

# FINAL REPORT

## 2001 Project Abstract

For the Period Ending June 30, 2003

**TITLE:** GIS Management in Koochiching County

**PROJECT MANAGER:** Jaci Nagle

**ORGANIZATION:** Koochiching County

**ADDRESS:** 715 4th Street, International Falls, MN 56649

**WEB SITE ADDRESS:** [www.co.koochiching.mn.us](http://www.co.koochiching.mn.us)

**FUND:**

**LEGAL CITATION:** ML 2001, 1<sup>st</sup> Special Session, Ch. 2, Sec. 14, Subd. 7(b)

**APPROPRIATION AMOUNT:** \$70,000

### Overall Project Outcome and Results

Several sources of information were utilized to create a parcel layer shapefile to assist with the GIS management in Koochiching County. This parcel layer will be an invaluable tool in the performing of GIS functions and data analysis within the county.

The final product contains 58,536 individual polygons . Of this total, 18,771 have data extracted from the AS/400 and are clearly identified as parcels from the property tax system; 213 polygons are miscellaneous in that they are identified by the local unit of government or agency identified as the owner; 7,587 polygons are identified as parcels owned by the State of Minnesota; 7,281 are identified as tax forfeited property (also State of Minnesota); and 2,806 are identified as Federal land.

This product contains information currently being sought under Hazard Mitigation and Emergency Response endeavors. It will provide for overall better land management including but not limited to planning and zoning, sales ratios, land use, timber harvesting, forfeited land sale, road construction, etc.

GIS users throughout the county departments can access the parcel layer and joined data via county purchased ArcView software programs/PC systems. Such access will facilitate prompt responses to taxpayer, realtor, state and local agency and other informational requests.

### Project Results Use and Dissemination

The parcel layer has already been utilized for both tax forfeit land sale management and to provide information for a joint member economic development agency. The data resides on a file server and is available for access by several county departments. A concerted effort has been made to ensure that all county processes include dissemination to the GIS Technician, facilitating the maintenance of the product. The metadata for this product is available on the ARDC Data Clearinghouse.

**Date of Report:** December 18, 2002  
**Date of Next Status Report:** June 2003  
**Date of Work program Approval:** June 13, 2001  
**Project Completion Date:** June 30, 2003

JUL 10 2003

## **LCMR Final Work Program Report**

### **I. PROJECT TITLE:** GIS Management in Koochiching County

**Project Manager:** Jaci Nagle  
**Affiliation:** Koochiching County  
**Mailing Address:** 715 4th St. International Falls, MN 56649

**Telephone Number:** 218-283-1171   **E-Mail:** jaci.nagle@state.mn.us   **Fax:** 218-283-1104

**Web Page address:** None.

**Total Biennial Project Budget:** \$70,000

**\$ LCMR Appropriation \$70,000 - \$ Amount Spent: \$66,405.67= \$ Balance: \$3,594.33**

**Legal Citation:** Laws 2001, First Special Session, Chapter 2, Section 14, Subd. 7 (b).

#### **Appropriation Language:**

GIS Management in Koochiching County  
\$70,000 is from the future resources fund to the commissioner of natural resources for an agreement with Koochiching county to develop parcel-based GIS capability for Koochiching county for land use, natural resource, and fiscal data.

### **II. and III. FINAL PROJECT SUMMARY:**

Several sources of information were utilized to create a parcel layer shapefile to assist with the GIS management in Koochiching County. This parcel layer will be an invaluable tool in the performing of GIS functions and data analysis within the county.

The final product contains 58,536 individual polygons . Of this total, 18,771 have data extracted from the AS/400 and are clearly identified as parcels from the property tax system; 213 polygons are miscellaneous in that they are identified by the local unit of government or agency identified as the owner; 7,587 polygons are identified as parcels owned by the State of Minnesota; 7,281 are identified as tax forfeited property (also State of Minnesota); and 2,806 are identified as Federal land.

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all county processes include dissemination to the GIS Technician, facilitating the maintenance of the product. The metadata for this product is available on the ARDC Data Clearinghouse.

#### **IV. OUTLINE OF PROJECT RESULTS:**

This project will consist of several phases, beginning in July 2001. The phases involve data collection, scanning or digitizing, editing, parcel ID entry, database joins, and metadata creation. Some steps will not be done all at once; for example digitizing may take place township by township. As townships are completed, they will be edited, updated, etc. and completed prior to the next township being digitized.

12-10-2001: The primary data collection phase has been completed. The scanning and digitizing is well underway, with most documents scanned. ARDC will continue to digitize as necessary, and begin to move into the editing phase.

05-31-2002: Data continues to be processed. Fifteen townships have been completed to date. Parcel ID number are being input as the polygons are drawn out per legal description.

12-18-2002: Parcels have been drawn per legal description for all areas of Koochiching County with the exceptions of International Falls city, the area east of International Falls near Rainy Lake, and various parcels throughout the county for which the legal descriptions are not detailed enough to interpret. Parcel ID attributes have been added to about 30 percent of the drawn parcels. Work will continue to complete the parcel drawings for the International Falls / Rainy Lake area and the attributing process. Newly acquired digital data from the City of International Falls Engineering Dept. and the Koochiching County Surveyor's office will aid in the process of completing the parcel drawings for the Northeast areas. Those parcels with insufficient legal descriptions will be researched through various data sources at the county, and completed as information becomes available.

#### **Result 1: July-December 2002: Initial Data Collection / Data Capture**

Hard Copy maps and databases will be collected from the assessor's office, along with ground control data from the surveyor's office, and other relevant data from appropriate sources. The maps will be digitized or scanned. Digital data will be processed in ArcGIS and compatible software ( ArcView 3.x/ PC Arc/Info) to polygon coverage or shapefile formats, delineating parcel boundaries per legal descriptions. Editing will be performed to make certain polygon topology is clean. All parcel polygons will be assigned a unique label point ID to correspond with PIN code. Parcel polygons will be merged into a single, seamless polygon layer for the entire county.

**LCMR Budget: \$59,898.00**

**Balance: \$0**

**Personnel: ARDC Consulting \$50,000**

**Equipment: \$9,898**

**Result Status:** Primary data collection has been completed. The scanning and digitizing process is well underway, with all documents scanned. ARDC will continue to digitize and draw out parcel boundaries and edit polygons, as well as assign PIN codes. Equipment purchased to date includes a digitizer. Software and other equipment will be purchased in the near future.

As of 5/31/02, 15 townships in Eastern Koochiching County had been completed. PC ARC/info and ArcView 3.2 software has been purchased for \$3,569.88.

As of 12/18/2002, parcels have been drawn per legal description for all areas of Koochiching County with the exceptions of International Falls city, the area east of International Falls near Rainy Lake, and various parcels throughout the county for which the legal descriptions are not detailed enough to interpret. Parcel ID attributes have been added to about 30 percent of the drawn parcels. Work will continue to complete the parcel drawings for the International Falls / Rainy Lake area and the attributing process. Newly acquired digital data from the City of International Falls Engineering Dept. and the Koochiching County Surveyor's office will aid in the process of completing the parcel drawings for the Northeast areas. Those parcels with insufficient legal descriptions will be researched through various data sources at the county, and completed as information becomes available. GPS equipment has been purchased for use in adding to the digital data that will be used in completing the parcel drawings. ArcView 8 has also been purchased. Total equipment expenditures since the last reporting period is \$2,233.31 with a project total of \$6,303.19.

**Result 2:** January-February 2003: Database Updating

Data will be extracted from the Assessor's AS400 system and converted to Microsoft Access format. This will be linked directly to the Parcel ID field in the parcel coverage attribute table. A new shape file and coverage containing the linked fields will be created, along with processes for updating parcel information from the AS400.

**LCMR Budget: \$6,000.00**

**Balance: \$0**

**Personnel: ARDC Consulting: \$6,000.00**

**Result Status:** No results as of 5/31/02

No results as of 12-18-2002

As of 2/28/2003, research was performed for parcels with incomplete legal descriptions and progress to complete parcel layer shapefile with all available information continues. Parcel ID attributes have been attached to all currently drawn polygons based on available ID information.

**Result 3:** March-June 2003: Metadata and Final Product Delivery

Resulting Product will be reviewed by county staff and checked for errors, etc. Metadata will be created by ARDC staff. Final modifications and edits will take place. Product will be delivered to Koochiching County prior to the June 30, 2003 project end date.

**LCMR Budget: \$4,102.48**

**Balance: \$0**

**Personnel: ARDC Consulting: \$4,102.48**

**Result Status:** No results as of 5/31/02

No results as of 12-18-2002.

As of 6/30/2003, all parcels with discernable legal descriptions have been drawn into the parcel layer shapefile. All polygons with available parcel ID information have been attributed. Data extracted from the tax database residing on the AS/400 has been joined to the parcel layer and a process to ensure regular updating of the data has been created. Shapefile has been reviewed with some modifications made. Final product was delivered 6/16/2003, but contractor continues to work with county staff on improvements. Metadata has been created and resides both on the GIS server within the county and is housed by the ARDC Data Clearinghouse.

**Personnel:**\$ 60,102.48, Arrowhead Regional Development Commission

**Equipment:**\$ 9897.52 (total of \$6,303.19 spent - \$3,594.33 returned)

Global Positioning Systems: 3 units – Garmin Map76

Digitizing Table: Cal comp Drawing board III 12x18 Tablet

GIS Software: Arc/Info, ArcView Versions 3.2 and 8.2

**Development:**\$0

**Acquisition:**\$0

**Other**

**Completion Date:**

**Result 1:** July-December 2002: Initial Data Collection / Data Capture

**Result 2:** January-February 2003: Database Updating

**Result 3:** March-June 2003: Metadata and Final Product Delivery

**Result Status:** No results as of 5-31-2002

No results as of 12-18-2002.

Final product has been delivered which consists of a parcel layer containing a total of 58,536 individual polygons. Of this total, 18,771 have data extracted from the AS/400 and are clearly identified as parcels from the property tax system; 213 polygons are miscellaneous in that they are identified by the local unit of government or agency identified as the owner; 7,587 polygons are identified as parcels owned by the State of Minnesota; 7,281 are identified as tax forfeited property (also State of Minnesota); and 2,806 are identified as Federal land. The unaccounted for balance includes slivers, roadways, unidentified parcels, etc.

**V. TOTAL PROJECT BUDGET:**

**All Results: Personnel: \$60,102.48**

**All Results: Equipment: \$ 9897.52**

**All Results: Development: \$0**

**All Results: Acquisition: \$0**

**All Results: Other: \$ 0**

**TOTAL BUDGET: \$70,000**

**A.)ATTACHMENT A- Submit a budget detail with all the specifics as attached as Attachment A. Please note- this has changed from your previous submission with your amended proposal.**

## **VI. PAST, PRESENT AND FUTURE SPENDING:**

### **A. Past Spending:**

Personnel time over last two years 250 hours \$9,000.

Study by ARDC on the feasibility to Map and Create a GIS Parcel Layer for Koochiching County, \$1,100.

### **B. Current and Future Spending:**

Staff time for meetings and project support, and materials for project support. Future spending will involve completion of the parcel layer to include all publicly-owned lands and parcels not placed in the system, and frequent maintenance of the system. And office space for consultant. Sources of funds will be local County and Cities, approximately \$5,000 per year for maintenance and about \$30,000 to complete the parcel layer.

### **C. Project Partners:**

Koochiching County, City of International Falls, Rainy River Community College, Boise Cascade, Voyageurs National Park, staff from Minnesota DNR and staff from ARDC.

### **D. Time:**

Should not exceed allotted time

## **VII. DISSEMINATION:**

Data will be presented in meetings with the cities and the public. Sharing of the data will be accomplished through the ARDC's Data Clearinghouse node, where the metadata will be available online. The data will also be shared with all participating partners.

## **VIII. LOCATION:**

Koochiching County

## **IX. REPORTING REQUIREMENTS:**

Reports will be given in December 2001, June 2002, December 2002 and June 2003

## **X. RESEARCH PROJECTS:**

None

ATTACHMENT A (include the attachment in all future update reports.) Use as many results as necessary. Landscaping on legal size paper to fit in all the columns may be helpful.

The commission will not allow office space rental fees or salary payments to officers or directors, this applies to ALL PROJECTS. See page 9 for Eligible and Ineligible expenses. GENERAL OTHER WILL NOT BE ACCEPTED. BE SPECIFIC AND USE AS MANY LINES AS NECESSARY.

Project Title: Improve Planning and Natural Resource Management in Koochiching County

Project Number:

LCMR Recommended Funding: \$70,000

Attachment A Deliverable Products and Related Budget												
2001 LCMR Project Biennial Budget												
Objective/ Result												
	Result 1 Budget:	Result 1 Current Invoice:	Result 1 Balance:	Result 2 Budget:	Result 2 Current Invoice:	Result 2 Balance:	Result 3 Budget	Result 3 Current Invoice:	Result 3 Balance:	PROJECT TOTAL:		
Budget Item (Title of Result)	Data Collection			Database Updating			Metadata and Final Product Delivery			BUDGET TOTAL:	CURRENT INVOICE TOTAL:	BALANCE TOTAL:
Wages, salaries & benefits – Be specific on who is paid \$												
Contracts												
Professional/technical Arrowhead Regional Development Commission	50000.00	0.00	0.00	6000.00	1657.47	0.00	4102.48	4102.48	0.00	60102.48	5759.95	0.00
Other contracts (with whom?)												
Space rental: NOT ALLOWED	X			X			X			X		
Maintenance												
Utilities												
Other direct operating costs (for what? – be specific)												
Printing												
Advertising												
Communications, telephone, mail, etc.												
Office Supplies (list specific categories)												
Other Supplies (list specific categories)												
Local automobile mileage paid												
Other travel expenses in Minnesota												
Travel outside Minnesota (where?)												
Tools and equipment (list categories)												
Office equipment & computers Attachment 2, GPS, Digitizer, and GIS Software	9897.52	0.00	3594.33							9897.52	0.00	3594.33
Other Capital equipment (list specific items)												
Land acquisition												
Land rights acquisition (less than fee)												
Buildings (for what?)												
Other land improvement (for what?)												
Legal fees (for what?)												
<b>COLUMN TOTAL</b>	<b>59897.52</b>	<b>0.00</b>	<b>3594.33</b>	<b>6000.00</b>	<b>1657.47</b>	<b>0.00</b>	<b>4102.48</b>	<b>4102.48</b>	<b>0.00</b>	<b>70000.00</b>	<b>5759.95</b>	<b>3594.33</b>