive metropolitan planning by all local governments, state and

federal agencies, and industry and environmental representatives that have a direct role in the physical development, dredging and dredged material management, environmental restoration and enhancement activities, and land use development activities in the St. Louis River Bay and Estuary. And finally, to develop, promote, monitor adherence to, and complete an annual review of comprehensive port development plans for the harbor, including the existing *Duluth Comprehensive Port Development Plan* and the in-progress *Superior Port Land Use Plan*. The HTAC input was important given the varied interests on the committee.

### **Study Committee**

A study committee was organized to assist staff throughout the planning process. The Study Committee was coordinated as a subcommittee of the Harbor Technical Advisory Committee (HTAC) with some non-HTAC members added to the committee. The committee members possess a wealth of knowledge on port issues and are familiar with the maritime industry and the history of the Superior port. They represent a wide range of interests and provided a valuable forum for review of data analysis, public outreach opportunities, policy development, and visioning for future port land use.

#### *Study Committee Members:*

Sheldon Johnson, Northwest Regional Planning Commission (Chair)

Ed Anderson, Superior City Council

Nick Baker, City of Superior

Ron Chicka, MIC Director

Bill Eckman, Douglas County Board

Martin Forbes, Wisconsin Department of Transportation

Lynelle Hanson, St. Louis River Citizens Action Committee

Cliff Knettel, City of Superior Planning and Port Director

Duane Lahti, Wisconsin Department of Natural Resources

Capt. Bob Libby, International Shipmasters

Capt. Ray Skelton, Duluth Seaway Port Authority

Ted R. Smith, Harbor Technical Advisory Committee

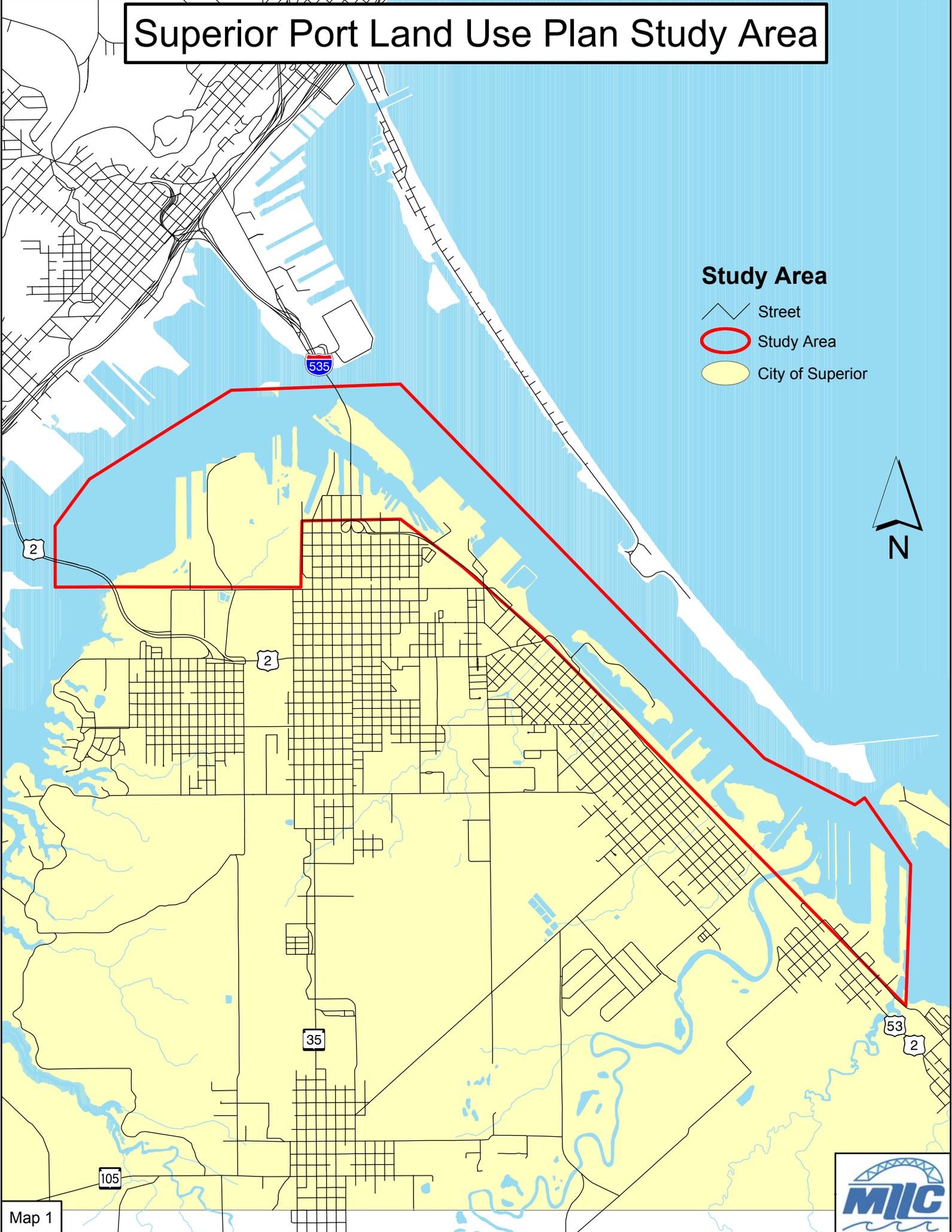
Dr. Richard Stewart, University of Wisconsin Superior – Transportation Logistics Program



# Superior Port Land Use Plan Study Area

## Study Area

-  Street
-  Study Area
-  City of Superior





## Background Documents

The following plans and documents were reviewed to provide background information for this planning process.

### **1978 Land Use and Management Plan for the Duluth-Superior Harbor**

The “78 Harbor Plan” as it is referred to was undertaken to provide direction to guide development and use of the harbor. The planning area for this document included the entire St. Louis River Estuary from Fond du Lac to the Duluth and Superior Port Entries. The major issues addressed in the plan include marine development, natural resources, harbor accessibility, dredge disposal, recreation, and harbor management. The plan generated policies that speak to these issues and set forth a preferred pattern of land use for the study area. The plan was prepared by the MIC and funded in part by grants from the Office of Coastal Zone Management of the National Oceanic and Atmospheric Administration, Department of Housing and Urban Development, and the Minnesota and Wisconsin Coastal Zone Management programs.

### **Connors Point Development Program – 1978**

The Superior Harbor Commission hired Architectural Resources, Inc. to conduct a planning/engineering analysis of Connors Point to look at the potential for maritime development. The specific elements of the plan include site characteristics, potential harbor needs, marine uses, land assembly, design sketches, and cost estimates for construction of facilities.

### **NP Ore Dock/Hog Island Use Analysis – 1982**

This plan was prepared for the MIC, ARDC and NWRPC by Robert J. Bruce, Consulting in Planning and Design. The purpose of this report was to identify potential uses for the abandoned ore dock and adjacent Hog Island and Nemadji River mouth area. It describes the structural condition of the ore dock, presents an environmental analysis of Hog Island and the Nemadji River mouth area and recommends alternative and futures uses.

### **Duluth Comprehensive Port Development Plan – 1992**

The Duluth Comprehensive Port Development Plan contains a Memorandum of Understanding (MOU) that binds the City of Duluth, Duluth Seaway Port Authority, and Minnesota Department of Natural Resources to set forth procedures for ensuring preservation of natural areas, disposal of dredged materials in designated disposal sites, and conservation of harbor lands suitable for maritime industrial development. The MOU also describes a forum for joint discussion and formal comments on land use development issues in and adjacent to the St. Louis River and Estuary. The Plan also contains a description of designated natural protection areas, designated dredge material disposal sites, habitat and protected waters mitigation procedures, a wetlands inventory, harbor front lands zoned W-1 Waterfront District, and an inventory of mitigation sites.

### **St. Louis River Remedial Action Plan – 1992, 1995**

The Remedial Action Plan (RAP) process was the result of the International Joint Commission’s (IJC) efforts to halt the degradation of water quality in the Great Lakes. The St. Louis River was identified in 1978 as one of 43 areas of concern (AOC) across the Great Lakes. The Great Lakes

Water Quality Agreement, as amended on November 18, 1987, defines AOC as "...a geographic area that fails to meet the general or specific objectives of the Agreement, or where such failure has caused or is likely to cause impairment of beneficial use or of the area's ability to support aquatic life." The goal of RAPs is to define problems and their causes, and then recommend actions and timetables to restore all beneficial uses of the AOCs. Restoring uses is to be achieved through implementation of programs and measures to control pollution sources and remediate environmental problems. The IJC requested that the Minnesota Pollution Control Agency and Wisconsin Department of Natural Resources develop a RAP that identifies specific management strategies to control sources of pollution, abate environmental contamination already present, and restore beneficial uses in the AOC.

### **Resolution of Land Use and Port Access Conflicts at Inland Waterway Ports – 1996**

This report was compiled by the U.S. Department of Transportation – Maritime Administration to identify methods for resolving conflicts of port land use. Urban redevelopment of the waterfront area has grown tremendously in the last two decades and has produced competition for waterfront land between waterway navigation interests and redevelopment interests. Guidelines presented in the plan focus on developing mechanisms to improve communication among individuals and agencies involved in the planning process. Recommendations include disseminating information from this plan to planners, intermodal transportation interests, and waterway navigation interests. Other recommendations include establishing an industry review committee, holding a forum to address conflict issues, and development of a Department of Transportation Interagency Task Force to assist cities in the resolution of port land use issues.

### **Erosion and Sedimentation in the Nemadji River Basin – 1998**

This study examined sedimentation and erosion problems in the Nemadji River watershed. This watershed, located in Douglas County in Wisconsin and Carlton and Pine Counties in Minnesota, produces the highest sediment load per square mile of any monitored watershed in Minnesota and Wisconsin. The watershed drains an area that has erosion problems caused by excessive peak flows resulting from the low permeability of the soils exacerbated by plant covers changes and hydrologic modifications in the watershed. The study makes recommendations that are designed to restore beneficial uses to the Nemadji River Basin.

A fact of particular note for the Superior Port Land Use Plan is the Nemadji River carries an annual sediment load of 131,000 tons, which is broken down to 117,000 tons of silt and clay and 14,000 tons of sand. The U.S. Army Corps of Engineers estimates that it removes 33,000 tons of Nemadji River sediments to maintain adequate depth for shipping traffic in the bay. The annual cost of this dredging is approximately \$200,000.

### **Superior Comprehensive Plan – 1998**

In 1998, the City of Superior completed a Comprehensive Plan that outlines policies that will provide direction for decision-makers, developers, residents and others as to the uses the City envisions for its land. Included in this plan are policies and strategies that address waterfront land use. Policies listed under the Transportation Strategies section include improving roadway access to port facilities, implementing oversize truck routes, maintaining compatible land uses, and conserving port lands for maritime use. In the Economic Development Strategies section,

policies are listed that address general infrastructure improvements in the port area such as modernization of bulk handling port facilities. The Urban Design and Community Image Strategies section includes a policy that directs the city to capture the “power of place.” The strategies supporting this policy describe the connection between the city and the waterfront and promote waterfront uses such as commercial, residential, recreational, and industry.

### **Dredged Materials Management Plan – 1998**

The purpose of this study conducted by the Detroit District of the Army Corps of Engineers is to determine if additional suitable dredged material placement facilities are available in the vicinity of the Duluth-Superior Harbor that will satisfy future dredged disposal needs for at least 20 years. The plan describes and evaluates alternatives and selects a base plan which has a design capacity of at least 20 years, is the least costly and engineering feasible, and meets all federal environmental standards. From the base plan, a management plan was chosen based on federal policies and budgetary priorities. The management plan includes three segments: 1) beach nourishment, 2) continued use of Erie Pier, and 3) placing dredged materials in deep holes within the Duluth-Superior Harbor.

### **Harbor Partnering Agreement – 1999**

This agreement was a renewal of an agreement signed by the partners in 1996. It basically states that the partners have formed a partnership based on communication and understanding and agree to commit their agencies to pursue an approach to dredge materials management in a manner that seeks to mutually benefit commercial navigation and the natural environment of St. Louis River and Lake Superior. The partners in this agreement are:

- U.S. Army Corps of Engineers, Detroit District
- Duluth Seaway Port Authority
- City of Superior
- Minnesota Pollution Control Agency
- Minnesota Department of Natural Resources
- Wisconsin Department of Natural Resources
- U.S. Environmental Protection Agency – Region 5
- Arrowhead Regional Development Commission
- Northwest Regional Planning Commission

The goals of the agreement as stated are:

- Promote mutual understanding of each partner’s objectives and constraints
- Continue to exchange pertinent information
- Timely problem solving and decision-making
- Protect and enhance natural resources
- Serve maritime commerce with proper channel depth

### **Duluth-Superior Landside Port Access Study – 2000**

The purpose of the Landside Port Access Study is to examine land-based access to the port of Duluth-Superior. Roadway and rail connections were examined in the study and impediments and deficiencies were identified. Strategies were recommended to correct or reduce problems. One of the most important recommendations to come out of this plan was to develop a second

connection to the port terminal area via Arthur Avenue. While this was not a new idea to this planning process, the Arthur Avenue concept was solidified with an alignment study conducted in conjunction with the study. The result was a successful application for federal Surface Transportation Program funding. Arthur Avenue is scheduled for construction in 2004 or 2005.

#### **Lower St. Louis River Habitat Plan – 2002**

The Habitat Plan was prepared by the St. Louis River CAC Habitat Committee to facilitate protection of the ecological diversity of the Lower St. Louis River. The conservation goals described in the Habitat Plan represent an ideal from an ecological perspective. It may not be possible to achieve every goal to its full extent; practical considerations will play a role in where, how, and to what extent the goals can be achieved. By setting conservation goals that will achieve a mix of ecological and social benefits, the Habitat Plan presents a new vision of the St. Louis River ecosystem toward which communities, organizations, and individuals can work in cooperation and partnership.

The Habitat Plan includes a detailed and comprehensive synthesis of existing information, an estuary-wide guide for resource management and conservation, a list of conservation and management objectives, and a collection of specific, obtainable, prioritized conservation and management actions that address specific threats.

#### **Barkers Island Redevelopment Plan – 2002**

This report studied current uses of Barkers Island and proposed future improvements. The City of Superior hired LHB Engineers and Architects to facilitate this process. Extensive stakeholder and public input was conducted to determine the consensus for future uses of Barkers Island. The proposals and recommendations from this planning process include relocating the boat launch to create a festival park, developing an RV park, relocating charter fishing and cruise docks, developing a restaurant and new wharf docks, restoring the S.S. Meteor, establishing a water taxi system, reconstructing the bridge entrance, and improving signage in the area.

The Superior Port Land Use Plan will recognize this plan as the future land use plan for Barkers Island.

#### **Twin Ports Intermodal Freight Terminal Study – 2003**

This study examines the potential for an intermodal freight terminal in the metropolitan area of Duluth, MN and Superior, WI (Twin Ports). Geographic regions in the US and Canada are assessed for potential sources of cargo. Operating intermodal terminals in comparable statistical metropolitan areas are examined and key success factors derived. Key shippers in the region are surveyed to determine freight volume, shipper requirements, and destinations of inbound and outbound freight. Intermodal Marketing Companies and other third party providers are surveyed. Reebie (Transsearch) freight flow data between sixty-six Business Economic Areas (BEAs) and the Twin Ports are analyzed for freight volume by mode, destinations, lanes and load balance. The establishment of a Roll-On/Roll-Off (RO/RO) marine service with Thunder Bay, Ontario is examined as a feeder for an intermodal terminal. Operating rail yards in the Twin Ports are cataloged and evaluated as potential intermodal terminals. An overall evaluation of the Twin Port's suitability as an intermodal terminal is presented.

**Superior Zoning Code**

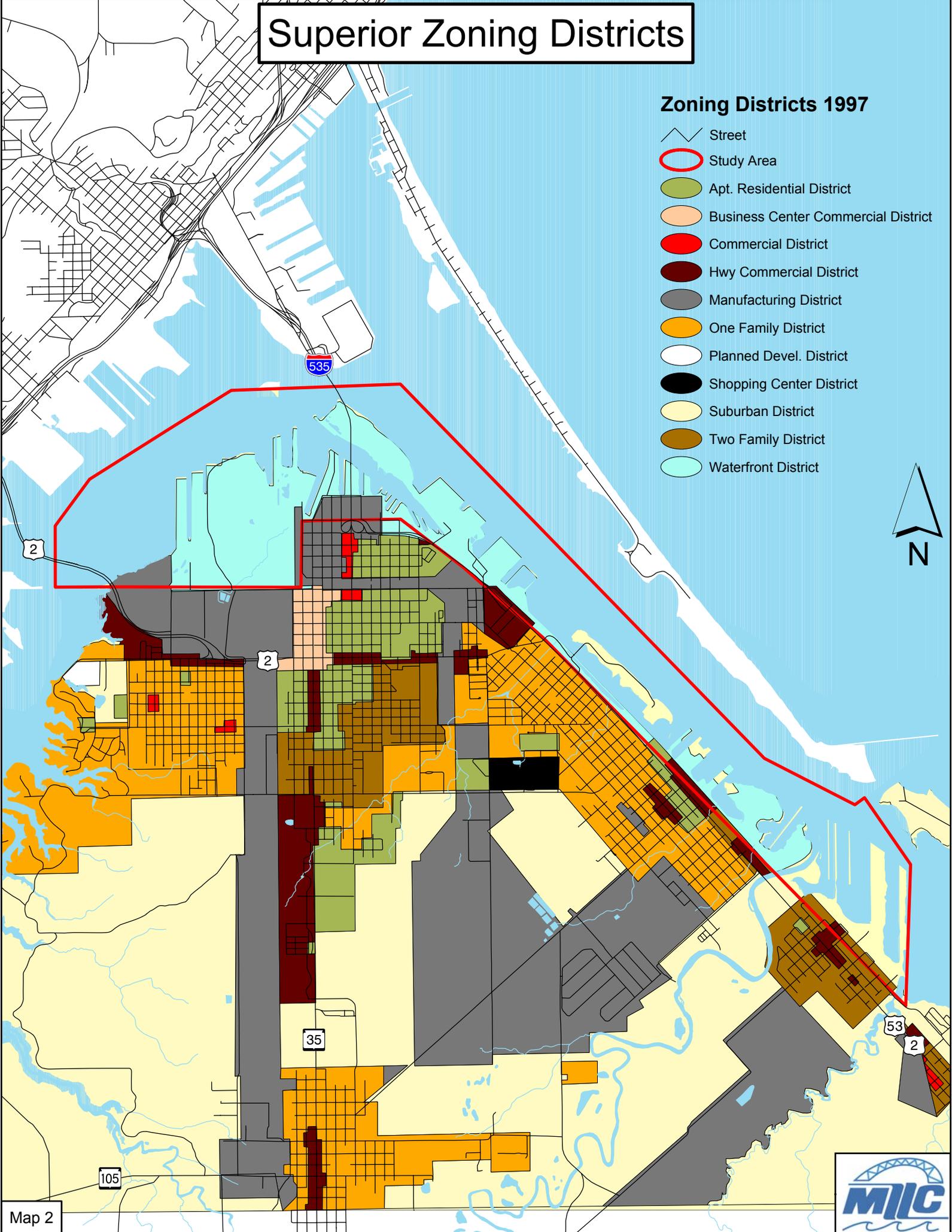
Article XIX – W-1 Waterfront District spells out the permitted uses for the area delineated as the Waterfront District (see Map 2). These uses include maritime facilities, sewage plants, power generation plants, a water-pumping station, marinas, parks, and manufacturing uses that require waterfront access, and museum/heritage centers. In 1988, the Superior City Council passed an ordinance amending the Zoning Code to include residential uses in the W-1 Waterfront District. The special uses as outlined in Article IV must be accompanied by a special permit from the City Council.



# Superior Zoning Districts

## Zoning Districts 1997

- Street
- Study Area
- Apt. Residential District
- Business Center Commercial District
- Commercial District
- Hwy Commercial District
- Manufacturing District
- One Family District
- Planned Devel. District
- Shopping Center District
- Suburban District
- Two Family District
- Waterfront District





# Stakeholder Input

In an effort to gain more input into this planning process, MIC staff conducted a public outreach effort and held interviews with large maritime businesses along the Superior waterfront.

## Public Outreach

In an effort to gain more stakeholder input, MIC staff conducted a public outreach program by attending regularly scheduled meetings of groups with a vested interest in the development of the Duluth-Superior Port. Time was reserved on the agendas of the groups listed and a short presentation was given. The presentation began with a description of the MIC explaining who we are and what we do, followed by a description of the Superior Port Land Use Plan which included a study overview, data collection and analysis, study committee structure, and the stakeholder input process. The presentation was followed by questions and comments. The following section lists the groups that invited MIC staff to speak, the date of the meeting, and a summary of comments and questions.

- Propeller Club – January 25, 2002
- UWS – Transportation Logistics and Geography Students – January 31, 2002
- International Shipmasters – February 4, 2002
- St. Louis River Citizens Action Committee – February 13, 2002
- Duluth-Superior Transportation Association – February 20, 2002
- Grain Elevator and Processing Society – November 20, 2002
- Development Association – December 9, 2002

The following is a list of the comments, questions and suggestions received during presentations to the above groups:

- Several requests to consult the recently-completed St. Louis River Habitat Plan. The Habitat Plan will give very useful and quantifiable information that should be noted in the Superior Port Development Plan process.
- Identify sites with contaminated sediment.
- A word of caution was given regarding the identification of pollutants in the harbor. It will be difficult to determine how ‘dirty is dirty’ since various agencies and involved players will have differing ideas of acceptable levels of pollutants. Any reference to pollutants should only identify where the pollutants are.
- Divide the maritime land use classification into two further divisions: 1) Less than 27’ depth channel needs and 2) Deep (27’) channel needs.
- Land use that is classified as ‘Waterfront Industry’ that is non-maritime should raise an environmental red flag.
- The Coast Guard could be a very valuable source for information on local docks
- Public Access and Recreational Use locations on the ports should remain very visible. Efforts should be made to maintain this visibility.
- Present this plan to the Chambers of Commerce. MIC staff noted that committee members were selectively chosen to spread the word and to achieve political buy-in. Several committee members have very close ties to the Chambers of Commerce and the city council.

- Support was expressed for this port development planning process. In the past the governmental entities on each side of the harbor had different port development plans and/or requirements. This process is very important so that one side of the harbor does not have competitive economic advantages over the other side. It is important that the process used for the Superior Ports be used in the Duluth Port Land Use Plan.
- Efforts should be made to identify areas where current maritime businesses can be relocated if the need arises.
- Land use conflicts exist between the working port and recreation uses. A line needs to be drawn to ensure adequate land exists for future maritime operations.
- Are there large enough existing vacant or public parcels for future maritime uses?
- Development guidelines would be helpful for the cities of Duluth and Superior concerning port development.
- What information is available for brownfields? What are the contaminants on the parcels displayed on the map?
- The working port is critical to the economies of Duluth and Superior.
- What port development plans exist now? How did this plan begin?
- Why should a plan be done?
- Why should we be concerned about sensitive species?
- Land adjacent to the deepwater channel should be preserved for port use. Other land uses not dependent on the port should be located elsewhere.
- The two non-maritime businesses on Connors Point should not be located there as they are using valuable space along the maintained shipping channel.
- If a need for land with port access develops, efforts should be made to relocate non-maritime businesses. Areas of Superior should be identified that would be suitable for relocation of non-maritime businesses.

### **Maritime Businesses Interviews**

Maritime businesses along the Superior waterfront were interviewed to get an idea of what their needs are to improve their businesses and to learn what their vision is for future land uses along the waterfront. Economic development does not always entail creating or assisting new businesses but can include identifying opportunities for existing businesses to improve or expand their current operations.

Listed below are the businesses that were interviewed. The answers to the questions are summarized to capture what was said and to omit repetition. The questions are listed in bold and the answers are listed by bullet after each question. Participants are not identified with their answers and some responses were generalized to maintain confidentiality.

- |  |   |
|--|---|
| • Midwest Energy Resources Corporation | • ConAgra Speciality Grains Co.         |
| • Hallett Dock                         | • Burlington Northern Taconite Facility |
| • Cenex Harvest States                 | • General Mills – S&X Elevator          |
| • Fraser Shipyards                     | • LaFarge Corp                          |
| • Peavy Grain Elevator                 | • CLM Co. (Cutler-Magner Co.)           |

**1. What do you need infrastructure-wise to expand or improve your business?**

- Improved trackage to handle larger trains.
- More dock space anywhere on the waterfront in Duluth or Superior.
- Road improvements would always help. We have good rail access and would like to see truck route improvement in Superior along Winter Street.
- Would like sewer extension.
- Would like to have city services (water & sewer) extended to their operation.
- A gas line extension would help save on heating costs.
- Developing a centralized location where rail cars can be fumigated would help all local elevators. The old Globe Elevator rail yard would be excellent location for this type of activity.

**2. Do you need improved access to roads or rail?**

- Access roads always need some improvement. Working with railroads to improve rail access.
- An improved truck route along Winter Street that would follow abandoned rail right of way to beginning of Tower and Hwy 35 would alleviate congested crossings on Tower and Hammond Avenues.
- Better trucking access to Highway 53. Rail service is good.
- Rail rates are monopolistic and inefficient because the lack of competition. Trucking access is more difficult since local access has changed to Highway 53.
- Improvements needed on 5<sup>th</sup> Street east of Main Street.
- Truck access issues conflict at times with local neighborhood.
- Road surface could be wider and strong enough to support truck traffic.
- Road could be improved into facility. They would like to see a new truck route in Superior connecting Tower Ave & 3<sup>rd</sup> St to Bong Bridge. More rail track space needed at the facility.

**3. What other types of businesses would you like to see develop along the Superior waterfront?**

- Only industrial or heavy industrial or maritime-related.
- Prefer mostly maritime, do not want to see any maritime facilities with dock space transition to another use.
- Any maritime related businesses should locate along the shore, but the recommended industrial park development should be farther inland.
- Anything that would add to the tax roll.
- Maritime and industrial would be most beneficial. Recreation uses ok in certain areas.
- More maritime business would benefit community. Residential and other types of development would be a negative impact to current and future maritime businesses and therefore not beneficial to community. Large investments in port infrastructure should be maintained and preserved for port operations.
- No Tourists! The waterfront area along the maintained shipping canal should be reserved for maritime-related industries.
- Larger industry would bring higher paying jobs and strengthen current businesses. They would not want to see any recreation development. A grain off-loading system would help the port when North America has poor crop years and specific grains from Europe could be

shipped in for national distribution. A waterfront intermodal terminal should be the location for this type of facility.

**4. Do you see a need for the City of Superior to have a land use plan for the waterfront?**

- Yes, definitely. Make sure recreation is located in proper areas away from maritime use.
- Yes, refine zoning to exclude commercial or recreation in areas near maritime industrial. Area not suitable for marinas or any other type of non-industrial businesses.
- Yes, use to preserve maritime land.
- Yes, recreation and marinas should not be located in industrial area.
- Yes, to keep incompatible uses such as recreation and industrial separate.
- Yes, land use plans will help preserve the quality of life along the lake. Any type of business that can supply jobs for the area should be allowed.
- Yes, very important to have land use plans that preserve port operations and reduce conflicts with other land uses.
- Yes, absolutely. If a plan is developed, it would be easier to entice other business to locate to the area, and also would show that we have the transportation infrastructure to support them.

**5. Should land along the maintained shipping channel be preserved for maritime activities? Should areas be designated for maritime and non-maritime activities?**

- Yes, area is currently maintained for shipping through user fees and taxes.
- Yes, definitely. Duluth-Superior should conserve land for maritime activities because historically maritime activities have provided for good paying jobs to support families.
- Yes, but realize Superior's need for economic development may not always produce maritime business. The Connors Point industrial area is a prime example. The land was sitting unused and is now on the tax rolls.
- The Great Lakes are our partner. Without the port we would not be here. We don't see a great growth for the port. This is basically a bulk commodity port facility.
- A marina would be fine and so would development if it did not infringe on current businesses.
- Maritime use should be primary. Recreation use is suitable for end of Connors Point.
- Port area land (outlined study area) should be preserved for maritime use. Much public dollars were spent on building infrastructure to support maritime industry. These investments should be protected in order to allow existing maritime businesses to grow and provide opportunity for new maritime businesses to develop.
- The more businesses that use the shipping channel, the better that it will be maintained. (Thus enticing new businesses) If cargo flow increases, there will be more funds to maintain the harbor.
- Shipping channels are maintained for the purpose of maritime activities. Other uses should be located elsewhere or provisions made to move non-maritime businesses if a maritime use needs the channel front lands.

**6. Should recreation and residential uses be developed along the waterfront?**

- No, not in the study area represented in the Superior Port Development Plan. However, along Barker's Island is ok.

- No residential or recreational in any of the Superior study area. Tourism is dependent on shipping.
  - Recreation and residential are ok at Barkers Island but should not expand. Tourism is dependent on shipping.
  - Recreation and residential along Barker’s Island is great and shows that both can work together. If zoning changes allow more recreation development along unused docks, encroachment will occur on remaining industrial areas and complaints will cause further challenges.
  - Yes, but away from industrial areas. End of Connors Point ok for recreation.
  - Yes, but safety concerns should be addressed before any recreation facility expansion.
  - No, too many conflicts with existing business operations. Other areas are more suited for recreation.
  - Yes to recreational, but hesitant on residential. It is stressed that maritime and recreational uses should be separated.
  - Recreational uses like walking trails and fishing piers are compatible and can be fitted within current businesses. Residential uses are not compatible with current working port because of noise and dust.
- 7. Are there any governmental regulations that make it difficult for you to improve or expand your business? Are additional regulations needed?**
- Have no trouble staying in compliance with present regulations. Work well with DNR and other government sources.
  - Would like to see less regulations – air quality regulations can be troublesome when changes targeted for one type of industry impact other industries.
  - Like to see fewer regulations. Difficulty with many different regulators. Hard to keep track at times.
  - There are enough regulations now. Work well with DNR.
  - DNR can be difficult. Complaints about dust from operation and trucks raising dust on access road.
  - DNR air quality and water runoff regulations are very expensive to comply with. Have made large capital investment to lower impacts from dust caused by their operation.
  - Not much impact from regulations although some older regulations should be updated to fit modern operations.
- 8. What could be done to make the port of Duluth-Superior more competitive with national freight rail, Mississippi River shipping, or East and West Coast shipping?**
- Load ships to deeper draft. Soo Lock Improvements would greatly increase freight flow throughout the Great Lakes region. Grain has gone to barges and rails over the past years. More economical for shipment through river. Would help if ships could be loaded heavier.
  - Seaway tolls make it difficult to compete with other modes and ports. Profits are measured in pennies per ton. Lack of year-round shipping season on Great Lakes also hurts competitiveness.
  - World markets have large impact on ship repairs. Ocean ships can receive service at third world ports at a fraction of the cost because of the difference in labor costs.

- More barge traffic with Canada would benefit Duluth-Superior port. A longer shipping season would also help, but is improbable. Rail rates also impact the Duluth-Superior port. The rates are currently favorable for shipping grain in unit trains to West Coast ports rather than trucks to Duluth-Superior. Big changes have taken place over the years as a result of changes in rail rates.
- When the seaway was subsidized shipping grew and now that river traffic is subsidized, it grows. Shipping from Lake Superior is hampered by St. Lawrence Seaway Authority and ship size. Containerization is not plausible in the Great Lakes because size of ships needed to make it cost effective.
- They would like to see progress on the deepening of the St. Lawrence Seaway system as well as looking at extending the shipping season. Planning for larger ships in the future is also important. What size will ships be in the future? Locks should be planned to accommodate ships longer and wider than current ships. Developing an intermodal facility would also help this area but year round shipping needs to happen at the same time so the facility won't sit idle for 3 months of the year.
- In general, making our port more efficient would be a first step. This would entail developing improved truck routes such as the proposed route in Superior. Competition in rail rates would also help. Look at developing facilities such as a grain off-loading facility.

### **Conclusion**

The information gathered from the both the business interviews and the public outreach was utilized in discussion and development of the future land use map. This information is very important to this planning process as it brought forward needs and concerns of businesses and organizations that are involved with port operations on a daily basis.

# Public Trust Doctrine

Information on the Public Trust Doctrine is presented in this plan because of the influence it has on future land use in the Superior waterfront area. The section is organized by first looking at Public Trust issues on the national level, then looking at how the State of Wisconsin addresses Public Trust, and finally what the impacts are to the City of Superior waterfront.

## National Overview

The following description of the Public Trust Doctrine is from the Government Law Center of Albany Law School Public Trust Doctrine (PTD) Home Page and is written by Paul Bray. This is a portion of the introduction on the web site and is a good description of the Public Trust Doctrine on a national level.

The Public Trust Doctrine is an historical and currently evolving concept relating to the ownership, protection and use of essential natural and cultural resources. It is receiving increased attention in the United State because of the growing awareness of the duty of care owed the environment. The Public Trust Doctrine may prove useful as the nations of the world develop their own ecologically based real property law.

The origins of the Public Trust Doctrine were the declaration of the Justinian Institute that there are three things common to all mankind: air, running water, and the sea (including the shores of the sea). Title to these essential resources or the common are held by the State, as sovereign, in trust for the people. The purpose of the trust is to preserve resources in a manner that makes them available to the public for certain public uses.

There are two co-existing interests to trust lands: the jus publicum which is the public's right to use and enjoy trust lands; and the jus privatum which is the private property rights that may exist in the use and possession of trust lands. The State may convey the jus privatum to private owners, but this private interest is subservient to the jus publicum which is the State's inalienable interest that it continues to hold in the trust land or water.

The Public Trust Doctrine became part of the English Common Law and the courts in the United States have applied the doctrine. Also, some State Constitutions incorporate the Doctrine, like the Hawaiian Constitution, which declares that, 'All public natural resources are held in trust by the State for the benefit of the People.'

Until recent decades the predominant commons recognized as subject to the Public Trust Doctrine was tidal and navigable waters. American cases have held that title to lands underlying tidal and/or navigable waters are held by the State in its sovereign capacity as trustee for the benefit of the citizens of the State who have the right to use the waters and adjacent land for navigation and to 'fish, hunt, or bathe....'

The common [law] has been expanding in keeping with our changing ideas about the proper protection and management of natural and cultural resources fundamental to the welfare of society and future generations (intergenerational equity).

The Public Trust Doctrine provides legal support for protecting and managing natural and cultural resources. It facilitates the weighing of legitimate public and private as well as conservational and development interests to create a well-balanced plan for resource protection and use. Public resources, once identified, may have beneficial uses that include recreational, environmental or economic. Public interest forms the basis for determining the use of the resource. The report of the US National Project on the Public Trust Doctrine pointed out that, "area-wide management programs may be structured, using the public trust doctrine with the state's police power in tandem, to encourage comprehensive management over lands, waters and resources within the area, and thus avoid the limitations inherent in ad hoc permitting decisions."

### **Wisconsin Public Trust Doctrine**

The following information is from Wisconsin Department of Natural Resources (the state agency charged with upholding the spirit of the Public Trust Doctrine). The following information associated with the Public Trust Doctrine in Wisconsin relates to how it addresses navigable waterways.

The "Public Trust Doctrine" as it relates to the use of navigable waters including filled areas and structures within State of Wisconsin waters has its basis in the Wisconsin Constitution. Article IX, Section 1, Wisconsin Constitution, as interpreted by the Wisconsin Supreme Court and the Attorney General, requires that filling of lakes and streams for development purposes be substantially related to navigation and its incidents. This means that such development must be related to commercial navigation or to public recreation associated with the use or enjoyment of the waterway. The trust doctrine is a confirmation that uses of waterways must be consistent with the purposes for which those waterways are held in trust for the public.

#### ARTICLE IX.

#### EMINENT DOMAIN AND PROPERTY OF THE STATE

Jurisdiction on rivers and lakes; navigable waters.

SECTION 1. The state shall have concurrent jurisdiction on all rivers and lakes bordering on this state so far as such rivers or lakes shall form a common boundary to the state and any other state or territory now or hereafter to be formed, and bounded by the same; and the river Mississippi and the navigable waters leading into the Mississippi and St. Lawrence, and the carrying places between the same, shall be common highways and forever free, as well to the inhabitants of the state as to the citizens of the United States, without any tax, impost or duty therefore.

The State of Wisconsin has authorized the Department of Natural Resources to uphold the public trust in state waters. To assist local government, developers, and the public, they produced a

matrix that describes what type of development is allowable on filled areas of navigable waterways under the Public Trust Doctrine.

**State of Wisconsin Position on Specific Types of Development 01/89**

| <b>Development Type</b>   | <b>Acceptable Under Public Trust</b>  | <b>Comments</b>   |
|---|---|---|
| Restaurant Building   | No  | Limited food service may be allowable where it supports, and clearly is an appurtenance to, a permissible use |
| Restaurant Ship or Barge  | Not unless it operates as a licensed watercraft.                                    | Same as above   |
| Municipal Civic Center  | Yes   | Must comply with Supreme Court guidelines.  |
| Hotel/Motel   | No  |   |
| Residences (apartment, condominium, house)                        | No  |   |
| Harbor Facilities   | Yes   | Can be private or municipal   |
| Private/public shore protection                                   | Yes   | Not trust related but a generally permissible exercise of riparian rights                                     |
| Fish or wildlife habitat management or enhancement projects       | Yes   | Must comply with Supreme Court Guidelines   |
| Public park, including “festival parks”, or recreation area       | Yes   | Same as above   |
| Park administration building                                      | Possibly if for administration of water front park(s)                               | Same as above   |
| Marina (and related facilities necessary for operation of marina) | Yes   | Same as above   |
| Amphitheater for plays and other cultural events                  | Yes   | Same as above   |
| Confined dredged material disposal facility (CDF)                 | Yes   | Ultimate use must be compatible with trust doctrine and Supreme Court guidelines.                             |
| Filling to extend private riparian property into water            | No  |   |
| Parking lot   | Possibly if ancillary to an allowable use   | Must meet Supreme Court guidelines  |
| Industrial facility   | No (except facilities related to ship building or repair which are water-dependent) | Same as above   |

### **Influence on Superior Waterfront**

The Public Trust Doctrine has a significant influence on land use on the Superior waterfront (see Map 3). Because much of the land along the Superior waterfront was formerly part of the navigable waters of the St. Louis River that was filled in, the Public Trust Doctrine applies to these lands. These waterfront areas were filled over the years for a variety of reasons such as disposal of industrial by-products and dredge materials and creation of docks, piers, wharves, and port land.

In November of 1999 the Natural Resources Research Institute, in cooperation with the Park Point Community Club, developed the *Minnesota Point Environmental Plan*. As part of this plan, a digital representation of the historic shoreline was created. This data was extracted from a port chart generated in 1861. Large areas of lower St. Louis River (including the Superior waterfront) are shown as they existed in 1861. This data set was used in conjunction with the current shoreline to get a rough idea of what lands are considered filled lands. Minor changes were made to the data to incorporate the changes in the course of the Nemadji River and the development of the NP Ore Dock.

In viewing the map of impacted lands, the reader can see the influence this section of state law has on the Superior waterfront. This being stated, it should not be viewed as lost opportunity, but as focusing certain types of development into appropriate areas. It can preserve lands for the public at large and provide additional opportunities for public use of navigable waterways as well as offer more efficient use of the maintained shipping channel, which all federal taxpayers pay to maintain. The Public Trust Doctrine compliments the policies of the Superior Zoning Code and Superior Comprehensive Plan.

In summary, the Public Trust Doctrine should not be viewed as an anti-development policy but as a confirmation that the uses of waterways must be consistent with the purposes for which those waterways are held in trust for the public. Public and commercial development which enhance the use of navigable waters for navigation and its incidents are promoted through the Public Trust Doctrine.

# Superior Waterfront Filled Land

## 1861 Shore Line

-  Street
-  Study Area
-  Filled Land (Since 1861)



The Public Trust Doctrine applies to the land shaded grey on this map. It states that development of these lands (being former waterways) must be for uses related to commercial navigation or public recreation associated with the use or enjoyment of the waterway. The trust doctrine is a confirmation that uses of waterways must be consistent with the purposes for which those waterways are held in trust for the public.

Caution should be used in applying the information on this map to small areas such as single parcels. The intended use of this data is for large area port planning. The data should be used to provide an overall guide to areas where the Public Trust Doctrine applies. Site specific and parcel level analysis may need soil borings or other methods to determine whether or not it is filled land.

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## Current Land Use

One of the goals of this planning effort is to describe current land uses along the Superior waterfront. This section illustrates the current land use of the Superior waterfront utilizing a slightly modified version of the ARDC Land Use Classification System. This land use classification system was developed to standardize land use mapping at ARDC in order that data generated from different projects could be compiled and used in future projects. See Appendix A for a description of the ARDC Land Use Classification System.

Land uses were identified at the parcel level for this study. Aerial photography was utilized to begin the data generation. Field checks were then conducted to more closely examine the current land use of each parcel. Review by the study committee was also used to ensure accuracy of the data. Map 4 on page 31 displays the results of the current land use.

### General Description of Current Land Uses

The following text is a general description of the study area utilizing the land use classification system described above. The descriptions are broken down by area and start on the west near the Bong Bridge and continue around to the east and south to Allouez Bay.

*The area between the Bong Bridge and Midwest Energy* current land uses include forest, brushland and light industry - maritime. Plans call for redevelopment of this area for industrial or maritime uses. Hallett Dock #8 is the first dock structure east of the Bong Bridge and is currently being used for movement of lumber materials received by barge. Directly to the east of Hallett Dock #8 is the Berwin Dock owned by C. Riess Coal Company. This dock is currently not being operated. Located between the Berwin Dock and Midwest Energy is the idle BP Amoco Oil Dock.

*South of the Hallett and Berwin Docks* are wooded lands with a rail corridor that runs along Winter Street. ABC Rail Products Corporation is located north of Winter Street rail corridor and is classified as a Heavy Industry – Non Maritime use.

*The area along Winter Street west of Banks Avenue* is a rail corridor that provides a connection from Superior rail yards across Grassy Point Draw to Duluth. The majority of freight destined for Rices Point on the Duluth waterfront travels along this corridor.

*The north end of the study area from Midwest Energy to Fraser Shipyards* is utilized by mostly maritime and non-maritime industrial uses. This entire area is fronted by the maintained shipping channel from the South Channel Eastern Section to Howards Bay. Midwest Energy is one of the most recognizable facilities on the Superior Waterfront with its large coal pile inside its loop rail track and the ever-present ships at the dock. Midwest Energy ships up to 16 million tons of coal through this facility each shipping season. Other maritime facilities in this area include Harvest States and General Mills grain elevators along with Fraser Shipyards. Non-maritime uses include trucking companies and construction contractors.

*Connors Point* is a peninsula that stretches from the Blatnik Bridge to the Louisiana-Pacific Plant. Connors Point has a long history of maritime as well as residential uses. Historic maritime and industrial uses include coal docks and rail yards. The north end of Connors Point includes open space that has been used for recreation. Three homes remain today along Main Street. Maritime uses on Connors Point include Peavy grain elevator. Non-maritime industrial uses include Partridge River and Genesis. The Louisiana-Pacific Plant recently closed and the site is available.

*The area to the south and east of Connors Point* includes CLM Corp and Lafarge Co. CLM ships and processes bulk materials such as sand and limestone and Lafarge imports cement products. CLM is categorized as heavy industry – maritime because of the processing of materials.

*The Barkers Island area* has mostly recreation, commercial and residential uses. The shore side area near Barkers Island is mostly open space recreation with the Osaugie Trail and fishing piers. Barkers Island is also the current site of the whaleback ship Meteor. Other primary uses on Barkers Island include a large marina and a hotel and restaurant.

*South of Barkers Island* are three docks, two of which are currently idle and categorized as transitional uses. The operating dock is the Elevator M site, which is the site of the Daisy Flour Mill. The idle sites include Elevator O dock and the former Lakehead Pipeline dock.

*Hog Island* is a forested area currently being managed as a natural area. Located between Hog Island and the mouth of the Nemadji River is the former Northern Pacific Ore Dock. This facility has been idle for many years and reuse options are limited at best. The mouth of the Nemadji River is another wooded area containing wetlands that is managed as a natural area.

*The southeast portion of the study area* contains the BNSF taconite facility. This facility uses a conveyor system to move taconite from the rail dumping area to the ship loading facility and is categorized as light industry – maritime. The last dock located adjacent to Allouez Bay is the Bunge Dock. This facility is currently seeing occasional recreational use.

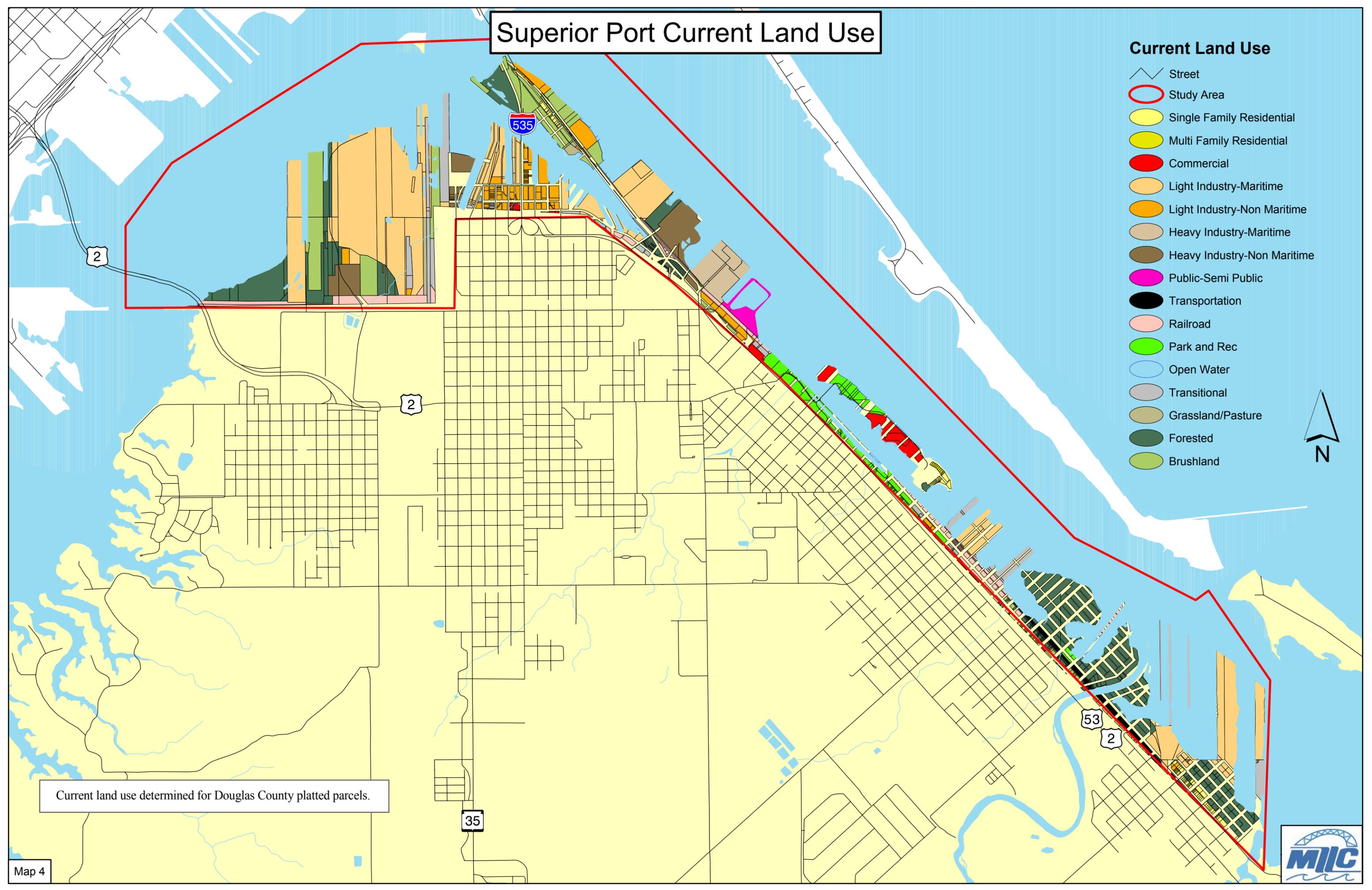
# Superior Port Current Land Use

## Current Land Use

- Street
- Study Area
- Single Family Residential
- Multi Family Residential
- Commercial
- Light Industry-Maritime
- Light Industry-Non Maritime
- Heavy Industry-Maritime
- Heavy Industry-Non Maritime
- Public-Semi Public
- Transportation
- Railroad
- Park and Rec
- Open Water
- Transitional
- Grassland/Pasture
- Forested
- Brushland



Current land use determined for Douglas County platted parcels.





# Superior Port Facilities

## Port Facilities

- Piling
- Port Facility
- Rail
- Street
- Study Area
- Building



| Map Ref # | Facility                                      | Active Dock |
|-----------|---|-------------|
| 1         | Hallett Dock #8                               | Y           |
| 2         | C. Reiss Coal Co. - Berwin Dock               | N           |
| 3         | Former BP Amoco Oil Dock                      | N           |
| 4         | Superior Midwest Energy Terminal              | Y           |
| 5         | General Mills, Elevators S & X                | Y           |
| 6         | Former Globe Grain Elevator                   | N           |
| 7         | Barko Hydraulics/Tower Aveune Slip            | N           |
| 8         | Cenex Harvest States                          | Y           |
| 9         | Fraser Shipyards                              | Y           |
| 10        | End of Connors Point (west of Blatnik Bridge) | N           |
| 11        | Northways Carriers                            | N           |
| 12        | Peavy Connor's Point                          | Y           |
| 13        | Former Georgia Pacific Corp.                  | N           |
| 14        | CLM Limestone Dock                            | Y           |
| 15        | Lafarge Corporation                           | Y           |
| 16        | Former Elevator O                             | N           |
| 17        | Con Agra Elevator M                           | Y           |
| 18        | Former Lakehead Pipeline Dock                 | N           |
| 19        | Former NP Ore Dock                            | N           |
| 20        | Burlington Northern Sante Fe Idle Ore Docks   | N           |
| 21        | Burlington Northern Sante Fe Ore Dock #5      | Y           |
| 22        | Bunge Dock                                    | Y           |





## **Waterfront Facilities**

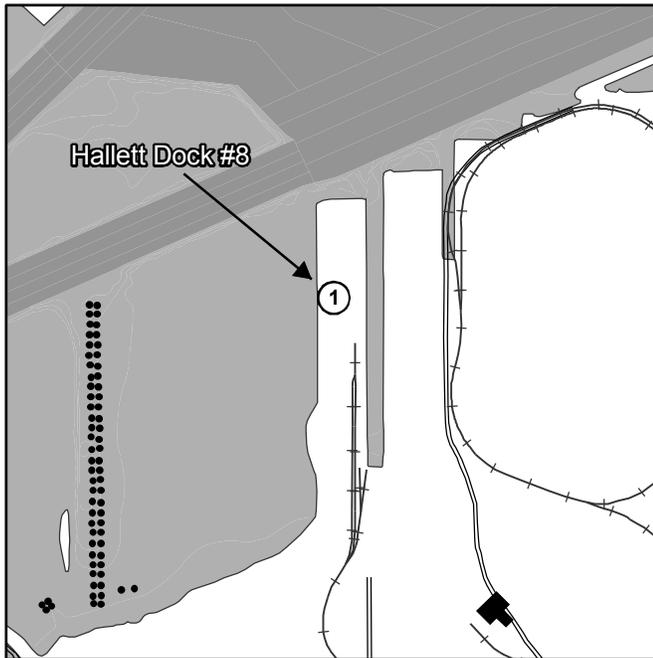
The information in this section describes facilities along the Superior waterfront that have docks and piers. A number of the facilities are currently active and are in operation while other facilities are no longer used. Information is provided on each facility in a text box. If a facility is not active, it is denoted under the title. Of the active facilities, some may not be currently used to their potential capacity. Opportunities may exist to increase the intensity of use of the active facilities.

A Map Reference Number is included in the upper left of each facility text box and corresponds with a number on Map 5 on page 33. Waterfront location maps and aerial photos for each facility are also included. The sources of information include the U.S. Coast Guard, U.S. Army Corps of Engineers, and City of Superior. The Coast Guard shared non-classified information they collected in compiling their Port Security Handbook. This handbook was compiled in late 2001. The Corps information came from their Navigation Data Center, which includes information on all ports in the U.S. The information for the Duluth-Superior port was updated in 1999. The City of Superior supplied information on a number of unused facilities.

**Map Reference # 1**

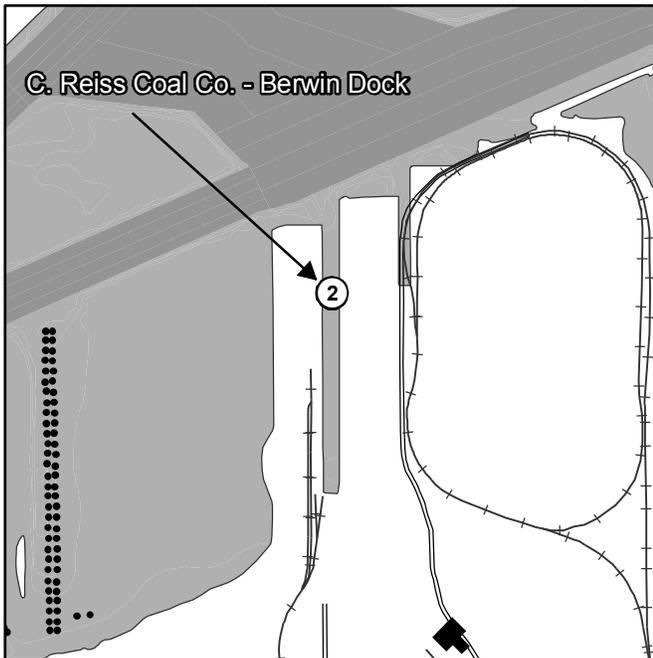
## Hallett Dock #8

**Number of Employees:** 14  
**Year Company Established:** 1963  
**Location:** Foot of Susquehanna and Maryland Ave.  
**Current Use:** Maritime -Receipt and shipment of coal, stone and miscellaneous products  
**Roadway Access:** Private drive off Winter Street  
**Rail Access:** Three surface tracks located at rear; connect with CP, UP, and BNSF  
**Dock Facilities:** Pier length: 2200 feet.  
Depth: 23 – 27 feet  
**Access to Shipping Channel:** South channel -- eastern section  
**Adjacent Land Uses:** Open space and underutilized former maritime facilities



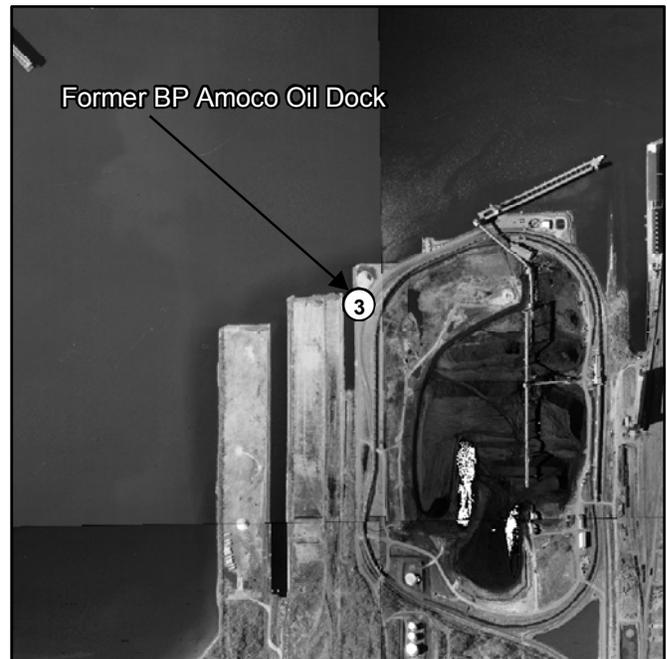
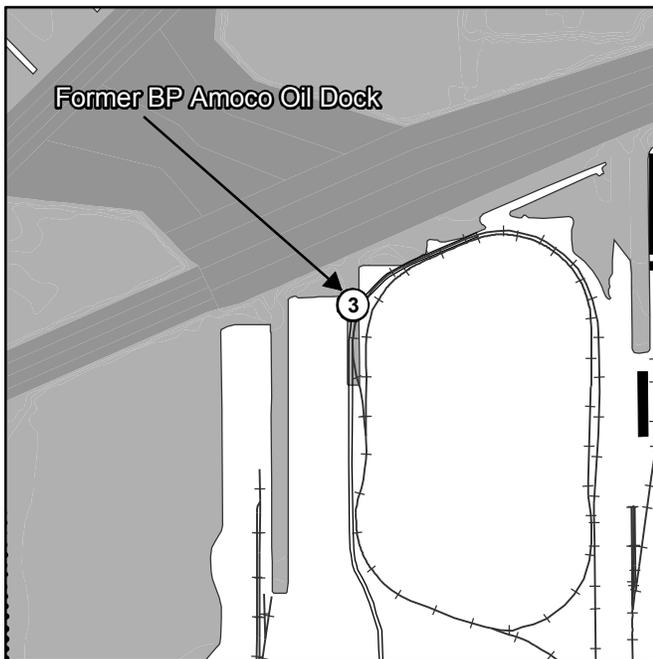
## C. Reiss Coal Co. - Berwin Dock (Not Active)

|                                    |                                       |
|------------------------------------|---------------------------------------|
| <b>Number of Employees:</b>        | N/A                                   |
| <b>Year Company Established:</b>   | N/A                                   |
| <b>Location:</b>                   | Foot of Susquehanna and Maryland Ave. |
| <b>Current Use:</b>                | Not currently in operation            |
| <b>Roadway Access:</b>             | Private drive from Winter Street      |
| <b>Rail Access:</b>                | None                                  |
| <b>Dock Facilities:</b>            | Length: 2,818 feet<br>Depth: 27 feet  |
| <b>Access to Shipping Channel:</b> | South channel -- eastern section      |
| <b>Adjacent Land Uses:</b>         | Maritime and open space               |



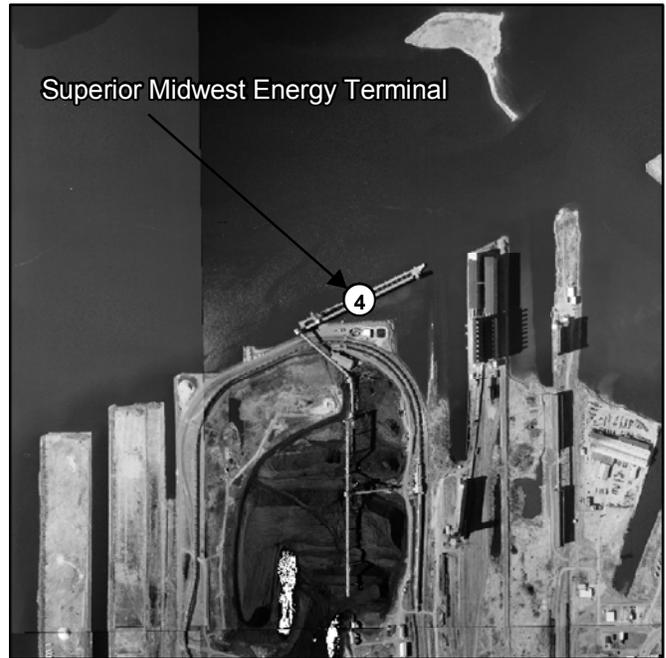
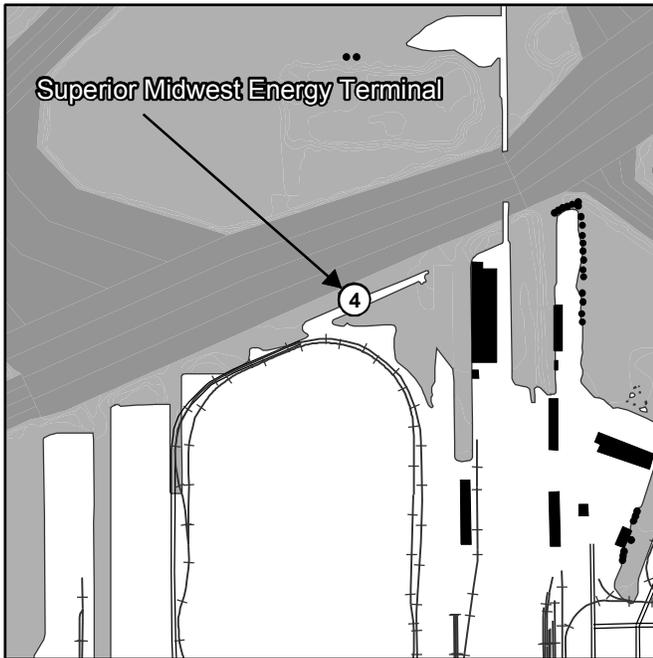
## Former BP Amoco Oil Dock (Not Active)

|                                    |                                       |
|------------------------------------|---------------------------------------|
| <b>Number of Employees:</b>        | N/A                                   |
| <b>Year Company Established:</b>   | N/A                                   |
| <b>Location:</b>                   | Foot of Susquehanna and Maryland Ave. |
| <b>Current Use:</b>                | Not currently in operation            |
| <b>Roadway Access:</b>             | Private drive from Winter Street      |
| <b>Rail Access:</b>                | None                                  |
| <b>Dock Facilities:</b>            | Length: 1,215 feet<br>Depth: 27 feet  |
| <b>Access to Shipping Channel:</b> | South channel -- eastern section      |
| <b>Adjacent Land Uses:</b>         | Maritime and open space               |



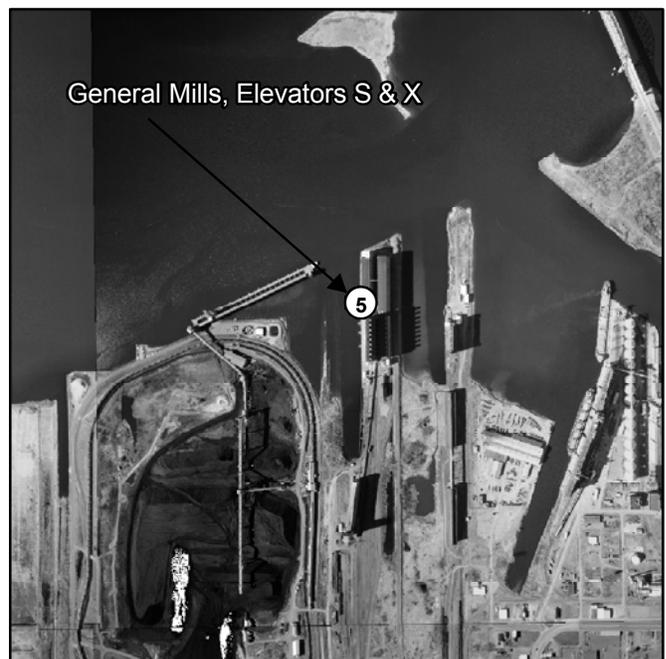
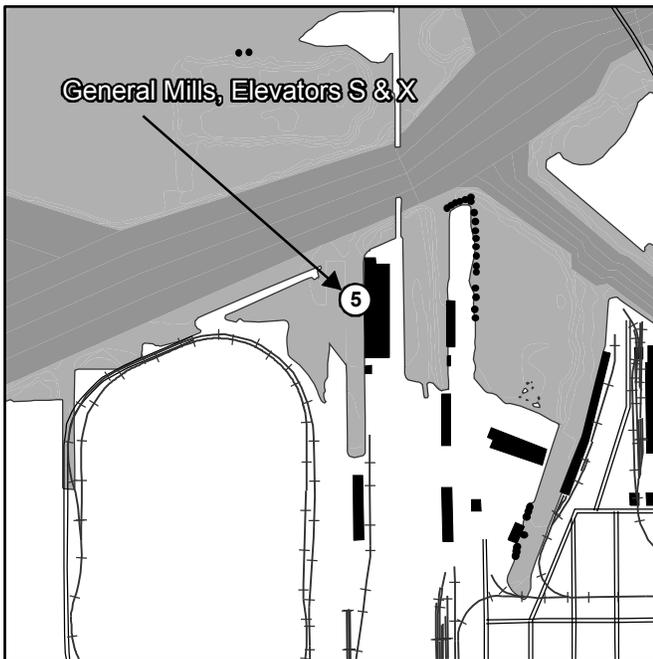
## Superior Midwest Energy Terminal

**Number of Employees:** 71  
**Year Company Established:** 1976  
**Location:** 2551 West Winter Street Superior, WI 54880  
**Current Use:** Maritime – Transshipment of bulk coal  
**Roadway Access:** Private drive from Winter Street  
**Rail Access:** Connection with BNSF and UP  
**Dock Facilities:** Pier Length: 1215 feet  
Depth: 28 feet  
**Access to Shipping Channel:** South channel -- eastern section  
**Adjacent Land Uses:** Maritime, open space, and heavy industry



## General Mills, Elevators S & X

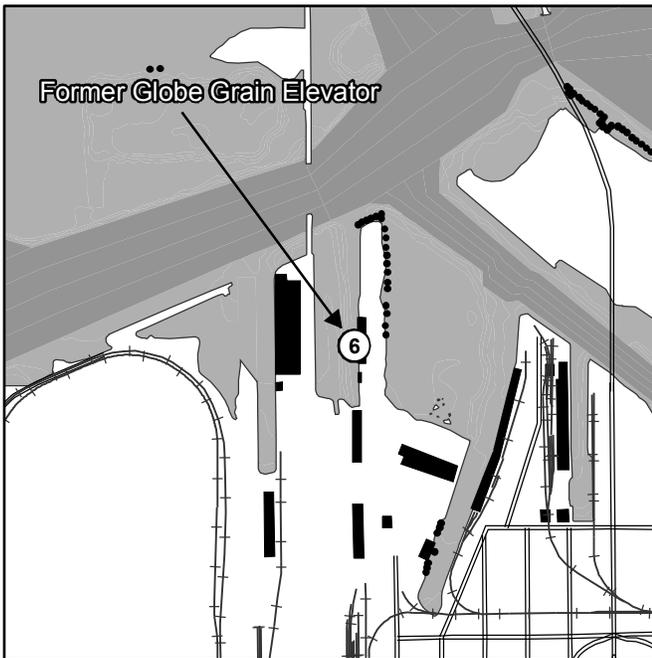
**Number of Employees:** 25  
**Year Company Established:** 1989  
**Location:** 2303 Winter Street  
**Current Use:** Maritime - Transshipment of grain products  
**Roadway Access:** Private drive from Winter Street  
**Rail Access:** Connection with BNSF  
**Dock Facilities:** Pier Length: 1100 feet  
Depth: 24 feet  
**Access to Shipping Channel:** South channel -- eastern section  
**Adjacent Land Uses:** Maritime and underutilized maritime facilities



Map Reference # 6

## Former Globe Grain Elevator (Not Active)

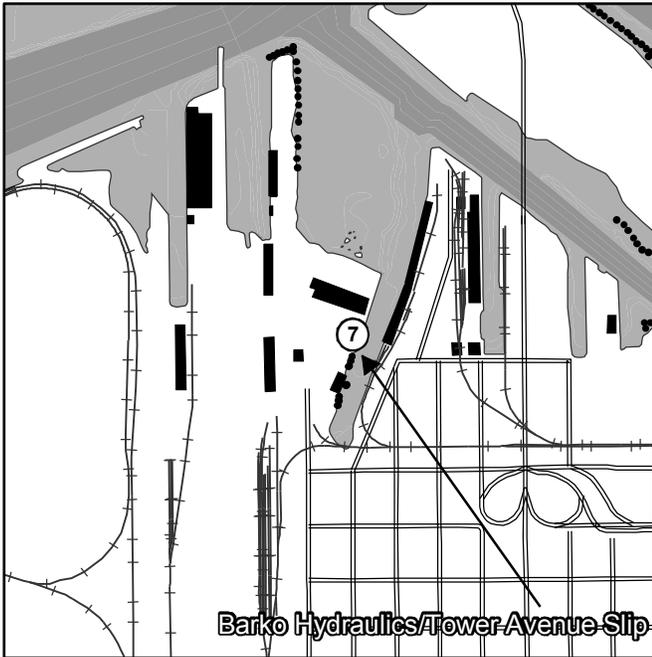
|                                    |                                    |
|------------------------------------|------------------------------------|
| <b>Number of Employees:</b>        | N/A                                |
| <b>Year Company Established:</b>   | N/A                                |
| <b>Location:</b>                   | Foot of Banks Avenue               |
| <b>Current Use:</b>                | Not currently in operation         |
| <b>Roadway Access:</b>             | Private drive from Banks Avenue    |
| <b>Rail Access:</b>                | Connection with BNSF               |
| <b>Dock Facilities:</b>            | Length: 794 feet<br>Depth: 28 feet |
| <b>Access to Shipping Channel:</b> | West gate basin                    |
| <b>Adjacent Land Uses:</b>         | Maritime and industrial            |



Map Reference # 7

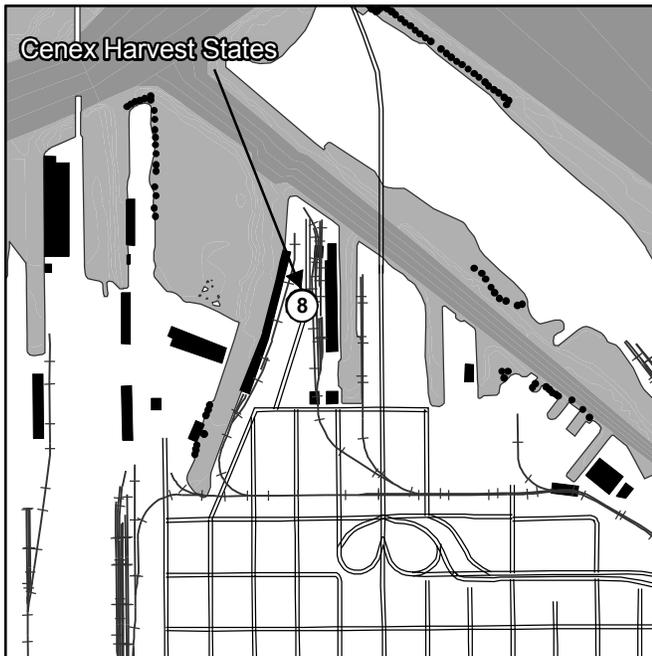
## Barko Hydraulics/Tower Avenue Slip (Not Active)

|                                    |                                    |
|------------------------------------|------------------------------------|
| <b>Number of Employees:</b>        | N/A                                |
| <b>Year Company Established:</b>   | N/A                                |
| <b>Location:</b>                   | Foot of Banks Avenue               |
| <b>Current Use:</b>                | Not currently in operation         |
| <b>Roadway Access:</b>             | Private drive from Banks Avenue    |
| <b>Rail Access:</b>                | Connection with BNSF               |
| <b>Dock Facilities:</b>            | Length: 786 feet<br>Depth: 20 feet |
| <b>Access to Shipping Channel:</b> | West gate basin                    |
| <b>Adjacent Land Uses:</b>         | Maritime and industrial            |



## Cenex Harvest States

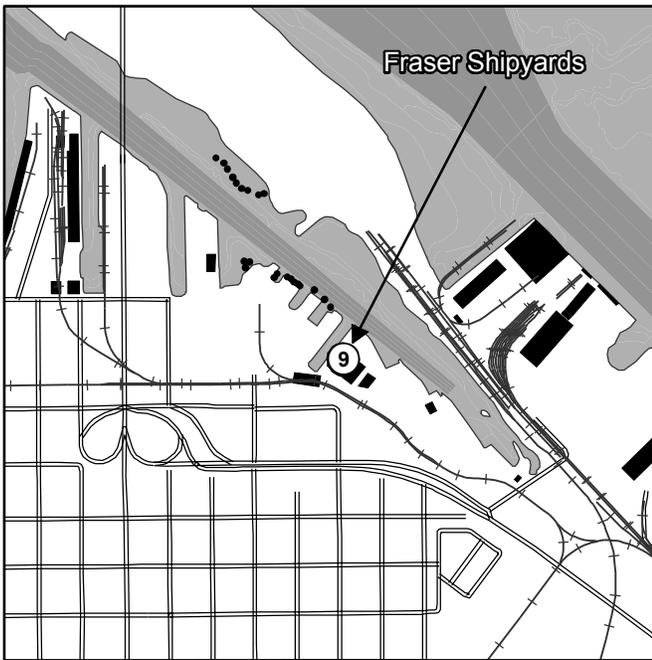
**Number of Employees:** 55  
**Year Company Established:** Late 1940's  
**Location:** 41 Dock Street  
**Current Use:** Maritime - Transshipment of grain products  
**Roadway Access:** Off Tower Avenue  
**Rail Access:** Connections with BNSF  
**Dock Facilities:** (3) Pier Lengths: 1165, 591, and 1190 feet  
Depth: 24-27 feet  
**Access to Shipping Channel:** Howards Bay  
**Adjacent Land Uses Include:** Maritime and industrial



**Map Reference # 9**

## Fraser Shipyards

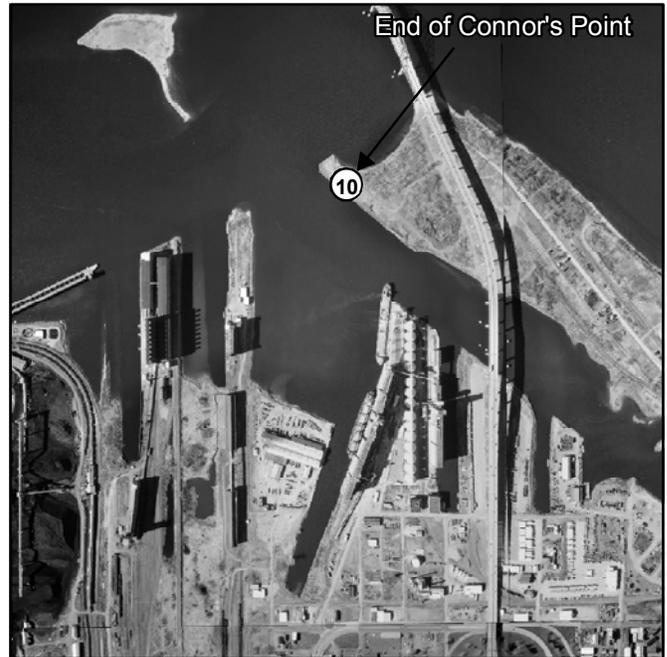
|                                    |                                     |
|------------------------------------|-------------------------------------|
| <b>Number of Employees:</b>        | 40-150 (seasonal)                   |
| <b>Year Company Established:</b>   | 1890                                |
| <b>Location:</b>                   | 1 Clough Avenue                     |
| <b>Current Use:</b>                | Maritime – Shipyard services        |
| <b>Roadway Access:</b>             | Third Street and Clough Avenue      |
| <b>Rail Access:</b>                | Rail spur to BNSF track             |
| <b>Dock Facilities:</b>            | 7 dock facilities along Howards Bay |
| <b>Access to Shipping Channel:</b> | Howards Bay                         |
| <b>Adjacent Land Uses:</b>         | Maritime and industrial             |



**Map Reference # 10**

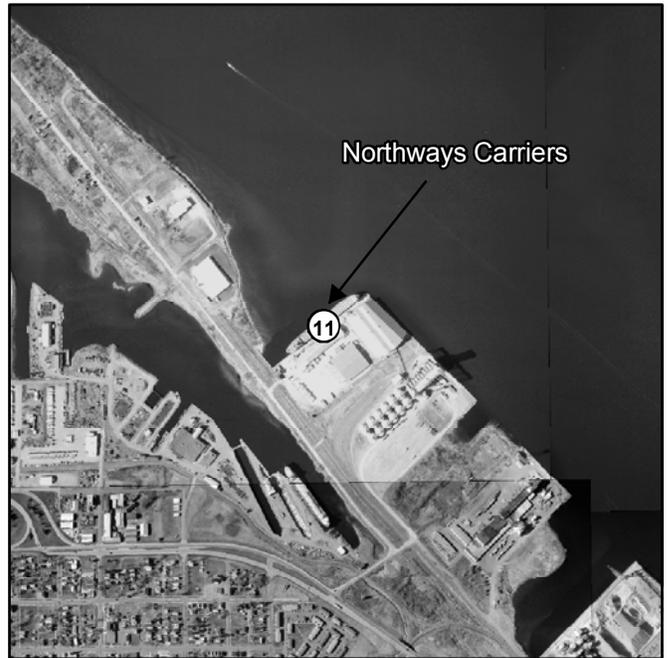
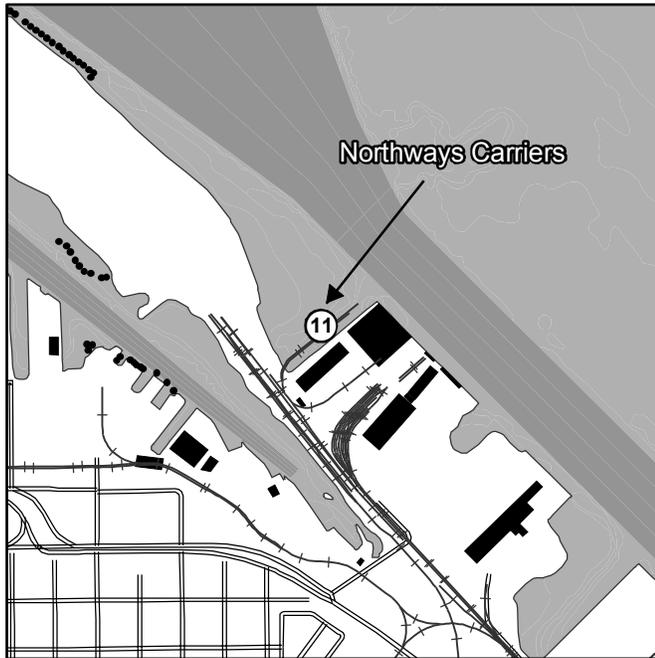
**End of Connors Point (west of Blatnik Bridge)  
(Not Active)**

|                                    |   |
|------------------------------------|---|
| <b>Number of Employees:</b>        | N/A   |
| <b>Year Company Established:</b>   | N/A   |
| <b>Location:</b>                   | End of Main Street                                |
| <b>Current Use:</b>                | Not currently in operation                        |
| <b>Roadway Access:</b>             | Rough road from Main Street                       |
| <b>Rail Access:</b>                | None  |
| <b>Dock Facilities:</b>            | Length: approximately 1000 feet<br>Depth: unknown |
| <b>Access to Shipping Channel:</b> | Howards Bay                                       |
| <b>Adjacent Land Uses:</b>         | Open space and recreation                         |



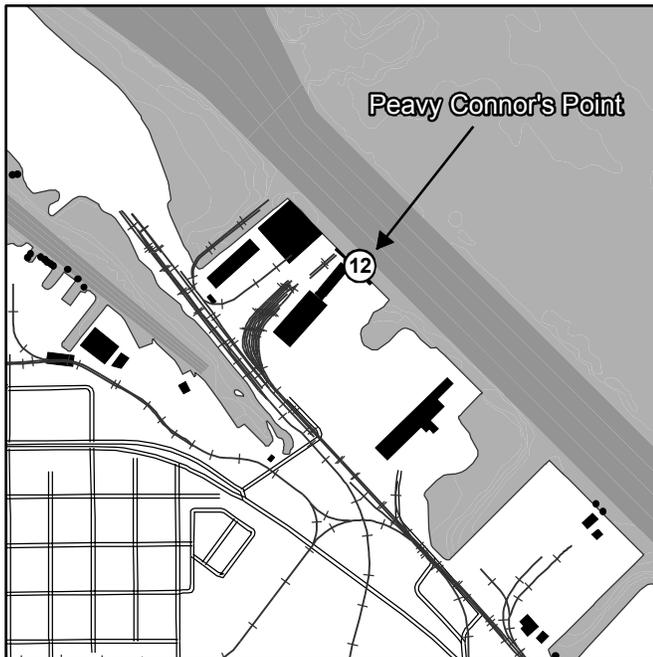
## Northways Carriers (Dock Facility Not Active)

**Number of Employees:**  
**Year Company Established:**  
**Location:** 259 Main Street  
**Current Use:** Movement of general cargo  
**Roadway Access:** Main Street  
**Rail Access:** None  
**Dock Facilities:** Length: 1,500 feet  
Depth: 30 feet  
**Access to Shipping Channel:** Superior front channel  
**Adjacent Land Uses:** Maritime and open space



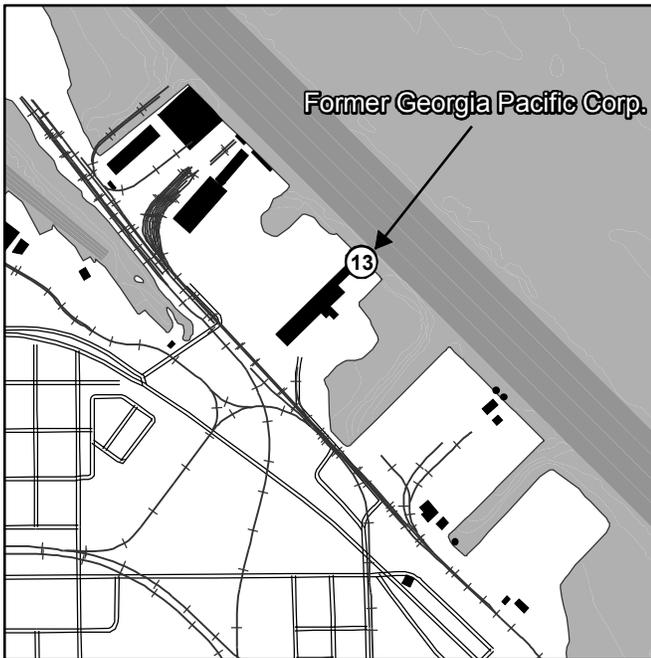
## Peavy Connors Point

|                                    |  |
|------------------------------------|--|
| <b>Number of Employees:</b>        | 27   |
| <b>Year Company Established:</b>   | Early 1900s                                |
| <b>Location:</b>                   | Connors Point                              |
| <b>Current Use:</b>                | Maritime - Transshipment of grain products |
| <b>Roadway Access:</b>             | Private drive from Main Street             |
| <b>Rail Access:</b>                | BNSF Railroad                              |
| <b>Dock Facilities:</b>            | Length: 794 feet<br>Depth: 28 feet         |
| <b>Access to Shipping Channel:</b> | Superior front channel                     |
| <b>Adjacent Land Uses:</b>         | Maritime and industrial                    |



## Former Georgia Pacific Corp. (Not Active)

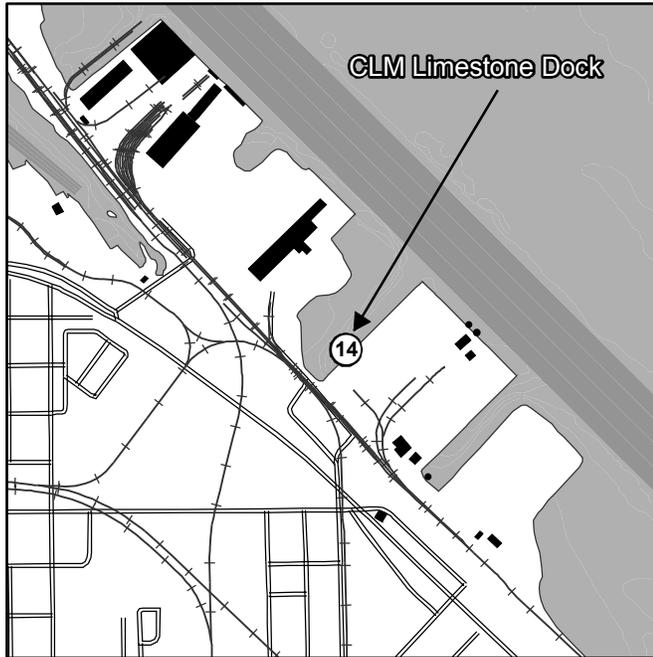
|                                    |                                |
|------------------------------------|--------------------------------|
| <b>Number of Employees:</b>        | N/A                            |
| <b>Year Company Established:</b>   | N/A                            |
| <b>Location:</b>                   | Foot of 5 <sup>th</sup> Street |
| <b>Current Use:</b>                | Not currently used             |
| <b>Roadway Access:</b>             | 5th Street                     |
| <b>Rail Access:</b>                |                                |
| <b>Dock Facilities:</b>            | Length: N/A<br>Depth: N/A      |
| <b>Access to Shipping Channel:</b> | Superior front channel         |
| <b>Adjacent Land Uses:</b>         | Maritime and industrial        |



**Map Reference # 14**

## CLM Limestone Dock

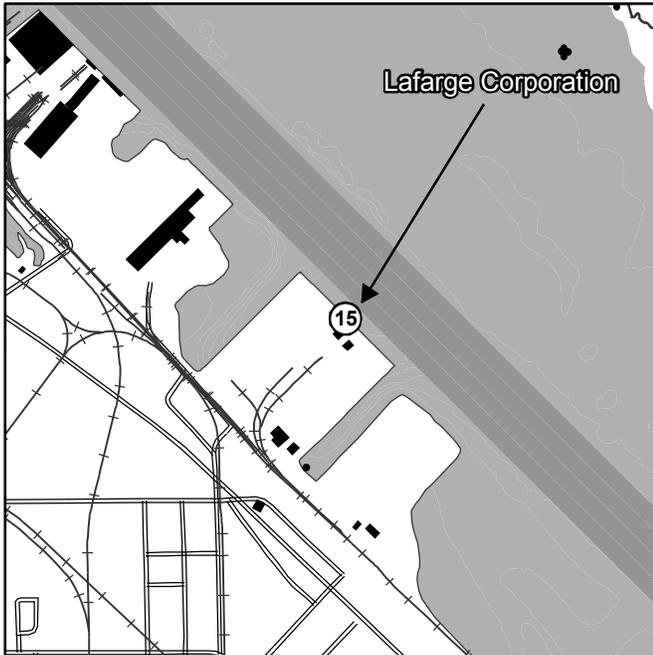
**Number of Employees:** 50  
**Year Company Established:** 1946  
**Location:** Foot of Hill Avenue  
**Current Use:** Maritime - Transshipment and manufacturing of aggregate materials  
**Roadway Access:** Private drive from Hill Avenue  
**Rail Access:** BNSF  
**Dock Facilities:** Length: 1000 feet  
Depth: 26 feet  
**Access to Shipping Channel:** Superior front channel  
**Adjacent Land Uses:** Maritime and industrial



Map Reference # 15

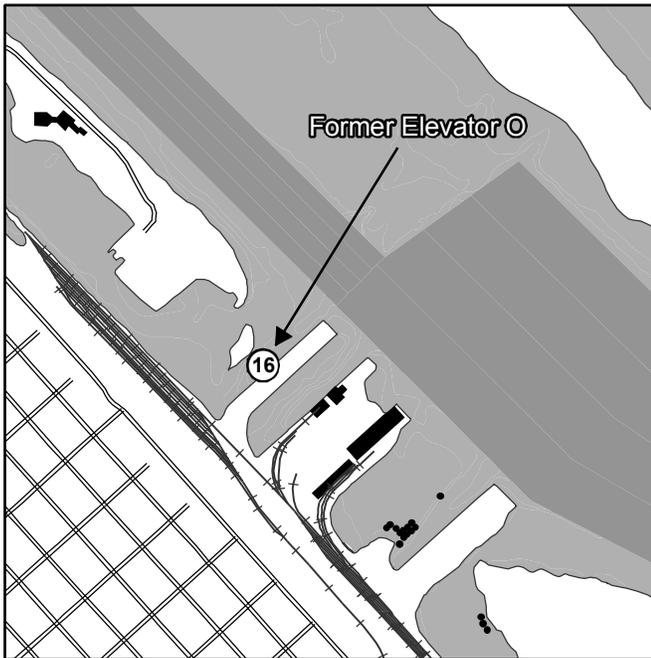
## Lafarge Corporation

**Number of Employees:** 6  
**Year Company Established:** Early 1950s  
**Location:** Foot of Hill Avenue  
**Current Use:** Maritime - Transshipment of cement products  
**Roadway Access:** Private drive from Hill Avenue  
**Rail Access:** Connection with BNSF.  
**Dock Facilities:** Length: 900 feet and 400 feet  
Depth 26 feet  
**Access to Shipping Channel:** Superior front channel  
**Adjacent Land Uses:** Maritime and public utility



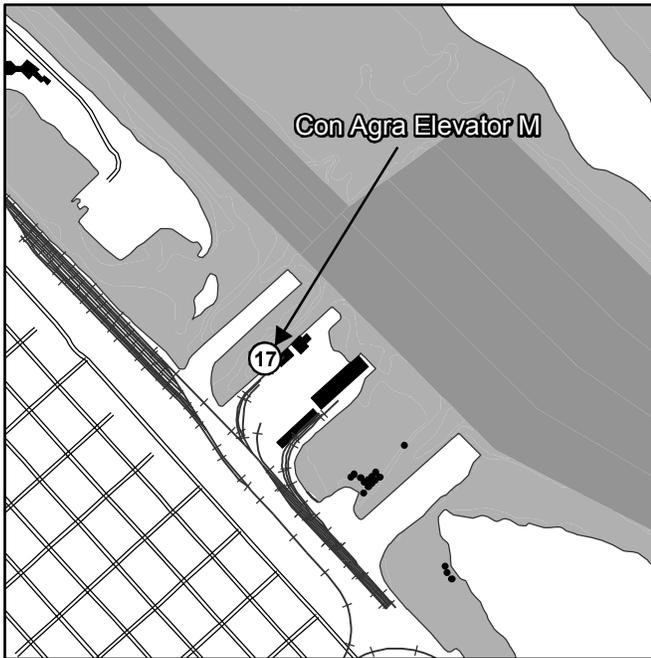
## Former Elevator O Dock (Not Active)

|                                    |   |
|------------------------------------|---|
| <b>Number of Employees:</b>        | N/A   |
| <b>Year Company Established:</b>   | N/A   |
| <b>Location:</b>                   | Foot of 19 <sup>th</sup> Avenue East              |
| <b>Current Use:</b>                | Not currently used                                |
| <b>Roadway Access:</b>             | Private road from 21 <sup>st</sup> Avenue East    |
| <b>Rail Access:</b>                | Access from BNSF                                  |
| <b>Dock Facilities:</b>            | Length: approximately 1000 feet<br>Depth: unknown |
| <b>Access to Shipping Channel:</b> | Superior front channel & Superior harbor basin    |
| <b>Adjacent Land Uses:</b>         | Maritime, rail yard, recreation, and residential  |



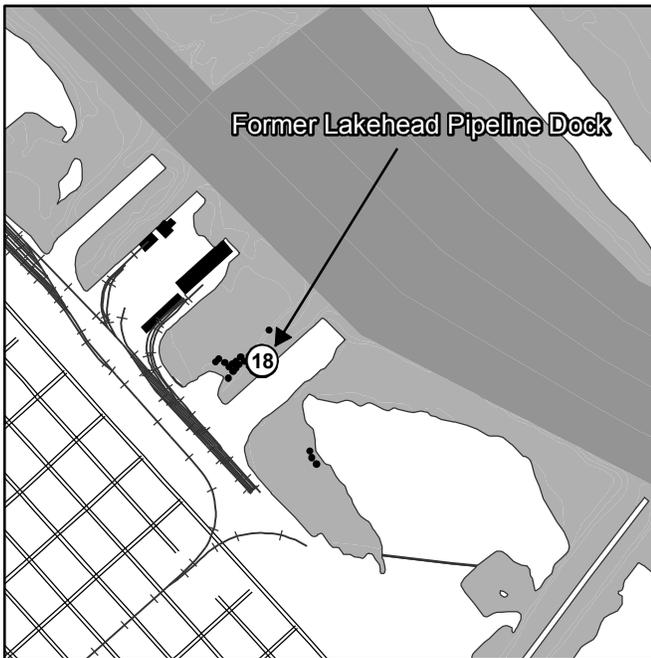
## Con Agra Elevator M

|                                    |  |
|------------------------------------|--|
| <b>Number of Employees:</b>        | 5  |
| <b>Year Company Established:</b>   | 1920s  |
| <b>Location:</b>                   | Foot of 20 <sup>th</sup> Avenue East               |
| <b>Current Use:</b>                | Maritime – Transshipment of grain products         |
| <b>Roadway Access:</b>             | Private driveway from 21 <sup>st</sup> Avenue East |
| <b>Rail Access:</b>                | Connection with BNSF                               |
| <b>Dock Facilities:</b>            | Length: 800 feet<br>Depth: 28 feet                 |
| <b>Access to Shipping Channel:</b> | Superior harbor basin                              |
| <b>Adjacent Land Uses:</b>         | Vacant maritime and transitional properties        |



## Former Lakehead Pipeline Dock (Not Active)

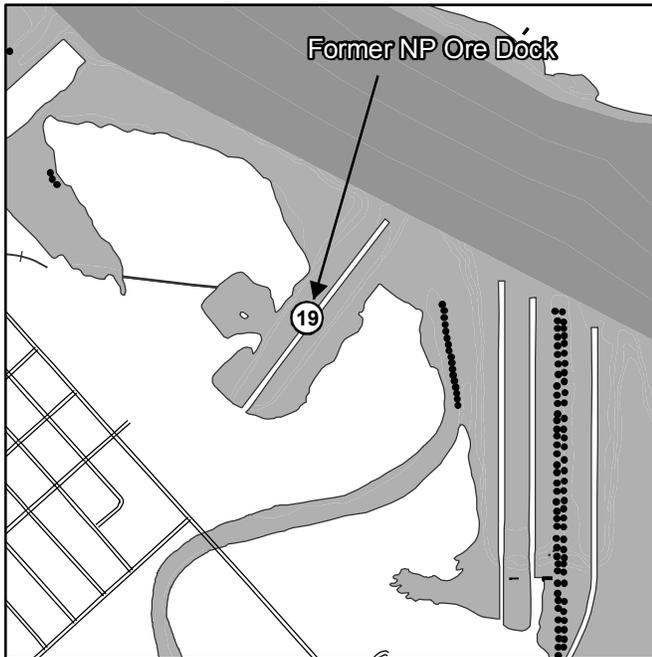
|                                    |   |
|------------------------------------|---|
| <b>Number of Employees:</b>        | N/A   |
| <b>Year Company Established:</b>   | N/A   |
| <b>Location:</b>                   | Foot of 23 <sup>rd</sup> Avenue East              |
| <b>Current Use:</b>                | Not currently used                                |
| <b>Roadway Access:</b>             | 23 <sup>rd</sup> Avenue East                      |
| <b>Rail Access:</b>                | None  |
| <b>Dock Facilities:</b>            | Length: approximately 1000 feet<br>Depth: unknown |
| <b>Access to Shipping Channel:</b> | Superior harbor basin                             |
| <b>Adjacent Land Uses:</b>         | Natural area and open space                       |



**Map Reference # 19**

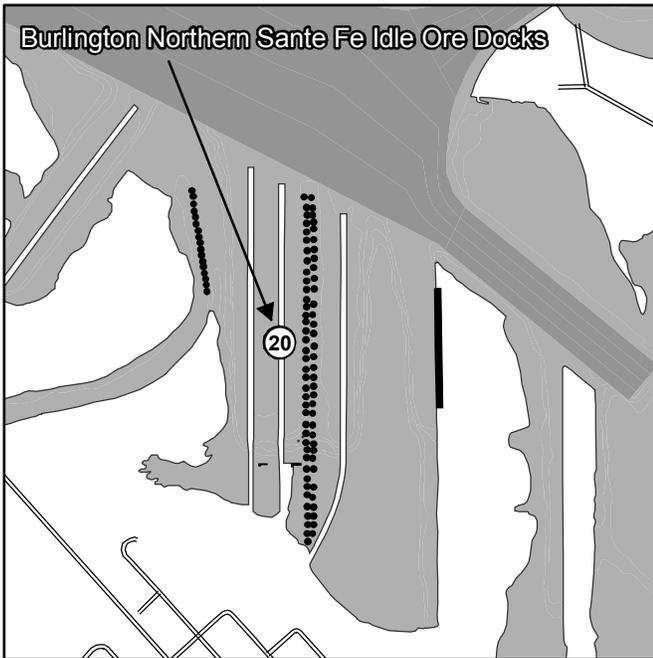
**Former NP Ore Dock  
(Not Active)**

|                                    |   |
|------------------------------------|---|
| <b>Number of Employees:</b>        | N/A   |
| <b>Year Company Established:</b>   | N/A   |
| <b>Location:</b>                   | Adjacent to Loons Foot Landing                    |
| <b>Current Use:</b>                | Not currently used                                |
| <b>Roadway Access:</b>             | Loons Foot Landing access road                    |
| <b>Rail Access:</b>                | None  |
| <b>Dock Facilities:</b>            | Length: approximately 2000 feet<br>Depth: unknown |
| <b>Access to Shipping Channel:</b> | Superior harbor basin                             |
| <b>Adjacent Land Uses:</b>         | Recreation and natural area                       |



## Burlington Northern Sante Fe Idle Ore Docks (Not Active)

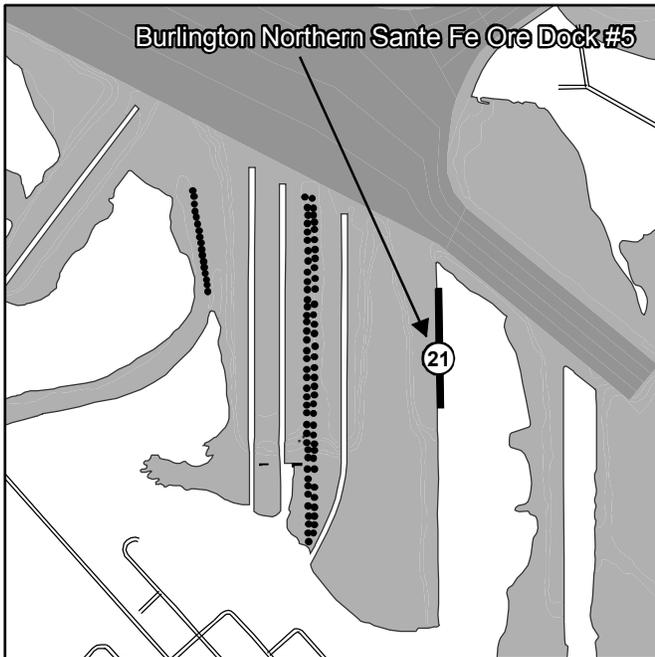
|                                    |   |
|------------------------------------|---|
| <b>Number of Employees:</b>        | NA  |
| <b>Year Company Established:</b>   | 1892  |
| <b>Location:</b>                   | 38 <sup>th</sup> Avenue East & Itasca Street                            |
| <b>Current Use:</b>                | Not currently used  |
| <b>Roadway Access:</b>             | 40 <sup>th</sup> Avenue East from Second Street                         |
| <b>Rail Access:</b>                | BNSF  |
| <b>Dock Facilities:</b>            | Length: 3 Docks approximately 2400, 2200, & 1900 feet<br>Depth: unknown |
| <b>Access to Shipping Channel:</b> | Superior harbor basin   |
| <b>Adjacent Land Uses:</b>         | Natural area and maritime   |



**Map Reference # 21**

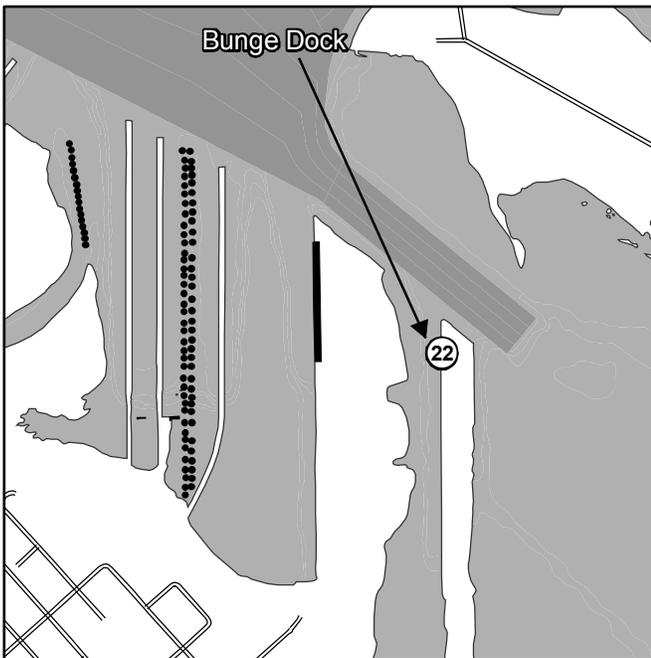
**Burlington Northern Santa Fe Ore Dock #5**

**Number of Employees:** 80  
**Year Company Established:** 1892  
**Location:** 3701 East Itasca Street  
**Current Use:** Maritime - transshipment of iron ore  
**Roadway Access:** 40<sup>th</sup> Avenue East from Second Street  
**Rail Access:** BNSF  
**Dock Facilities:** Length: 1400 feet  
Depth: 27 feet  
**Access to Shipping Channel:** Superior harbor basin  
**Adjacent Land Uses:** Transitional and residential



## Bunge Dock (Not Active)

|                                    |   |
|------------------------------------|---|
| <b>Number of Employees:</b>        | N/A   |
| <b>Year Company Established:</b>   | N/A   |
| <b>Location:</b>                   | Foot of 44 <sup>th</sup> Avenue East              |
| <b>Current Use:</b>                | Used for recreational purposes                    |
| <b>Roadway Access:</b>             | 44 <sup>th</sup> Avenue East                      |
| <b>Rail Access:</b>                | None  |
| <b>Dock Facilities:</b>            | Length: approximately 2000 feet<br>Depth: unknown |
| <b>Access to Shipping Channel:</b> | Superior harbor basin                             |
| <b>Adjacent Land Uses:</b>         | Maritime and open space                           |



# The Natural Environment

## Introduction

Land use activities throughout the Superior Harbor have significantly influenced the natural environment. Some past land use activities have resulted in the removal and filling of area wetlands, contamination of soils, and the elimination or reduction of plant and animal species. Because of a greater understanding about the role the natural environment plays, better development and management standards are now being used to minimize the impacts to the natural environment.

## Wetlands

Wetlands in Wisconsin are defined as “an area where water is at, near, or above the land surface long enough to be capable of supporting aquatic or hydrophytic (water-loving) vegetation and which has soils indicative of wet conditions.” Wetlands provide for floral diversification, fish and wildlife habitat, flood protection, water quality protection, shoreline protection, and groundwater recharge and discharge.

The U.S. Army Corps of Engineers (Corps) protects and regulates all “navigable waters of the U.S.” including wetlands as provided by the federal Clean Water Act. Permits from the Corps are required for activity occurring in a wetland or that may impact a wetland. In wetland areas within the City of Superior identified in the Special Area Management Plan (SAMP) found on Map 6, a streamlined permitting process is allowed under partnership with the Corps and the Wisconsin Department of Natural Resources (WDNR) and the City of Superior. Development in or near areas identified within the SAMP must be coordinated with the City of Superior. The City of Superior also has a shoreland-wetland overlay district in their zoning ordinance which covers wetlands over 5 acres in size on the shoreland.

A Wisconsin Wetland Inventory has been completed for the State of Wisconsin classifying and mapping wetlands 2 acres and larger (Map 7). It is important to note that additional wetlands may exist on subject property and it is the property owner’s responsibility to determine if a wetland smaller than 2 acres is present.

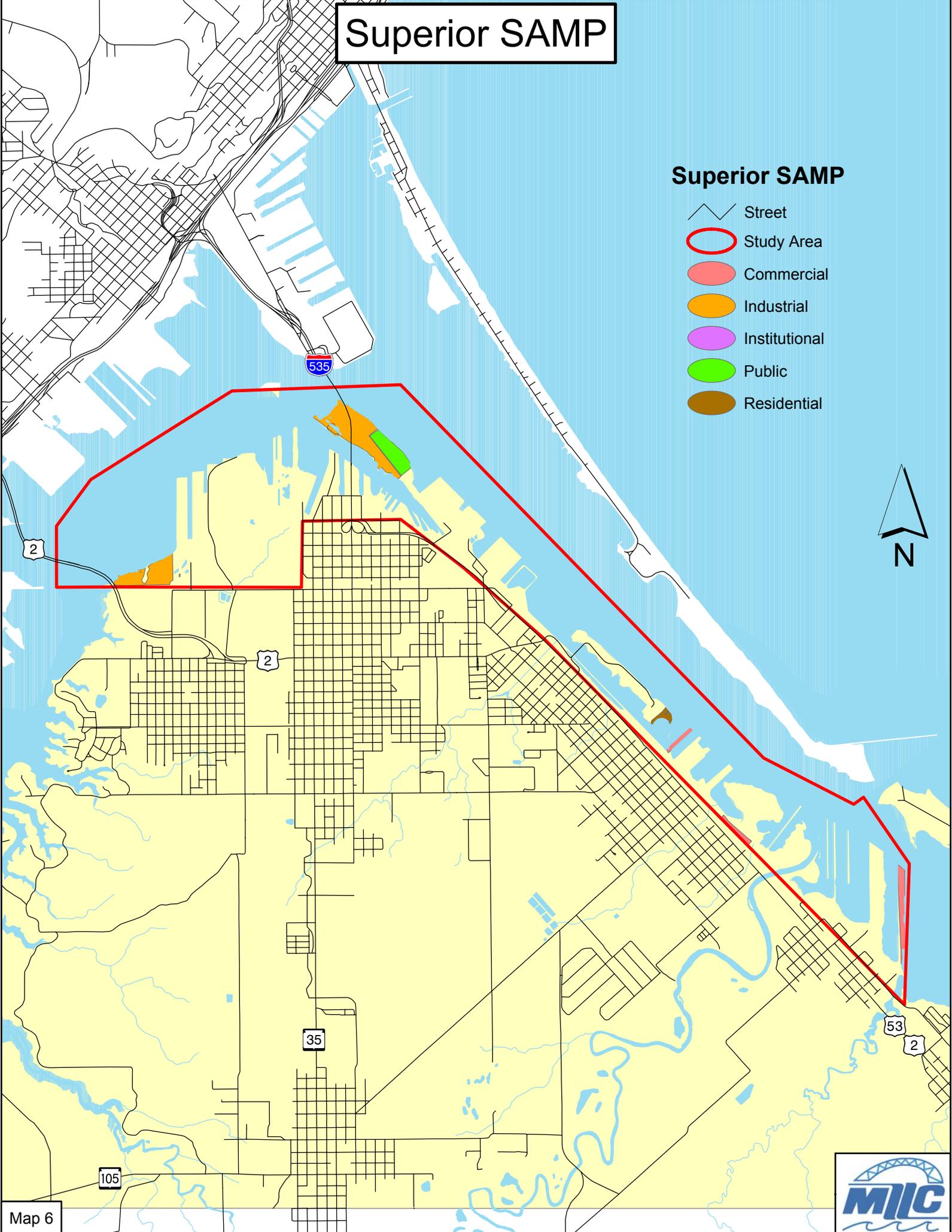
Wisconsin Administrative Code is the water quality standard for wetlands. The Code describes a “wetland dependent” activity when it is “of a nature that requires location in or adjacent to wetlands to fulfill its basic purpose.” Landowners and developers are encouraged to consult the local WDNR representative regarding impacts to wetlands. A permit is required of developers on a project impacting wetlands from the Corps. Before a Corps permit is valid, the WDNR must certify that state water quality standards are met.

As transition zones, coastal wetlands within the Superior Harbor provide critical habitat for plants and animals and contribute to the quality of the ecosystem. Several coastal wetlands exist within the Superior Harbor and have been identified and documented. Information regarding coastal wetlands can be found at [www.dnr.state.wi.us/org/land/er/publications/cw/](http://www.dnr.state.wi.us/org/land/er/publications/cw/) and in *Wisconsin’s Lake Superior Coastal Wetlands Inventory* authored by Eric J. Epstein et.al. and in *Priority Wetland Sites of Wisconsin’s Lake Superior Basin* authored by Eric J. Epstein et.al.

# Superior SAMP

## Superior SAMP

- Street
- Study Area
- Commercial
- Industrial
- Institutional
- Public
- Residential





# Superior Wetlands

## Wetlands

Street

Study Area

## Wetland Type (WIDNR)

Aquatic Bed

Aquatic Bed/Flats/Unvegetated wet soil

Aquatic Bed/Open Water

Open Water

Emergent/Wet Meadow

Emergent/Wet Meadow/Aquatic Bed

Emergent/Wet Meadow/Forested

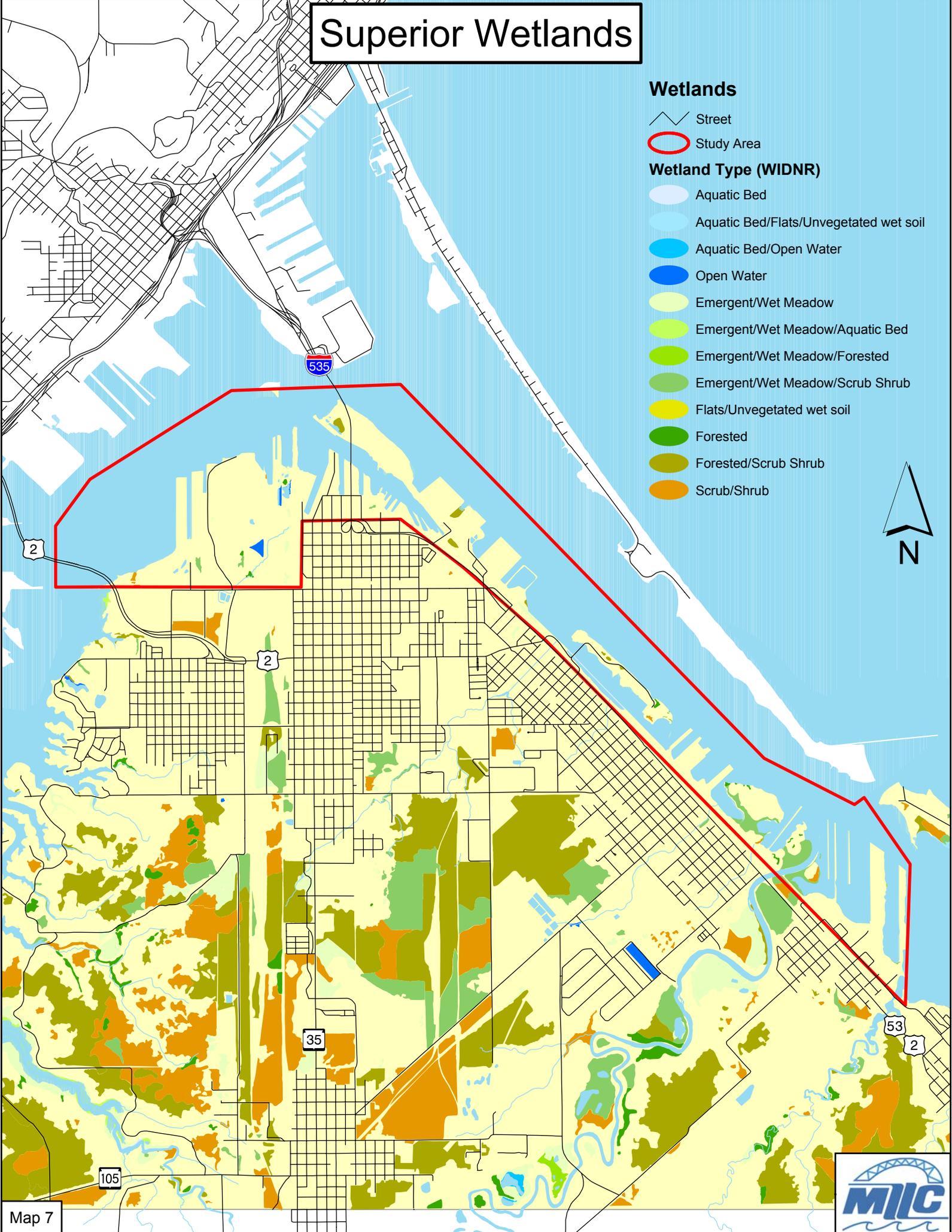
Emergent/Wet Meadow/Scrub Shrub

Flats/Unvegetated wet soil

Forested

Forested/Scrub Shrub

Scrub/Shrub





Coastal wetlands also support a number of rare species, natural communities and other uncommon elements of nature. An evaluation of the coastal wetlands was conducted by the Wisconsin's Natural Heritage Inventory program with information regarding rare species, natural communities and other uncommon elements of nature available from the WDNR.

### **Aquatic Habitat**

The St. Louis River Citizens Action Committee facilitated the development of the *Lower St. Louis River Habitat Plan* (May 2002). This plan set out to examine the aquatic and terrestrial habitat of the lower St. Louis River. Shown below is an excerpt from the habitat plan describing the six types of aquatic habitat found adjacent to the study area (see Map 8) of the Superior Port Development Plan, as well as their condition and conservation goals as outlined in the plan.

It is important to recognize that the conservation goals described here represent an ideal from an ecological perspective, and that it may not be practical to achieve every goal to its full extent. Some goals were established in a circumscribed fashion, because it is not the intent of this plan to recommend the restoration of the entire estuary and its surroundings to a presettlement condition. Where a goal does recommend something closer to presettlement condition (for example, in the estuarine wetlands and forested lands that do remain), it is important to recognize that practical considerations are expected to play a role in where, how, and to what extent those goals are achieved. By setting conservation goals that will achieve a mix of ecological and social benefits, this Plan presents a new vision of the St. Louis River ecosystem toward which communities, organizations, and individuals can work in cooperation and partnership.

In the following descriptions, the current state of health of the conservation targets is summarized with qualitative rankings of "Good," "Fair" or "Poor." A **Good** ranking indicates that a habitat or community closely resembles presettlement conditions, or that a species is secure and reproducing in the Lower St. Louis River. The supporting ecological processes are operating within or close to the natural range of variation. A **Fair** ranking indicates some alteration from presettlement conditions. The species composition, physical setting, age class distribution, or other characteristics of a habitat or community may be somewhat altered and supporting ecological processes are somewhat outside the natural range of variation. A Fair ranking for an individual species indicates it is either in decline or it has declined but stabilized. A **Poor** ranking indicates a habitat or community that shows significant alteration from presettlement conditions, or a species with a very low or non-existent local population. Ecological processes are significantly outside the natural range of variation.

### Lower Estuary (Industrial Harbor) Flats

The industrial harbor flats, located between Grassy Point and the Duluth and Superior entries, are similar to the flats of the upper estuary, but they have been more heavily altered by industrial and commercial activity. They cover roughly 2,400 acres. The shoreline has been greatly modified, and the subsurface topography is complex with old river channels and borrow pits. Lake level fluctuations exert the greatest influence on water level in this habitat. This habitat may have once held the highest mussel abundance in the estuary; it is now one of the only areas where observers have documented that native mussels are being killed by the zebra mussel infestation. Extensive submergent and emergent wetland vegetation was likely present in this habitat prior to the estuary's industrial and commercial development, but very little vegetation remains today.

*Current Condition:* Poor

*Conservation Goal:* Avoid the loss or further degradation of any of this aquatic habitat. If practical, restore some portion of the flats to an appropriate vegetated condition. As with the dredged channel, slips, and industrially-influenced bays, restoring this entire area to a good ecological condition requires a significant financial investment, and the importance of commercial shipping may weigh against this. Ensure that native species continue to utilize this habitat at current or higher levels.

### Industrial Slips

Industrial slips are located along the shoreline of both St. Louis Bay and Superior Bay; the level of commercial use varies between slips. Slips where ships regularly move in and out experience water displacement but very little unidirectional water flow. The water is frequently disturbed and turbid in the most active slips. Substrates may be sandy and scoured, or they may contain more silty sediments with varying levels of contaminants (e.g., PAHs, mercury) or industrial materials. There is little vegetation within the slips, primarily due to water depth, but wetland vegetation is present at the shallow heads of some slips. Despite the poor conditions, even active slips are used by fish and water birds.

*Current Condition:* Poor

*Conservation Goal:* Since shipping is an important industry in the Twin Ports area, the minimum goal is to avoid the loss of any open water or wetland components of these habitats (due to filling or other activities). In addition, some abandoned slips should be identified for restoring the aquatic habitat to a fair to good condition. Ensure that native species continue to utilize this habitat at current or higher levels. Remediate contaminated sediments.

### Industrially-Influenced Bays

Industrially-influenced bays are found on both sides of the river. The bays are generally 4-5 feet deep, with varying occurrences of emergent and submergent aquatic vegetation. Lake level fluctuations have the strongest influence on water level and flow in these bays. Many bays have high concentrations of industrial

# Superior Waterfront Aquatic Habitat

## Aquatic Habitat

- Street
- Study Area
- Clay-Influenced Bay
- Clay-Influenced Tributaries
- Industrial Slips
- Industrially-Influenced Bays
- Lower Estuarine (Dredged) Channel
- Lower Estuary (Industrial Harbor) Flats



Source: St. Louis River Citizens Action Committee  
Lower St. Louis River Habitat Plan May 2002

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debris such as rebar, concrete, and wood, and some sediments are highly contaminated with PAHs, mercury, lead, PCBs, and other toxins. Exposure to the contaminants associated with the sediments adversely affects many organisms and degrades the habitat. Consequently, these bays are in very poor health.

*Current Condition:* Poor

*Conservation Goal:* At a minimum, avoid the loss of any open water of these bays. Restore industrially influenced bays to habitat similar to the sheltered bays (in good condition) whenever possible. This includes ensuring a diversity of native emergent, floating leaved, and submergent vegetation, as well as increased diversity of native fish and bird species utilizing this habitat type. Remediate contaminated sediments.

#### Lower Estuarine (Dredged) Channel

From Stryker Bay to the Duluth and Superior entries, the river channel is dredged regularly to maintain a depth of 27 feet. This creates frequently disturbed deep-water habitat. It is used by some fish as wintering habitat, and it is an important feeding area for fish-eating birds. Water quality is greatly improved compared to the period between the late 1800s and the 1970s, but further improvements are necessary. This habitat contains the St. Louis River/Interlake/Duluth Tar Superfund site, a discrete area of highly contaminated sediment. This portion of the channel is in poor ecological health, but the current economic importance of commercial shipping makes it impractical to consider any restoration at this time.

*Current Condition:* Poor

*Conservation Goal:* Implement continued improvements in water quality and replicate the natural hydrologic regime to the extent possible. Avoid any loss of this open water habitat. Avoid further degradation of this habitat. Ensure that native species continue to utilize this habitat at current or higher levels.

#### Clay-Influenced Bay

Allouez Bay, southeast of the Superior Entry, is unique within the estuary. It is a shallow, protected bay, with little water exchange between the bay and the lake. However, lake level fluctuations are the primary determinant of water level in the bay. Two small surface runoff-dominated tributaries—Bear Creek and Bluff Creek—empty into the bay. There is abundant emergent and submergent vegetation, which provides excellent habitat for fish and waterfowl. Mudflats, which are used by a variety of bird species, are also present. Many species of fish spawn in Allouez Bay, including northern pike, muskellunge, bluegill, black crappie, smallmouth bass, and yellow perch. The exotic ecotype of common reed (*Phragmites australis*) is present in Allouez Bay, but it is not yet common.

*Current Condition:* Fair/Good

*Conservation Goal:* The relatively good quality of this habitat should be maintained and enhanced. Reduce turbidity to its natural range of variation; restore the natural hydrologic regime of the tributaries feeding this bay. Ensure

the continued diversity of native aquatic plants; non-native plant species should not be present. Enhance the diversity of native fish and bird species utilizing this habitat.

### Clay-Influenced Tributaries

These aquatic habitats were identified as targets as part of the Great Lakes aquatic ecoregional planning process. They include tributaries such as the Red River and Little Pokegama River, as well as the larger Nemadji River. Bluff Creek and Bear Creek are also included in this habitat type. They are defined by a broader set of physical characteristics than the other estuarine aquatic habitats. Their health is determined in part by their own hydrologic regime, not by Lake Superior or the St. Louis River. They are first- or second-order, medium- to low-gradient, groundwater- and surface water-influenced streams, flowing through lacustrine red clay deposits. These tributaries provide habitat for a variety of the native fish found in the estuary. The surface water hydrology of these streams has been altered by ditches, wetland draining, and other hydrologic modifications in the watersheds. Changes in the composition of the surrounding forest have resulted in excessively high flows and extremely low flows, which in turn cause excessive streambank erosion, increased sedimentation, and habitat impairment. Ditching and developed areas create higher peak flows and increased sediment loads in these streams.

*Current Condition:* Variable—Fair to Poor

*Conservation Goal:* The hydrology and related sediment loads within the respective watersheds should be managed to more closely resemble presettlement conditions. Ensure that native species continue to utilize this habitat at current or higher levels. Restore in-stream habitat where degraded.

### **Contaminated Areas**

For over a century, changes in land use and activities associated with development have resulted in the contamination of the natural environment. Documented areas of contamination exist within and beyond the project boundary of the Superior Port Development Plan. In addition to these areas of contamination, it is anticipated that other contaminated areas exist but are not of record.

#### *Harbor*

As a result of human and natural activity, contamination of sediments within the harbor has occurred over the past century. Several local, state, and federal agencies have produced reports identifying contaminated locations. Examples of these reports include the *Sediment Assessment of Hotspot Areas in the Duluth/Superior Harbor* and the *St. Louis River System Remedial Action Plan*. These reports are useful as future development impacting the area's land use may necessitate remediation of contaminated sites. Some selected sites having known contamination include Newton Creek/Hog Island and Howard's Pocket.

### *Landside*

In addition to the contamination of soils within the harbor, landside contamination has primarily occurred due to human activity. Within the project boundary of the Port Plan, a number of known contaminated sites exist. The Wisconsin Department of Natural Resources contaminated land database contains both WDNR and non-WDNR links to databases having information on contaminated lands (Map 9). Information available on the contaminated land database includes known contaminated sites, registry of waste disposal sites, superfund sites, and petroleum storage tank information.

### *Cleanup Strategies*

Addressing the cleanup and financial responsibility of contaminated sites can often result in remediation efforts never getting off the ground. State and federal agencies have developed funding programs that are designed to assist property owners and local units of government in the cleanup of contaminated sites. Many of these programs, available through the Wisconsin Department of Natural Resources and the Wisconsin Department of Commerce, are intended to remove contamination and encourage redevelopment of local lands. Funding mechanisms are available to both private and public entities for remediation efforts.

Local units of government and economic development corporations that acquired contaminated property, even if they did not purchase it, were once considered responsible for cleanup due to them possessing or controlling the property. Changes to state law in the 1990s removed local units of government and economic development corporation liability and created incentives for them to redevelop contaminated property depending on how it is acquired. If a local unit of government acquires property through tax delinquency, bankruptcy, condemnation, eminent domain (Ch. 32, Wis. Stats.), escheat, for slum clearance or blight elimination, by using WDNR Stewardship funds, or from another eligible local unit of government, the local unit of government is not responsible to investigate or clean up a hazardous substance discharge at the property.

Many of the contaminated locations within the port could be considered as brownfields sites. Brownfields are identified as “an abandoned or underutilized commercial or industrial site that is not redeveloped because of perceived or actual contamination.” Efforts by the State of Wisconsin to encourage cleanup of brownfields have resulted in several funding mechanisms available to local jurisdictions. Through a partnership between the Wisconsin Departments of Natural Resources and Commerce, financing tools for brownfields cleanup and redevelopment, including planning, acquisition, phase I and II assessments, emergency actions, NR716 investigation, cleanup, redevelopment, and marketing are available. Approximately 40 different funding programs at the local, state, and federal level can contribute to brownfield redevelopment.

### **Dredging**

In the Duluth-Superior port, the federally authorized shipping channel (see Map 10) is maintained at a charted depth of 27 feet from the Duluth and Superior Entries upstream to and including the north channel eastern section, cross channel, and south channel eastern section. From this area, it is maintained to a charted depth of 23 feet for approximately two miles

upstream. The Army Corps of Engineers has developed a Dredged Material Management Plan (DMMP) for the Duluth-Superior Harbor (1998). This plan is intended to assist the Army Corps of Engineers and local jurisdictions in identifying potential uses for dredged materials over the next 20-year period.

For navigational purposes, it is often necessary to dredge portions of the Superior Harbor. Within the harbor, dredging occurs in the federally designated shipping channel and in areas frequented by shipping vessels. As required by local, state and federal regulations, individuals desiring to dredge the lake bottom must obtain permits in order to conduct such activities.

### *Regulations*

Dredging activities within the Superior Harbor must be permitted and approved by the Army Corps of Engineers and/or the Wisconsin Department of Natural Resources and the City of Superior. Federal regulations relating to dredging activities include Section 10, Section 404 and Section 401 permits. As part of the Section 404 permitting process, the Corps has initiated a GPLOP 98 process that now replaces the Section 404 nationwide permitting process in Wisconsin. Additional detail on dredging regulations can be found at [www.mvp.usace.army.mil/regulatory/](http://www.mvp.usace.army.mil/regulatory/) and at [www.dnr.state.wi.us/org/water/fhp/waterway/dredging.htm](http://www.dnr.state.wi.us/org/water/fhp/waterway/dredging.htm). All applicants are encouraged to contact the WDNR and submit a “pre-application” prior to making a formal application for dredging approval to the Army Corps of Engineers. Wisconsin DNR approvals under Chapter 30 may also be required as part of a dredging project.

### *Beneficial Reuse*

Dredging within the Superior Harbor requires a plan for disposal or disposition of the dredged material. For decades, the majority of dredged material has been deposited at the Erie Pier Confined Disposal Facility (CDF). More recently, however, the dredged materials have been used for beneficial use. Beneficial use is the use of dredged materials as a resource rather than disposing of it as a waste. For many of the maintenance dredging activities, sand is dredged from the harbor and sorted at the Erie Pier for use in construction projects. In addition, dredged material is used as beach/near-shore nourishment or habitat creation or restoration. The beneficial use of dredged material assists in limiting the amount of materials to the CDF and can improve the environmental quality of aquatic and plant life.

In Wisconsin, dredged material is defined as “any solid waste removed from the bed of any surface water” and the use of dredged material as beneficial use is defined as “the recycling or use of solid waste in a productive use”. Upland application and in-water placement using dredged material is regulated by the WDNR. Wisconsin DNR staff from the Superior Office should be contacted regarding beneficial use of dredged material.

### **Conclusions**

Land use activities within the port will continue to contribute to the overall quality of jobs and economic prosperity of the city and region. It is important that as land use activities occur, developments consider impacts to the natural environment and utilize methods that enhance the quality of the natural environment.

# Superior Brownfields

## Brownfields

- Brownfield (Points)
- Street
- Brownfield (Polygons)
- Study Area



Brownfields are defined as an abandoned or underutilized commercial or industrial site that is not redeveloped because of perceived or actual contamination.





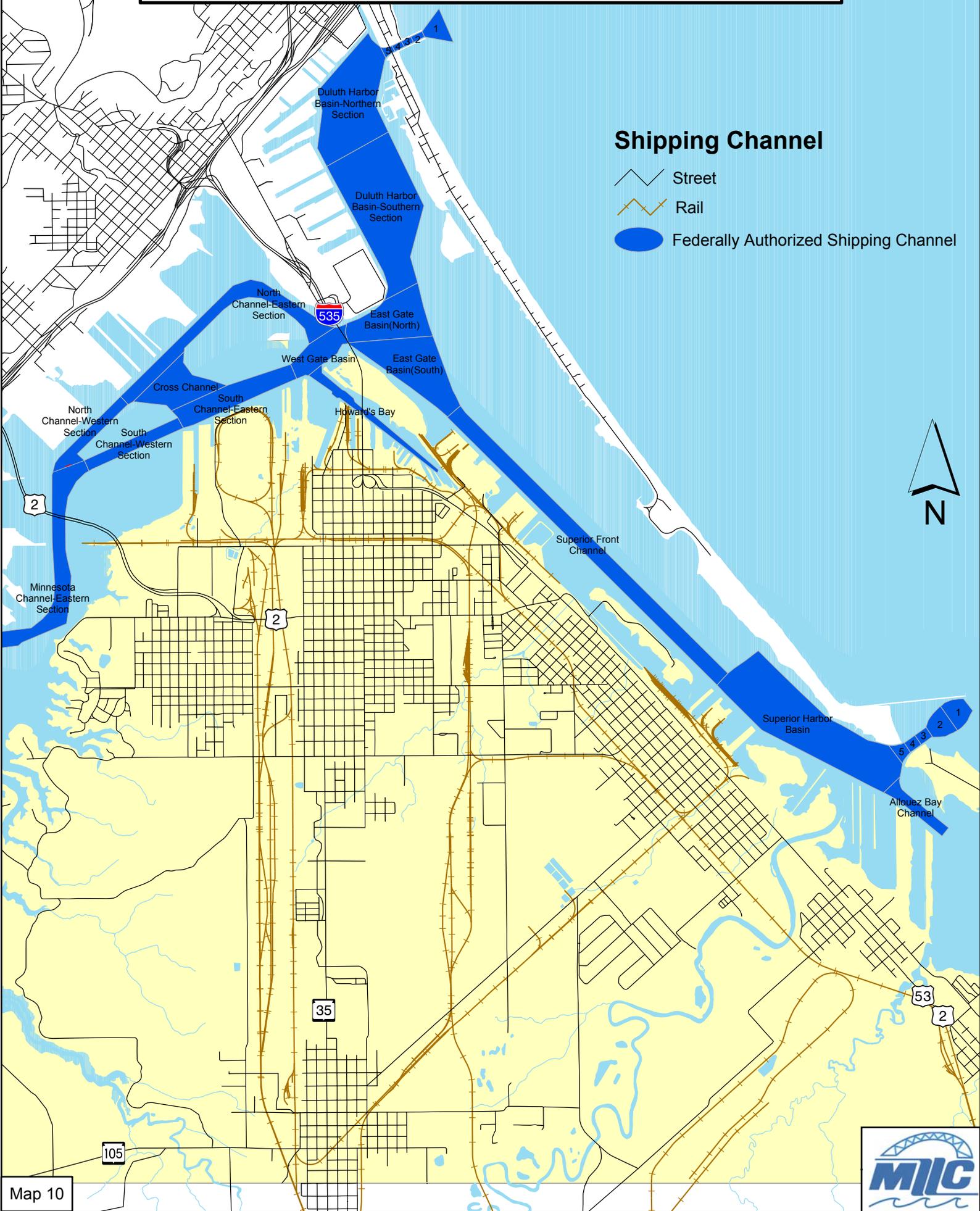
# Federally-Authorized Shipping Channel

## Shipping Channel

Street

Rail

Federally Authorized Shipping Channel





## Future Land Use

The goal in looking at future land uses is to identify a configuration of land uses that provides compatibility between uses, protects natural and economic resources, and provides opportunities for future development. This arrangement of land uses would utilize the Superior waterfront to its highest use and accommodate appropriate interests in waterfront development. It would protect the existing businesses, which provide a large number of jobs and provide opportunities for future recreation, commercial, industrial and residential development.

Another factor in looking at future land uses along the Superior waterfront is to protect and preserve the utility of the federally authorized shipping channel (see Map 10 ). This channel is maintained to accommodate maritime freight activities. Using channel front lands for other purposes takes away future opportunities to utilize the shipping channel.

In developing a vision for future land uses, a number of inputs were considered. A development suitability analysis was conducted that looked at five types of development – commercial, industrial, maritime industrial, recreation, and residential. Other information included input from port stakeholders, interview responses from port businesses, the Public Trust Doctrine, Superior’s Comprehensive Plan, current zoning, and location of existing businesses. The Study Committee considered all of these inputs as they developed a future land use map.

### Development Suitability Analysis

A number of factors can influence what port area land is most suitable for certain types of development. Proximity to roads, rail, the federally-authorized shipping channel, wetlands, and brownfields can have some bearing on where development occurs. Much of the geographic data collected for this study illustrates the location of these factors. With the capabilities of Geographic Information Systems (GIS), all of these factors can be analyzed together. This analysis attempts to illustrate the locations most suitable for certain types of development in the port area.

Working with numerous data layers in a project can be challenging, especially when each of those data layers can impact the final outcome of the analysis. In order to organize the data and assess its relative importance in the final analysis, a ranking model is often used. A ranking model was developed for this project to better illustrate future developable areas. Ranking involves placing attributes, such as wetlands and proximity to the maintained shipping channel, into discrete classes. These classes are assigned numerical values or weighted based on their relative importance to a certain type of development. This type of ranking, called the single additive weighting model (SAW), involves a raw score that is added for all participating attributes. The results display areas of higher value relative to the weight of the input data.

The following list is the geographic data that were used in this analysis:

- Sanitary Sewer
- Water Lines
- Gas Lines
- Rail Lines

- Roads
- Maintained Shipping Channel
- Port Facilities
- Wetlands
- Brownfields
- Endangered Species
- Current Land Use
- Vacant Parcels
- Publicly-Owned Parcels

The results of this analysis were used as a starting point for discussion of future land use and the development of the Future Land Use Map.

### **Future Land Use Map**

A number of inputs were considered in the future land use discussion. In addition to the above information, other factors were taken into consideration. National markets and changes in freight movements over the last twenty years have shifted some cargoes away from the Superior port. Decreases in grain and iron ore shipments have left Superior with unused capacity in grain elevators and ore docks. Coal shipments have been increasing yearly at the Midwest Energy facility.

Development of the Future Land Use Map began with a review of the Development Suitability Analysis results and discussions about how the Public Trust Doctrine impacts land use in the port area. Information from Superior's Comprehensive Plan and the Zoning Ordinance were reviewed to identify port area concepts and development requirements.

An interactive GIS exercise was conducted with a list of available data provided to Study Committee members. As the discussion was taking place, Study Committee members were able to request viewing of any data layer in any combination. For instance, if a request was made to view the federally-authorized shipping channel in relation to parcels that are publicly-owned along with water, sewer and roads, these various data layers could be displayed one at a time or in any combination. Digital aerial photos were also available for viewing. This exercise allowed a large amount of geographic information to be considered in this process.

The study area was examined with the objective of promoting compatible land uses, protecting and enhancing existing maritime businesses, preserving natural features, redeveloping underutilized or idle facilities, and providing opportunities for the public to access the waterfront. It is important to protect the value of the federally-authorized shipping channel and preserve waterfront areas for uses that require access to the shipping channel. The intent of this map is to serve as a land use guide and provide a quick visual reference for appropriate port land uses (see Map 11).

### **Opportunities and Underutilized Facilities**

The Study Committee conducted a site-by-site review of the Superior waterfront in an attempt to identify underutilized sites and opportunities for redevelopment. The following text contains a brief description of sites that may have reuse or intensified use potential.

# Superior Port Future Land Use

## Future Land Use

- Street
- Study Area
- Commercial
- Industrial
- Maritime
- Maritime/Industrial
- Maritime/Recreation
- Natural Area
- Public Utilities
- Recreation
- Residential



In the development of this map the following legal documents were referenced:

- Public Trust Doctrine (Wisconsin State Constitution)
- City of Superior Zoning Ordinance





*Far western portion of the study area*

This area is being targeted for an industrial park type development. A new off ramp from the Bong Bridge will greatly improve truck access to this area. An infrastructure upgrade is being planned by the City of Superior with a new roadway being considered to connect to Winter Street near the former ABC Rail and going east toward Hallett Dock #8 facility. Water and sewer extensions are also to be established along this new road corridor.

*Hallett Dock #8*

This site could provide a future expansion site for Hallett Dock when their current situation in West Duluth is determined. Hallett Dock #6 in the Waseca Industrial area in West Duluth will potentially be impacted by the clean-up of the Interlake/Duluth Tar Superfund Site in nearby Stryker Bay. The case is still under negotiation and one solution identified is to relocate Hallett Dock Co. operations to another site.

*C. Reiss Coal Dock*

This dock and slip located east of Hallett Dock #8 is currently idle and has no immediate plans for future use.

*Former Amoco Oil Dock*

This small dock and slip adjacent to Midwest Energy may be able to accommodate a rail ferry service or barge traffic.

*Former ABC Rail and the Area South of Midwest Energy*

While this area is not located along the waterfront, opportunities may exist for industrial development. The former ABC Rail building is now partially occupied by Metal Recovery. Vacant space is available for other tenants.

*Area Southeast of MW Energy*

This area should be used to support maritime industry. The rail and road corridors should be maintained for General Mills Elevator. Outside of the rail and road corridors industrial uses would be appropriate.

*Globe Elevator*

The former Globe Grain Elevator is no longer in operation and some of the buildings on the property should be torn down as they are wooden structures that represent a potential fire hazard. Other facilities on this property still have reuse potential and could be salvaged. This area has been identified as a poor candidate for recreational use given its proximity to heavy industrial operations with their higher levels of noise and dust. Ideas for reuse of this property include using the dock as a potential winter ship storage and using the adjacent rail yard as a potential fumigation yard for grain cars.

*Tower Avenue Slip*

A planning effort by the City of Superior for the North Tower Avenue district identified the Tower Avenue Slip as a potential connection for the district to the waterfront. One problem with this idea is the presence of the BNSF rail track that is used to access Harvest States Grain

Elevator and operations on Connors Point. This issue would have to be resolved to allow pedestrian access to the slip. The City of Superior has also identified the Tower Avenue Slip as a potential for the whaleback ship Meteor, which is currently located on Barkers Island and may be moved in the near future. This slip could also have potential for winter ship storage and maintenance.

#### *Area south of Harvest States Grain Elevator*

This area is appropriate for maritime, industrial, and commercial uses. The area is somewhat run down and not used to its highest potential. It would be a good candidate for redevelopment projects that target a higher intensity of the properties.

#### *Area Under and East of Blatnik Bridge*

This area is currently used for storage of construction equipment. Potential reuses would include maritime uses.

#### *Connors Point*

This area was studied in 1978 and specific elements of the plan include site characteristics, potential harbor needs, marine uses, land assembly, design sketches, and cost estimates for construction of facilities. The final conclusion of the plan suggested that public ownership of the area would be desirable. Currently the City of Superior controls large portions of Connors Point. Ideally the area would be utilized for maritime use given its proximity to the maintained shipping channel, however given recent market changes in the freight shipping industry, maritime businesses may not be feasible for this area. Road and rail access is not ideal and would be very costly to develop. Other industrial uses are currently located here and may represent the highest and best use of portions of Connors Point. Recreation uses are another use that may develop.

#### *Georgia Pacific*

The Georgia Pacific plant has closed and the facility is for sale. The site is approximately 30 acres with a small dock face along the maintained shipping channel. This site is a prime redevelopment site suitable for maritime uses.

#### *The Barkers Island Area*

The City of Superior recently completed a plan that addresses the future of Barkers Island.

#### *Former Elevator O Site*

Elevator O is a small (less than 6 acres) vacant maritime site that could be used for either maritime (preferable) or recreational uses. The dock is on the north side of the site although the south side could possibly be used for recreational boats. This site could potentially be used for docking of the Meteor.

#### *Elevator M – Flour Mill*

This site is currently being used for the shipment of specialty grains. Most of the grains are received and sent by rail and truck. The site has unused capacity for shipping additional grain products. The site has docking facilities and could be used for other maritime uses.

### *Lakehead Pipeline Pier*

This site is currently vacant and is approximately 10-12 acres in size. It has a rail connection and an operable dock wall. The site would be suitable for maritime uses.

### *NP Dock*

The former Northern Pacific Ore Dock has not been used in many years. A 1978 study recommended using the dock for transshipment of coal. Currently the area identified for the coal yard has transitioned to residential use, which would not be compatible for a coal facility. Costs identified in the 1978 plan are extremely high and would make conversion of this facility prohibitively expensive. The status of the structure is currently under review.

### *BNSF's Three Idle Taconite Docks*

Given the current uncertainty of the taconite industry, BNSF may not ever open any of these three ore docks. Their current operation uses a conveyor to move taconite from the train dump area to the operating ore dock. Maintaining lines of communication with BNSF is important to identifying future opportunities for reusing these ore docks.

### *Bunge Dock*

This dock would be suitable for maritime or recreational uses.

## **Future Facility and Development Considerations**

- ✓ Truck Route – A future truck route could connect the Trunk Highway 35 area near the intersection of Tower Avenue and North 3rd Street to Trunk Highway 2, where a planned new off ramp from the Bong Bridge would connect with Winter Street. Issues that would have to be resolved would include how to cross the numerous rail lines as well as funding sources.
- ✓ Fumigation Yard – A central site is needed in the Duluth-Superior port area to conduct fumigation of grain cars. Currently some local rail companies will not allow this service on their property and some grain elevators do not have space and track available on their locations. A central facility would provide a site to conduct fumigation to rail cars from all area grain elevators.
- ✓ Additional Wintering Dockage – The port of Duluth-Superior currently provides winter dockage and maintenance services to as many as 15 Great Lakes ships. These maintenance operations generate economic benefits in the form of jobs and contracts for local companies. Opportunities may exist for additional ships to berth along the Superior waterfront.
- ✓ Grain Off-Loading Facility
- ✓ Marine Intermodal Facility – examine results of *Twin Ports Intermodal Study*
- ✓ Expansion of Existing Marina Facilities

## Waterfront Development Review Process

Developing land along Superior's waterfront involves review by local, state, and federal agencies. The most important concept is to *open lines of communication early in this process*. Meeting with those responsible for development review will allow information to be shared about the requirements of developing along the waterfront.

The first step in the process is to contact the Planning Department at the City of Superior. City planning staff will supply guidance and information on zoning and permitted uses, waterfront design standards, wetlands, filled lands, contamination issues, potential rezoning, and building permits. The City of Superior staff prefers to have developers come in early in the process for a sit down meeting with planning, engineering, and building department staff to discuss requirements for permits and to assist with information gathering. This meeting is helpful before plans are drawn up to provide requirement information to developers early in the process. City of Superior staff can also provide contact information for state level officials responsible for development review.

The state agency responsible for reviewing waterfront development proposals is the Wisconsin Department of Natural Resources. The first point of contact is usually the area DNR Water Management Specialist located in the Superior office. Provide the Water Management Specialist with a description of the project and a conceptual plan. If a permit or plan approval is needed, the necessary application materials will be mailed. The Water Management Specialist will provide general guidance and information on application forms and wetland maps. They will make ordinary high water mark (OHWM) and navigable water determinations. Wetland boundary delineations are to be determined by the Army Corps of Engineers or a qualified consultant subject to verification by the DNR or Corps.

A permit application will generally require 1) a description of the activity including the location and design, 2) the purpose of the activity, 3) plans showing location and design of the project, and 4) proof of ability to carry out the project. After receiving the applications, the DNR may require that a public notice be published in a local paper or that a public hearing be held prior to granting the permit. Another possible requirement may be to notify affected people in the project area.

It may be beneficial to file a joint application with the DNR and U.S. Army Corp of Engineers. The DNR will review the application and forward it to the Corps along with their recommendation. If the project is approved, a formal permit or project approval will be issued. Projects may also be subject to a 20 day waiting period from the time the Corp confirms the project.

The federal agency in charge of reviewing waterfront development proposals is the U.S. Army Corps of Engineers. The Corps of Engineers' Regulatory Programs include Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. The St. Paul District's regulatory jurisdiction covers the states of Minnesota and Wisconsin.

Under Section 10, a Corps' permit is required to do any work in, over or under navigable water of the U.S. The geographic jurisdiction of the Rivers and Harbors Act of 1899 includes all navigable waters of the United States which are defined as "those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible to use to transport interstate or foreign commerce." Activities requiring Section 10 permits include structures (e.g., piers, wharfs, breakwaters, bulkheads, jetties, weirs, transmission lines) and work such as dredging or disposal of dredged material, or excavation, filling, or other modifications to the navigable waters of the United States.

In 1972, amendments to the Federal Water Pollution Control Act added what is commonly called Section 404 authority to the program. The Corps is authorized to issue permits, after notice and opportunity for public hearings, for the discharge of dredged or fill material into waters of the United States. Section 404 jurisdiction is defined as encompassing Section 10 waters plus their tributaries and adjacent wetlands and isolated waters where the use, degradation or destruction of such waters could affect interstate or foreign commerce. Activities, requiring Section 404 permits are limited to discharges of dredged or fill materials into the waters of the United States. These discharges include return water from dredged material disposed of on the upland and generally any fill material (e.g., rock, sand, dirt) used to construct fast land for site development, roadways, erosion protection, etc.

Public involvement plays a central role in the Corps' administration of its regulatory program. The major tools used to interact with the public are the public notice and public hearing. The public notice is the primary method of advising all interested parties of a proposed activity for which a permit is sought and of soliciting comments and information necessary to evaluate the probable beneficial and detrimental impacts on the public interest. Public notices on proposed projects always contain a statement that anyone commenting may request a public hearing. Public hearings are held if comments raise substantial issues which cannot be resolved informally and the Corps decision-maker determines that information from such a hearing is needed to make a decision. Public notices are used to announce hearings.

More information about the Corps' regulatory programs can be obtained at [www.mvp.usace.army.mil/regulatory/useful\\_links](http://www.mvp.usace.army.mil/regulatory/useful_links).

# Funding

## Harbor Assistance Program

The following information was taken from the Wisconsin Department of Transportation website. This information is also contained in the Wisconsin Administrative Code Chapter Trans 28.

In 1979, Wisconsin's Legislature created the Harbor Assistance Program (HAP) to assist harbor communities along the Great Lakes and Mississippi River in maintaining and improving waterborne commerce. Port projects typically include dock reconstruction, mooring structure replacement, dredging, and the construction of facilities to hold dredged material. Grant applications are accepted on a semi-annual basis on August 1 and February 1. There are 23 ports in the state that are potentially eligible for funding through the HAP.

To be eligible for funding:

- The port facility must be publicly-owned;
- The project must benefit facilities that are used for cargo transfer, ship building, commercial fishing or regular ferry service;
- The applicant must be a local unit of government;
- The project must pass a rigorous benefit-cost analysis; and
- The project must have been identified in a current Three-Year Harbor Development Plan.

Key Provisions of the Program:

1. The objective of this program is to provide necessary water access and to maintain or improve the economically effective commodity movement capabilities of Wisconsin's commercial harbors on the Great Lakes and Mississippi River system.
2. Eligible projects must be located in Great Lakes or Mississippi River harbors where:
  - a. Vessels take on or discharge a combined total of more than 1,000 tons of commercial cargo per year;
  - b. Commercial, naval or recreational vessels are built;
  - c. Passenger or vehicle-carrying ferry service connects Wisconsin communities along the Great Lakes and Mississippi River or connects the Wisconsin mainland with other states, Canadian Provinces or populated islands in Wisconsin; or
  - d. Commercial fishing vessels unload fish.
3. Projects may be undertaken solely by the eligible applicant, or by the eligible applicant in conjunction with the U.S. Army Corps of Engineers or other government agencies.
4. Applications will be evaluated according to the following criteria:

- a. Economic impact of project -- benefits must exceed costs.
  - b. Urgency of project.
  - c. Type of project -- maintenance projects have higher priority.
  - d. Tonnage moved in waterborne commerce.
5. Projects may be denied funding if:
    - a. The application was submitted by an ineligible applicant or was submitted after the due date.
    - b. The application is incomplete.
    - c. The project is inconsistent with the criteria in TRANS 28.
    - d. Harbor Assistance Program funds are inadequate.
    - e. The project is speculative; that is, the applicant for a new project development has no firm financial commitment from a potential lessee or operator that ensures future, productive use of the work performed under the project.
    - f. The project has a lower priority than others requiring Harbor Assistance Program funding during the current biennium.
    - g. The applicant has not met the program planning requirements under TRANS 28.10.
    - h. The project proposed is inconsistent with applicable harbor development plans or local comprehensive plans.
  6. Projects selected for funding shall be implemented through formal contracts between the Department and the eligible applicant. General conditions of the contracts are described in TRANS 28.08.
  7. All grant recipients will be required to maintain project books and records and to make periodic progress reports to the Department.

Projects are chosen by developed criteria. The primary criteria is the economic impact of the project which looks at benefit-cost information and the number of jobs created or impacted by the project. The next criteria is the type and urgency of the project. Factors include harbor depth, dockwall deterioration, passenger or commodity movement. This criteria also spells out a priority by project type. The final criteria gives higher priority to ports with larger amounts of tonnage and waterborne transportation.

### **Freight Railroad Infrastructure Improvement Program**

The Freight Rail Infrastructure Improvement Program (FRIIP) is one of two freight rail assistance programs WisDOT currently administers (also see the Freight Rail Preservation Program [FRPP]). Wisconsin's original rail assistance program was created in 1977 to help preserve freight rail service during an era when widespread railroad bankruptcies and line abandonment threatened the availability of rail service in Wisconsin.

Initially, the program was limited to grants to local governments because of constitutional restrictions on state assistance to railroads. But in 1992, Wisconsin voters approved a constitutional amendment that allowed state money to fund railroads as a type of internal improvement.

In 1992 the FRIIP loan program was added to the state's rail assistance program. FRIIP loans enable the state to encourage a broader array of improvements to the rail system, particularly on privately owned lines. It also provides funding for other rail-related projects such as loading and trans-loading facilities. Statutory information about Wisconsin freight railroad assistance can be found in Wis. Stats. 85.08.

Since 1992, \$58 million in FRIIP loans have been awarded. The 2001-03 state budget provides \$11.1 million for the FRIIP. This funding is a combination of new state funds and repayments from prior loans.

The FRIIP provides up to 100% loans for rail projects that:

- Connect an industry to the national railroad system;
- Make improvements to enhance transportation efficiency, safety, and intermodal freight movement;
- Accomplish line rehabilitation; and
- Develop the economy.

### **Freight Railroad Preservation Program**

The Freight Rail Preservation Program (FRPP) is one of two freight rail assistance programs WisDOT administers (also see the Freight Rail Infrastructure Improvement Program [FRIIP]). Wisconsin's original rail assistance program was created in 1977 to help communities and shippers preserve freight rail service during an era when widespread railroad bankruptcies and line abandonments threatened the availability of rail service in Wisconsin.

Initially, the program was limited to grants to local governments because of constitutional restrictions on state assistance to railroads. But in 1992, Wisconsin voters approved a constitutional amendment that included railroads in the list of internal improvements state money could fund.

In 1992, the original rail assistance grant program was replaced by the current FRPP program, which provides grants to local units of government, industries, and railroads for the purpose of preserving essential rail lines and rehabilitating them following purchase. Statutory information about Wisconsin freight railroad assistance can be found in Wis. Stats. 85.08.

Since 1980, under both the original rail assistance program and FRPP, some \$80 million in grants have been awarded for rail acquisition and rehabilitation projects. The 2001-03 state budget provides \$4.5 million in bonding authority for the program.

The Freight Railroad Preservation Program provides grants up to 80% of the cost:

- To purchase abandoned rail lines in an effort to continue freight service, or for the preservation of the opportunity for future rail service; and

- To rehabilitate facilities, such as tracks or bridges, on publicly-owned rail lines.

### **Transportation Economic Assistance (TEA)**

The Transportation Economic Assistance (TEA) program provides 50% state grants to governing bodies, private businesses, and consortiums for road, rail, harbor and airport projects that help attract employers to Wisconsin, or encourage business and industry to remain and expand in the state.

The goal of the TEA program is to attract and retain business firms in Wisconsin and thus create or retain jobs. The businesses cannot be speculative and local communities must assure that the number of jobs anticipated from the proposed project will materialize within three years from the date of the project agreement and remain after another four years.

Grants of up to \$1 million are available for transportation improvements that are essential for an economic development project. It must begin within three years, have the local government's endorsement, and benefit the public. The program is designed to implement an improvement more quickly than normal state programming processes allow. The 50% local match can come from any combination of local, federal, or private funds or in-kind services.

Applications are first come, first serve, and funded when all eligibility information is complete and satisfactory.

The TEA program began in 1987. Through August 2002, nearly 54,100 jobs have been directly and indirectly created through the \$53.3 million in grants awarded to 154 communities. Some 238 businesses have benefited from the grants. An April 2002 job audit reveals that actual job creation and retention is 23% above that originally promised. The state average cost to date has been \$2,271 per direct job created.

2002-2003 funding:

\$7,250,000 --- State segregated funds

\$7,250,000 --- Local matching funds

### **Wisconsin Coastal Management Program**

The Wisconsin Coastal Management Program (WCMP) is dedicated to preserving and making accessible the natural and historic resources of Wisconsin's Great Lakes Coasts. The program works cooperatively with state, local and tribal government agencies and non-profits in managing the ecological, economic and aesthetic assets of the Great Lakes and their coastal areas.

The WCMP is a voluntary program that works through a Governor-appointed Council to award federal funds to local governments and other entities for the implementation of coastal initiatives. Our goal is to achieve a balance between natural resource protection and coastal communities' need for sustainable economic development.

**Wisconsin Department of Commerce Programs**

The Wisconsin Department of Commerce has many funding programs that may be applicable for development and redevelopment of waterfront businesses. These programs include funding for planning and development, recapitalizing revolving loan funds, developing business incubators, public facility improvements, blight elimination, brownfield redevelopment, industrial revenue bonds, and promotion of high-tech business clusters. For more information on these funding programs go to the Department of Commerce's website ([www.commerce.state.wi.us](http://www.commerce.state.wi.us)).

**Wisconsin Department of Natural Resources**

The WDNR provides grants and loans that are applicable to waterfront areas. The grant programs include sport fishing restoration, cleanup of waterways, water quality management planning, recreation boating facilities, recreation trails, brownfield site assessment, and storm water planning. Environmental loans are available for wastewater treatment facilities, urban storm runoff, and drinking water facilities. For more information on the WDNR's funding programs go to [www.dnr.state.wi.us](http://www.dnr.state.wi.us).

## **Concluding Chapter - Superior Port Land Use Policies and Recommendations**

All of the information in this document was essential in developing the policies and recommendations contained in this final chapter. A brief summary of previous chapters is included here to highlight information that has been presented to this point. After careful consideration of the information assembled throughout this planning process, recommended policies were designed to promote land use in the study area that will enhance and protect the economic and natural resources of the Superior waterfront.

### **Plan Summary**

A brief port history was compiled to show that what exists today in the Duluth-Superior port has developed over a long period of time. It also illustrates that the port functions as one port that is located in two cities and two states. The economic impact information demonstrates the importance of the port to the regional economy and the large number of jobs that are the result. A description of the planning process introduces the concept that this effort is the beginning of a larger process that will ultimately produce a land use plan for the entire Duluth-Superior port. Starting on the Superior side allows the planning process to be established while considering information unique to each state in greater detail. This section also describes the HTAC and its function and the subcommittee of the HTAC that formed the study committee, which provided invaluable insight on port issues.

The background documents that were reviewed throughout this planning process represent a wealth of information and recent history of port planning issues and represent the hard work of many agencies, groups, and citizens. These planning documents examined the port on an area-wide basis as well specific sites as they address a wide range of issues. The large amount of resources that have been invested in planning for the port demonstrates its importance to our area.

The stakeholder input methods produced a wealth of information on how groups and businesses view the port areas. The message that was communicated by many stakeholders was that the port is important to the community because of the number of jobs it provides. Many people saw the value of a land use plan to protect existing businesses and to promote compatible uses throughout the port. Land for new maritime developments is limited and we need to be prepared for potential new maritime developments. Many people also saw the need to develop recreation areas as well as other uses that would allow the public to enjoy the waterfront.

Environmental protection was also a primary theme we heard from stakeholders. Moving freight by water transportation is the most fuel efficient and safest method of freight transportation. It was also pointed out that cleaning up contaminated sediments and lands will take a cooperative effort on the part of all port stakeholders.

The Public Trust Doctrine is important in the port area as it helps preserve waterfront lands for navigation and other appropriate uses that will provide benefit to the port and citizens of the area.

The doctrine states that waterways are held in trust for the public and any lands created when waterways are filled are required to have maritime, navigation-related, or public benefit uses when developed. This doctrine provides the legal support for protecting and managing lands held in trust for the public. It can provide opportunities for public use as well as help assure more efficient use of the federally designated shipping channel. Map 3 on page 27 illustrates the lands along the Superior waterfront that the Public Trust Doctrine applies to.

Describing the current land use of the port helps the reader identify what the present uses are in the study area. A general description of current land use is provided to get an idea of what types of business are located along the waterfront and how they are grouped or located in relation to each other. A land use map (Map 4 on page 31) provides a parcel level look at the current uses in the study area. The chapter concludes with a description of all the businesses and facilities that have dock and pier facilities. This was included to assist with looking at future land uses and opportunities for redeveloping underutilized facilities. A number of changes have impacted the waterfront over the years leaving behind dock and pier facilities with redevelopment potential.

The natural environment has been highly impacted over the years as the port developed. Impacted areas such as wetlands and aquatic habitat are shown. The aquatic habitat section describes the current condition of the different habitat areas and spells out some goals for conservation that were developed by the St. Louis River CAC Habitat Committee. Contaminated lands are another consideration for future land uses in the port area. These lands should be given priority for development before green areas are developed. Cleanup strategies are described and local jurisdictions are encouraged to develop these areas. Dredging has always been an important issue and discovering methods to prolong the life of the Erie Pier (currently the only CDF in the port) has been a priority of many agencies.

The future land use chapter provides information to be considered in developing a vision of future uses in the study area. A development suitability analysis was conducted to identify areas that may be more suitable for certain types of development. Geographic features such as the location of utilities, roads, rail lines, current land use, wetlands, and brownfields have a large impact on where development should occur. Results of the development suitability analysis were used as a beginning point in the formulation of the future land use map (see Map 11 on page 77). Other information considered in the development of the future land use map include public trust, results of stakeholder input, current land use, current trends in transportation markets, land use compatibility issues, and subcommittee input. The final map is designed to provide a visual guide that describes desired future uses of port area land.

The waterfront development review process offers information on what the preliminary steps are in developing port area properties. The information does not represent all steps in the development process, which may vary depending on factors such as proximity to the waterfront or wetlands.

The funding information describes a number of programs that can apply to port areas. These programs include funding for harbor facility improvements, freight rail improvements, economic

development, coastal management, and recreation projects. The programs listed are administered by Wisconsin state agencies.

### **Existing Policies**

A number of existing policies have been developed in prior planning efforts and are listed here to reinforce that this planning effort continues the support of these policies.

1. Acknowledge the value of wetlands, fish habitat, aquatic communities in the estuary and adopt a policy of “no net loss” for these valuable habitat areas in the harbor through preservation, mitigation, and enhancement.
2. Port area lands with the combined characteristics of adjacent deep water access, adequate rail and road access are to be designated for future maritime development after giving consideration to existing facilities and demand for port development.
3. The economic strength of the harbor is to be promoted. The general public should be educated on the importance of the port and its operations to the regional economy.
4. The maritime industrial activities that generate the greatest local economic impact should be given priority for development.
5. Port operations should be consolidated toward the harbor entrances whenever possible.
6. The City of Superior should enhance public access to the waterfront in areas that do not conflict with existing waterfront businesses. Enhancements can include hiking trails, fishing piers and picnic areas. Pedestrian access to the waterfront should be encouraged in clearly identified areas.
7. Residential uses should be promoted in areas, where allowed, that do not conflict with existing waterfront businesses.
8. Utilities should be expanded in an efficient manner to provide service to existing facilities and new planned developments.
9. Encourage land use management strategies in the Nemadji River watershed that can reduce sedimentation of the federally-authorized shipping channel near the mouth of the Nemadji River.

## Recommended Policies

10. The City of Superior should formalize its Port related activities including land use, promotion, business and economic development etc. in the following priority or combination thereof:
- A. Establish an Interstate Port Authority, encompassing the Ports of Duluth and Superior.
- or
- B. The City of Superior should formalize an agreement with the Seaway Port Authority of Duluth to provide services and resources for the activities mentioned above.
- and
- C. The City of Superior should re-establish the Board of Harbor Commissioners/Waterfront Redevelopment Commission, made up of locally elected officials and marine-based business owners, to help guide land use, policy, and planning activities related to Maritime Commerce, waterfront development and redevelopment and waterfront natural resource protection and conservation.

Note: Recommendation C should be implemented immediately to guide the process to establish recommendation A or B.

11. The City of Superior should incorporate the Future Land Use Map into its zoning ordinance.
12. Remove unusable buildings and superstructures along the Superior waterfront that do not have reuse potential and could become a hazard or impediment to future land uses.
13. The City of Superior in conjunction with other port stakeholders should take a holistic approach to cleaning up contaminated sediments in the entire St. Louis River Estuary. Other port stakeholders include all federal, state, and local agencies involved in port management activities.
14. Non-maritime use of waterfront land should be viewed as an interim use until an appropriate use is realized.
15. This plan represents Superior's Three-Year Harbor Development Plan. As the end of each three year period approaches, a subcommittee of the HTAC will be appointed to review and update the plan to be used as the next Three-Year Harbor Development Plan.
16. Priority should be given to maritime commerce along the Superior waterfront given its considerable impact.
17. Protect and enhance the utility of the federally-authorized shipping channel.

18. Encourage beneficial reuse of dredge materials from maintenance dredging.
19. Establish a formal process for review and approval of development or redevelopment of filled land (created under the jurisdiction of the Public Trust Doctrine) or dock structures including a review by state agencies.
20. Protect natural resources through the use of local land use authority and state regulations.
21. Identify opportunities for private, public or public/private partnerships to rehabilitate and reuse underutilized dock structures for additional maritime commerce uses.
22. Identify opportunities for private/public partnerships that benefit the port. Examples are natural resource protection and enhancement or improvement of waterfront access.
23. Identify opportunities to assist maritime businesses in obtaining improved rail service.

### Action Plan and Implementation Schedule

| #   | Recommendation   | Who   | When                           |
|-----|--|---|--------------------------------|
| 10. | <p>The City of Superior should formalize its Port related activities including, land use, promotion, business and economic development etc. in the following priority or combination thereof:</p> <p>a. Establish an Interstate Port Authority, encompassing the Ports of Duluth and Superior.</p> <p>or</p> <p>b. The City of Superior should formalize an agreement with the Seaway Port Authority of Duluth to provide services and resources for the activities mentioned above.</p> <p>and</p> <p>c. The City of Superior should re-establish the Board of Harbor Commissioners/Waterfront Redevelopment Commission, made up of locally elected officials and marine-based business owners, to help guide land use, policy, and planning activities related to Maritime Commerce, waterfront development and redevelopment and waterfront natural resource protection and conservation.</p> | City of Superior and Duluth Seaway Port Authority | Begin with "C" in Summer 2003. |

|     |  |                                 |   |
|-----|--|---------------------------------|---|
|     | Recommendation C should be implemented immediately to guide the process to establish recommendation A or B.  |                                 |   |
| 11. | The City of Superior should incorporate the Future Land Use Map into its zoning ordinance.   | City of Superior                | Summer 2003   |
| 12. | Remove unusable buildings and superstructures along the Superior waterfront that do not have reuse potential and could become a hazard or impediment to future land uses.  | City of Superior and landowners | Ongoing   |
| 13. | The City of Superior in conjunction with other port stakeholders should take a holistic approach to cleaning up contaminated sediments in the entire St. Louis River Estuary. Other port stakeholders include all federal, state, and local agencies involved in port management activities. | HTAC                            | Include topic on HTAC agenda on 3 <sup>rd</sup> or 4 <sup>th</sup> quarter 2003 |
| 14. | Non-maritime use of waterfront land should be viewed as an interim use until an appropriate use is realized.   | City of Superior                | Ongoing   |
| 15. | This plan represents Superior's Three-Year Harbor Development Plan. As the end of each three year period approaches, a subcommittee of the HTAC will be appointed to review and update the plan to be used as the next Three-Year Harbor Development Plan.                                   | HTAC Chair                      | March 2006  |
| 16. | Priority should be given to maritime commerce along the Superior waterfront given its considerable impact.   | City of Superior                | Ongoing   |
| 17. | Protect and enhance the utility of the federally-authorized shipping channel.  | All Port Stakeholders           | Ongoing   |
| 18. | Encourage beneficial reuse of dredge materials from maintenance dredging.  | All Port Stakeholders           | Ongoing   |

|     |  |                                 |           |
|-----|--|---------------------------------|-----------|
|     |  |                                 |           |
| 19. | Establish a formal process for review and approval of development or redevelopment of filled land (created under the jurisdiction of the Public Trust Doctrine) or dock structures including a review by state agencies. | City of Superior & WDNR         | 2003-2004 |
| 20. | Protect natural resources through the use of local land use authority and state regulations.   | City of Superior & State of WI. | Ongoing   |
| 21. | Identify opportunities for private, public or public/private partnerships to rehabilitate and reuse underutilized dock structures for additional maritime commerce uses.   | All Port Stakeholders           | Ongoing   |
| 22. | Identify opportunities for private/public partnerships that benefit the port. Examples are natural resource protection and enhancement or improvement of waterfront access.  | All Port Stakeholders           | Ongoing   |
| 23. | Identify opportunities to assist maritime businesses in obtaining improved rail service.   | City of Superior                | Ongoing   |

# Appendix

## ARDC Land Use Classification System – Superior Port Land Use Plan

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This land use classification system was used to compile Map 5: Superior Port Current Land Use.

1. Single Family Residential  
Includes all individual, freestanding single family housing. Residential areas that are clearly not complete are classified as transitional.
2. Multi-Family Residential  
Includes all multiple dwelling units such as duplexes, town homes, townhouses, and apartment complexes.
3. Commercial  
Includes all retail services, large shopping centers or multi-tenant shopping centers, marinas, hotels/motels, health care facilities (nursing homes, medical clinics, or medical laboratories) except hospitals, and recreational services that are predominantly privately owned and operated for profit (theaters, bowling alleys, etc.), except golf courses. All buildings and parking lots are also included.
4. Light Industry  
Structures and their associated grounds used for light industrial activities. Includes industrial parks, port facilities, heavy equipment yards, machinery repair, and junkyards.
  41. Maritime
  42. Non-Maritime
5. Heavy Industry  
Structures and their associated grounds used for heavy fabrication, manufacturing, and assembling of parts which are, in themselves, large and heavy; or for processing raw materials such as iron ore, timber, or animal products.
  51. Maritime
  52. Non-Maritime
6. Public / Semi-Public  
Includes lands under and adjacent to hospitals, schools (public and private), churches, cemeteries, ice arenas, and all facilities of local, state, and federal governments, including mental institutions and penal facilities. All lands and parking lots within the boundaries of these institutions are included. Recreation areas associated with schools or churches are also included in this category.

7. Transportation  
All activities associated with all modes of transportation. Includes railroads and adjacent yards, major 4-lane highways, airports, and hiking/biking/snowmobile trails.  
  71. Railroad
8. Park and Recreation  
Includes all parks (city, regional, and state), playgrounds, zoos, gun clubs, golf courses, and similar areas. Parks are delineated using park maps, comprehensive plans or aerial photos.
9. Open Water  
Permanent bodies of water such as lakes, rivers, reservoirs, stock ponds, and areas where photo evidence indicates that the areas are covered by water the majority of the time. Also included are harbor areas.
10. Transitional  
Areas that are currently under a state of transition from one land use type to another. This may include undeveloped urban areas, areas with less than 25% vegetative cover, or any “other” land use that cannot be adequately defined through air photo interpretation.
11. Cultivated Land  
Areas under intensive cropping or rotation, including fallow fields and fields seeded for forage or cover crops that exhibit linear or other patterns associated with current tillage.
12. Grassland/Pasture  
Areas covered by grasslands, prairies and herbaceous plants; these may contain up to one-third shrub and tree cover. Some areas may be used as pastures and mowed or grazed. Included are fields that show evidence of past tillage, but now appear to be abandoned and grown over with native vegetation or planted with a cover crop.
13. Forested  
Areas where two-thirds or more of the total canopy cover is composed of predominantly woody deciduous and coniferous species and areas of regenerated or young forest where commercial timber has been completely or partially removed by logging, other management activities or natural events; includes woodlots, shelterbelts, and plantations.
14. Brushland  
Areas with a combination of grass, shrubs, and trees in which deciduous or coniferous tree cover comprises from one to two-thirds of the area, or shrub cover comprises more than one-third of the area. These areas are often found adjacent to pasture/grassland or forested areas and vary greatly in shape and extent.
15. Wetland

Lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. Vegetation varies, but common is the hydrophilic vegetation such as cattails and rushes. These areas also include hydric soils, lowland coniferous forest and peat-covered or peat-filled depressions with a high water table. Areas are often interspersed with channels or pools of open water.

\*Note: Parking lots are NOT considered transportation and should be included among the surrounding facility. Classifications were derived from MN DNR, Metropolitan Council, APA Land Use, and previous ARDC classifications.