

Minnesota's Lake Superior Coastal Program

North Shore Collaborative North Shore Management Board

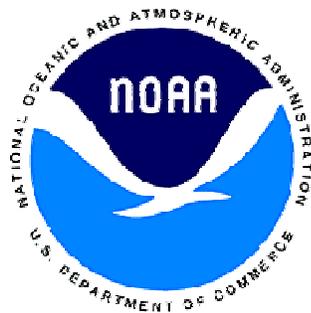
Kara J.Kent, GIS Specialist (NSMB Staff)

December 14, 2009

Project No. 306-15-10

Contract No. B17890

This project was funded in part under the Coastal Zone Management Act, by NOAA's Office of Ocean and Coastal Resource Management, in cooperation with Minnesota's Lake Superior Coastal Program.



Final Report

INTRODUCTION

In 2009, the North Shore GIS Collaborative was created by the North Shore Management Board (NSMB). The Collaborative is made up of the entities and agencies on the Minnesota's North Shore of Lake Superior that have land management interests. The Collaborative has two main goals: increase communication between its members regarding Geographic Information Systems (GIS); and create a simple tool for local decision makers to easily access and map their geographic data.

The NSMB used its contract staff from the Arrowhead Regional Development Commission (ARDC) to implement this project.

WORK COMPLETED

The NSMB completed the first phase of the North Shore GIS Collaborative with all decisions and recommendations reviewed by the NSMB and its Technical Advisory Committee (TAC). The North Shore GIS Collaborative consisted of three major steps: committee creation; data inventory development; and implementation of the GIS web application.

A steering committee was created to guide the process. Members included city engineers, city administrators, county GIS specialists, state agency GIS specialists, and GIS software representatives. The group assisted NSMB staff with organizing the project goals and developing the project framework. The framework was created to ensure that data used and generated by the project was consistent with the project's goals as well as with state and national standards. They also helped to develop data sharing policies, determine priority data attributes of the system, and test the internet-data interface.

A geographic data inventory was generated from an assessment of available and potential spatial information for the North Shore. GIS data was put into three categories: existing data, data which needs to be migrated or refined, and missing data. If needed, the data was put into a common format and assessed for quality. All information was adjusted and prepared for use in the online GIS web application.

Using ArcGIS Server, the NSMB staff created a general basemap for the North Shore and populated it with the data layers from the newly created data inventory. The web application and its tools were customized to address the North Shore GIS Collaborative's needs (see Figure 1.1). The web application has the ability to layer many different combinations of data at different scales and use tools to zoom in and out, pan, identify features, download data, and print maps. The data and the web application reside on ARDC's server, which provides entities with access to the data by using a web browser such as Internet Explorer, Firefox, or Safari.

Local governments will utilize this application to assist them in making important decisions regarding land use as well as to assist them to complete day-to-day business tasks. The application is useful for a variety of mapping and analysis needs. Construction projects, maintenance, property ownership organization, and other local government responsibilities are all aided by this application.

RESULTS

This project has resulted in the development of an internet based GIS application that can be used by the entities of the North Shore for day-to-day business tasks and for assistance in making land-use decisions. This project also populated a dedicated folder on a server with the available geographic data sets for the North Shore. The Collaborative process identified other data sets that are desired, but not yet available.

CONCLUSIONS

The process and products of the North Shore GIS Collaborative were completed as planned. To ensure the continued success of the Collaborative additional steps are now needed. The Collaborative identified a need for more GIS data to be developed on the North Shore. Accurate cadastral and elevation data is not in place. That data layer is needed as a building block for creating additional GIS layers. The City of Beaver Bay is undertaking the development of the cadastral layer as a pilot project in 2010. More information regarding this project can be found by going to www.arrowheadplanning.org/nsmb and then scrolling down to the North Shore GIS Collaborative link.

The North Shore Management Board proposes to continue the North Shore GIS Collaborative's success of 2009 and start Phase II of the Collaborative. Phase II has two steps-Phase IIA and Phase IIB.

Phase IIA will consist of collaborative meetings, creating an inventory of digital land records available on the North Shore, applying them to the North Shore GIS Collaborative application, and preparing for the next phase of the collaborative.

Phase IIB will include developing a supplemental resource center for the North Shore GIS Collaborative web application. It will include a glossary, small tutorials and links to other online GIS resources. Additionally, the NSMB proposes to hold GIS workshops to provide more information on GIS and training on GIS and the basics of how to make a functional map.

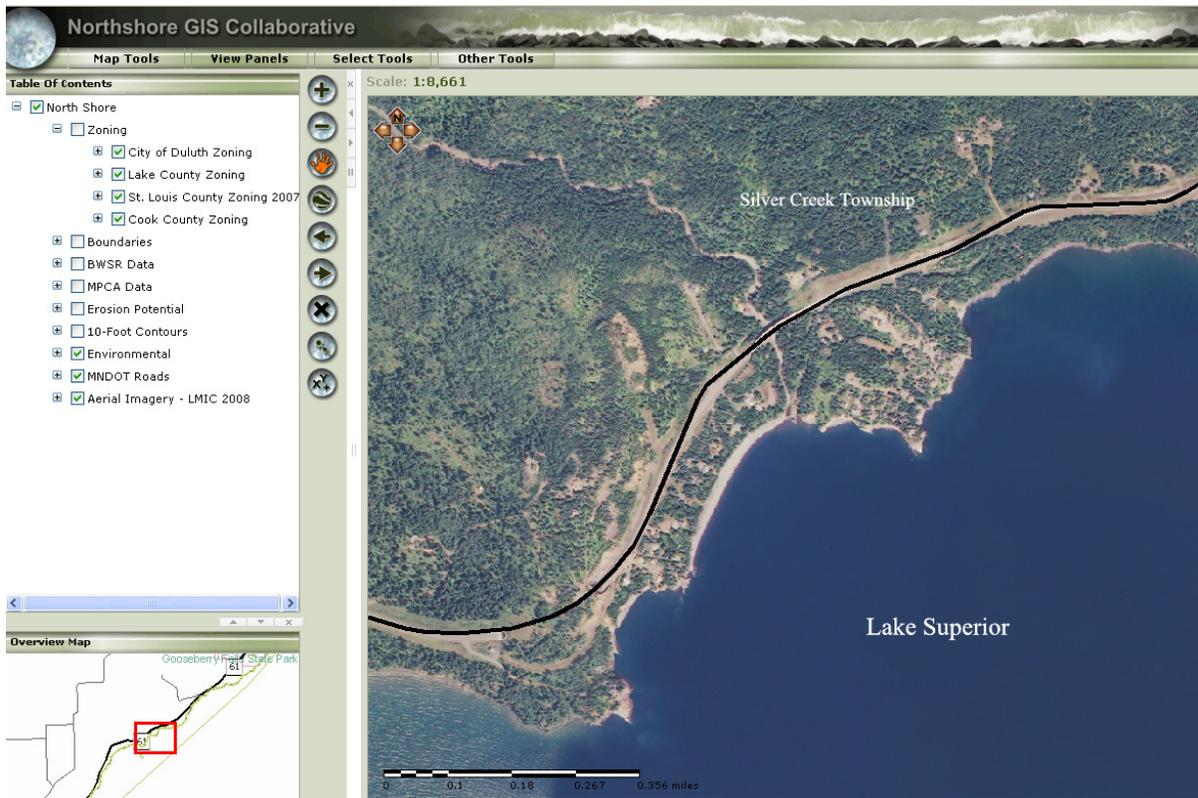


Figure 1.1 – The North Shore GIS Collaborative online web application

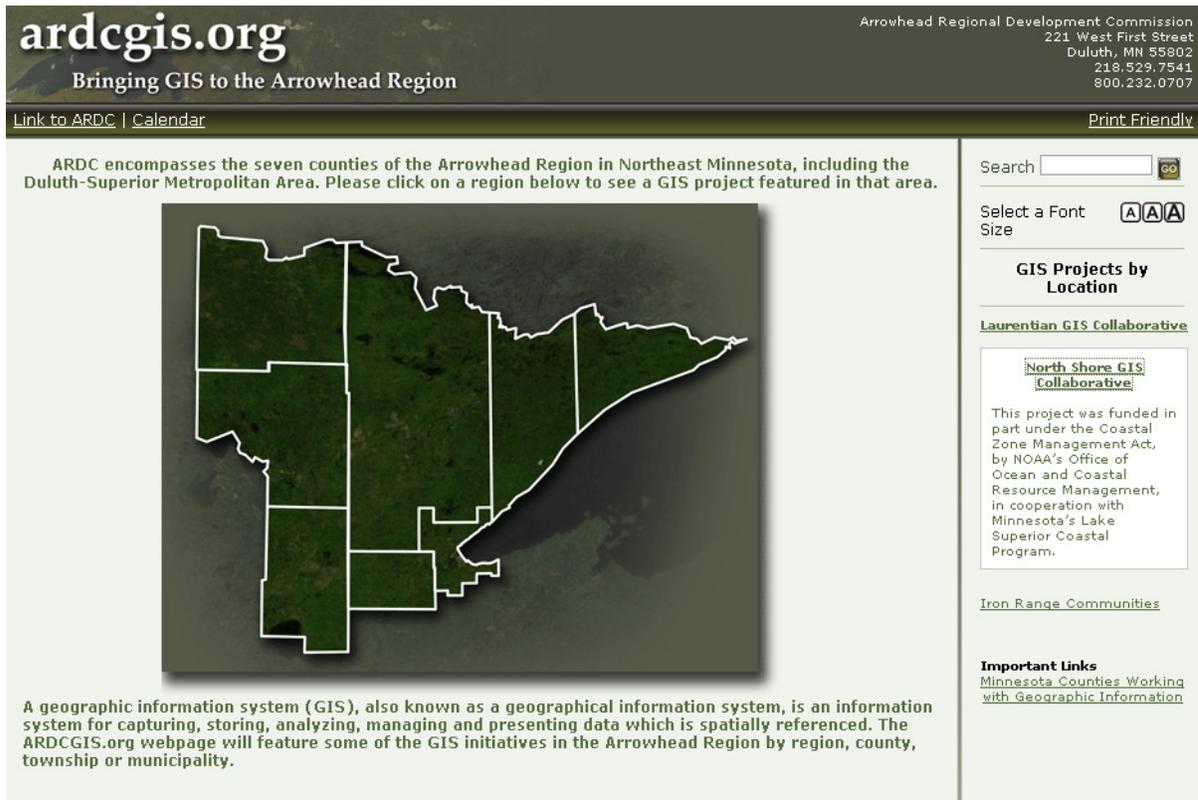


Figure 1.2 – www.ardcgis.org (provides access to the online web application)