

CARROLL COUNTY, IL GEOGRAPHIC INFORMATION SYSTEM(GIS) DEPARTMENT COST AND FEE STUDY

2017

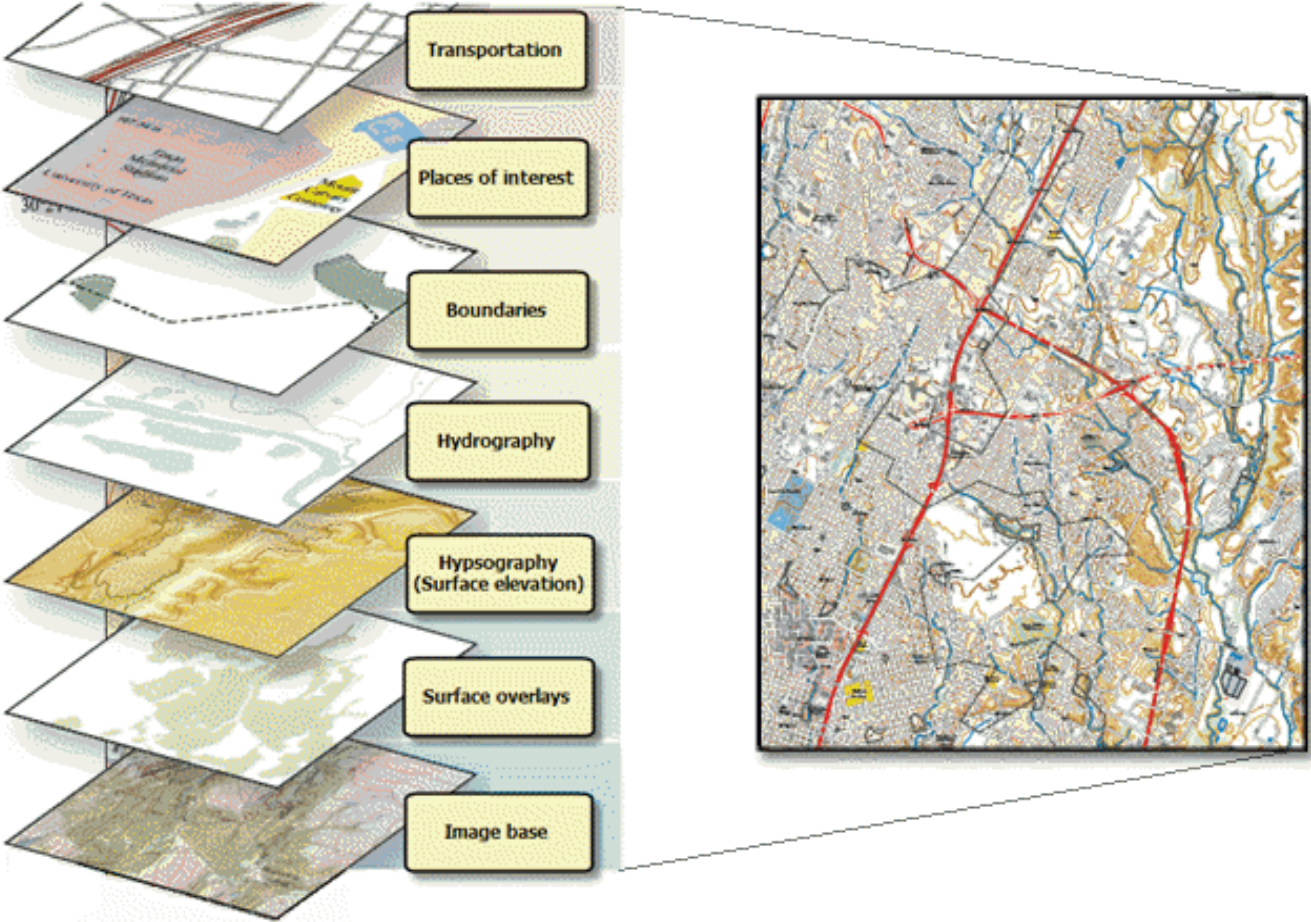


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DESCRIPTION OF STUDY:

Attached is a study examining the yearly costs associated with running a Geographic Information System (GIS) Department in Carroll County, IL. The purpose of this study is to identify the current and future trends affecting the funding of the GIS Department and to discuss the revenue options available through the collection of the various fees charged for services in Carroll County.

A portion of the information presented is taken directly from the 2004 Cost Study completed by WIPFLI LLP (formerly Lindgren, Callihan, VanOsdol & Co., Ltd.) and updated to reflect figures from the fiscal year 2016-2017.

The 2004 study established the annual non-labor costs of GIS to be \$34,838. The annual cost of GIS labor was set at \$31,794. Bringing the total "true cost" or the recommended funding to adequately cover the yearly operation of GIS to \$66,449. An important note of difference between the 2004 study and this updated study is the change in employment status of GIS position. In the 2004 study, GIS staffing was figured on a part time basis. However, it has since become a single full-time position, beginning in 2008.

It is also the intention of this report to satisfy the requirements of State Law 55 ILCS 5/3 -5018. Specifically, the requirement that the County Board may, by ordinance, increase or alter the recording fee when a cost study is provided that justifies the fee is not covering the costs of implementing a service.

The information provided within has been compiled by Jeremy Hughes, Carroll County GIS Department Coordinator. Financial data used in this study was taken directly from Carroll County budget and revenue records.

GENERAL GIS INFORMATION:

- I. **GIS or Geographic Information Systems is an integration of computer hardware, software, and trained personnel linking topographic, demographic, utility, facility, image and other resource data that is geographically referenced.” NASA. A GIS database allows multiple features of a map to be related to one another as well as to attribute information in a database, resulting in "intelligent maps."**

- II. **The Carroll County GIS Department provides the services of making custom maps, selling digital data, and facilitating information from the GIS database. The GIS Database is used to create and maintain multiple layers of interest:**
 - a.) **PARCEL LAYER:** This includes working closely with the Assessment Office to enter surveys, plats and legal descriptions as properties are corrected and/or split throughout the county. Our database currently consists of 13,934 individual parcel files.
 - b.) **LAND USE LAYER:** This includes utilizing aerial imagery to identify and catalog how our counties 298,806.84 acres are being used.
 - c.) **SOIL SURVEY LAYER:** The GIS database includes a soil survey layer which identifies and displays the distribution of all soil types within the county.
 - d.) **BOUNDARY LINES:** GIS is utilized to maintain and display various types of boundaries. The primary boundaries include: county, township, political, municipal, school, fire & tax districts (i.e. TIFF & Enterprise Zones)
 - e.) **SURVEY SYSTEMS:** This includes maintaining township & range sections, entering and maintaining section corners by survey whenever possible.
 - f.) **TRANSPORTATION DATA:** This includes entering and maintaining right of way distances, maintaining and displaying all road, rail road and trail centerlines throughout the county.
 - g.) **OTHER IMPORTANT GIS LAYERS:** Aerial imagery, flood zones, zoning, topographic, water features, building and demolition permits.

GENERAL COST STUDY NOTES OF IMPORTANCE:

- 1.) To help offset the cost of GIS, counties have been authorized by State Law to establish GIS Resolution Funds that use a portion of the recording fee assessed for the filling of documents in the County Recorder's Office. User fee legislation affecting County Recording is included in ILCS Chapter 55 section 5/3 5018 of Illinois Compiled Statutes.

Under this law, the statute sets forth the maximum fee levels for various services charged through the process of recording. It is also written that counties have authority to raise or regulate any fee that can be determined insufficient to cover the cost of the operation of service. In such instances, a study must be executed that establishes the fee is insufficient. The study must be made available for public review.

- 2.) GIS costs depicted in this study are broken down into three categories, labor cost, non-labor costs and capital/general costs. The costs are expressed on an annual basis. A table is included on page 4 that illustrates these costs.
 - a. The non-labor costs encompass every known and real cost incurred by the department and deduced over the amount of time each cost would ideally need to be funded. Some costs are inferred at an annual rate, while others are established over greater periods of time. Known costs can fluctuate and tend to increase, but generally do so slowly. Non-labor costs include support services, equipment, supplies and GIS related projects.
 - b. The GIS Department labor costs are based on the current salary rate and insurance expenses of one GIS employee. Labor costs are also subject to fluctuation and will tend to increase alongside county insurance and salary rates.
 - c. The combined labor and non-labor costs are considered the minimum financial requirements required to keep a GIS Department functioning.
 - d. Capital/General Fund purchases are considered non-essential operating costs that could be delayed in the event of financial hardship. These costs have traditionally been covered by the County General Fund.
 - e. The combined total of costs is referred to as "the true cost of operation" or the recommend funding required for operating GIS on a yearly basis.

TABLE 1: Non-Labor, Labor and Capital Costs of GIS based on costs from 2016-2017 fiscal year.

GIS Non-Labor Costs

Equipment & Supplies			
<u>Description:</u>	<u>Costs:</u>	<u>Funding Period (Years)</u>	<u>Yearly Cost</u>
Small Format Printer	\$1,000	8	\$125
Paper, Supplies & Postage	\$1,500	1	\$1,500
Software Licenses	\$5,500	1	\$5,500
Projects			
Plat & Atlas Books	\$4,500	3	\$1,500
GIS Website	\$3,000	1	\$3,000
Other:			
Travel	\$500	1	\$500
Dues	\$100	1	\$100
Education	\$1,000	1	\$1,000
Total Non-Labor:			\$13,225

GIS Labor Costs			
<u>Description:</u>	<u>Costs:</u>	<u>Funding Period (Years)</u>	<u>Yearly Cost</u>
GIS Salary	\$48,500	1	\$48,500
Health Care	\$7,500	1	\$7,500
Total Labor:			\$56,000

Capital/General Costs			
Aerial Imagery	\$35,000	5	\$7,000
Workstation (computer)	\$3,000	6	\$500
Large Format Printer	\$7,000	12	\$583
Intern/Part Time	\$4,000	1	\$4,000
Total Capital:			\$12,083

True Cost of Operation:

\$81,308

UNDERSTANDING RECORDING VOLUMES AND GIS RESOLUTION REVENUE:

The Carroll County GIS Resolution, Fund 52, established by County Ordinance Chapter 170, is generated by the fee charged for the recording of deeds and documents in the Recorders Office. Each recording fee collected sets aside a portion to help offset the costs of GIS. The current break down of the Carroll County recording fee includes \$11 to GIS, \$1 Recorder Special Fund, \$23.50 to General Fund, \$5.50 to Recorder and \$9 to the Rental Housing Support Program (RHSP) for a total fee of \$50.

The amount of revenue generated by the GIS Resolution is reliant on the volume, or the number of recordings that take place in any given year. Taking into consideration the 2016 recording volume of 2,863, the income generated to support GIS through the resolution was \$29,000. The recording rates and thus the revenue generated have remained steady over the past several years. **Table 2**, included below illustrates Carroll County recording volumes from 2003 to 2016. The average recording volume used in this study will be **3,021** documents a year (averaged from the years 2012 – 2016).

TABLE 2. RECORDING VOLUMES 2003 thru 2016

YEAR:	2003	2004	2005	2006	2007	2008	2009
RECORDING VOLUME:	6026	4704	4253	4345	4058	3554	4000

YEAR:	2010	2011	2012	2013	2014	2015	2016
RECORDING VOLUME:	3450	3165	3507	3223	2657	2855	2863

In the 2004 WIPFLI GIS Cost Study the average recording volume used to establish the recording fee rate increase was 5,200 documents a year. The study divided the established true cost of funding needed (\$66,449), by 5,200 recordings a year and recommend a GIS Resolution fee increase to \$12.78 per recording. On January 20th 2005, the portion of the GIS Resolution Fee was increased from \$2 to \$11 by County Ordinance #0105-20.

Since 2004 the county recording volumes have been in a declining trend. Due to the decrease in recording volumes the GIS Resolution Fund has fell short of covering the yearly true cost of operation in which it was intended. To help make up this difference and continue a GIS program the General Fund has contributed \$66,000 in general aid support over the past 5 fiscal years (this excludes the recent capital improvement purchases of aerial imagery and a high-end workstation). This general fund contribution has been designated and described as a short-term solution in delaying the insolvency of the GIS Department while a cost study and the related information could be compiled for review.

Included below in **Table 3**, is information pertaining to local counties and the GIS Resolution Fee and Revenues collected. The information is provided as a comparison; however, it is important to keep in mind that county size, demographics, recording volume, GIS staffing and thus the funding requirements for GIS are very different from county to county. All of the county's surveyed in **Table 3** independently fund GIS through the use of their GIS Resolution Funds.

TABLE 3. LOCAL GIS RESOLUTION RECORDING FEE 2016

<u>COUNTY</u>	<u>GIS FEE PER RECORDING</u>	<u>Last Increase</u>	<u>TOTAL RECORDING FEE</u>	<u>GIS RES. FUND REVENUE 2016</u>
CARROLL	\$12 with \$1 Recorder Special Fund	year 2005	\$50	\$29,000
JO DAVIESS	\$24 with \$1 Recorder Special Fund	year 2010	\$61	\$124,560
WHITESIDE	\$15 with \$1 Recorder Special Fund	year 2012	\$41	\$119,720
STEPHENSON	\$25	year 2008	\$50	\$150,000
OGLE	\$15	year 2016	\$60	\$107,980

*Jo Daviess County Recording = \$20.50 Recorder, \$7.50 Restoration, \$24 GIS and \$9 RHSP, for a total of \$61 per recording last increase was 2010

*Whiteside County Recording = \$12 to General Fund, \$15 to GIS w/ \$1 Recorder Special Fund, \$4 Recorders Doc fee and \$9 RHSP, for a total recording fee of \$41, their last increase was 2012

Included on the next two pages is a copy of Chapter 170, which established the GIS Resolution Fund in 2000 and ordinance # 0105-20, which increased the resolution fee in 2005.

Chapter 170

GEOGRAPHIC INFORMATION SYSTEM RECORDING FEE

Sec. 170-1 A Geographic Information System Recording Fee Imposed.

Commencing September 1, 2000 and continuing thereafter, an additional fee in the amount of \$3.00 is hereby imposed for the of filing every instrument, paper, or notice for record with the County Recorder in order to defray the cost of implementing or maintaining the County's Geographic Information System. The County Recorder shall collect that fee in each instance at the time of filing for record.

Sec. 170-2 Use of the Charge.

Of every fee collected by the County Recorder under the authority of this resolution, two dollars must be deposited into a special fund set up by the County Treasurer to be used solely for the equipment, materials, and necessary expenses incurred in implementing and maintaining the County's Geographic Information System. The remaining one dollar must be deposited into the County Recorder's special funds created under 55 ILCS 5/3-5005.4. The County Recorder may, in her discretion, use money/s in the funds created under Section 3-5005.4 to defray the cost of implementing or maintaining the county's Geographic Information System.

History: Resolution number 000-15 approved July 20, 2000.

Authority: P.A. 91-0791

State of Illinois
Before the County Board of Carroll County
Ordinance No. 0105-20

An Ordinance to increase the Geographic Information System (GIS) Fee as allowed under 55 ILCS 5/3-5018.

WHEREAS, the Carroll County Board previously authorized for the creation of the Carroll County GIS Department for the purpose of providing and maintaining a countywide map through a Geographic Information System (GIS); and

WHEREAS, pursuant to 55 ILCS 5/3-5018 the Carroll County Board authorized the assessment of a \$3 charge for filings with the Carroll County Recorder in order to defray the cost of implementing and maintaining the Carroll County GIS and in order to defray the cost of providing electronic access to the Carroll County GIS records; and

WHEREAS, 55 ILCS 5/3-5018 provides that a County Board may, by ordinance, increase the fees allowed by this section and collect such increased fees if the increase is justified by an acceptable cost study showing that the fees allowed by this section are not sufficient to cover the cost of providing the service; and

WHEREAS, at the request of the Carroll County Board, Lindgren, Callihan, Van Osdol & Co., Ltd., conducted a cost study in accordance with the provisions of the United States Office of Management and Budget Circular A-87 and found the actual cost to equal \$12.78 per unit;

WHEREAS, an appropriate increase in said fees is necessary to cover the cost of providing services by the Carroll County GIS Department.

NOW, THEREFORE, BE IT ORDAINED, that pursuant to 55 ILCS 5/3-5018 the GIS fee to be assessed by the Carroll County Recorder is hereby increased from \$3 (three dollars) to \$12 (twelve dollars) per filing with \$11 (eleven dollars) to be deposited into the Carroll County GIS fund and \$1 (one dollar) to be deposited into the Carroll County Recorder's special funds created under Section 3-5005.4

BE IT FURTHER RESOLVED, that this Ordinance shall become effective April 1, 2005.
Passed this 20th day of January, 2005.

Carroll County Board

By Sharon Cook
Chairman

Attest:

Judith Gray
Judith Gray, Carroll County Clerk

GIS INCOME AND FUND RESERVES:

Carroll County GIS has a cost recovery policy in place that is used to generate revenue from the sale of services offered by the department. The most significant of those services being the Carroll County GIS website which provides access to viewing and printing map data over the internet. Carroll County GIS also creates custom maps and map books at a cost based off labor and material. The department also recovers revenue from the leasing of digital data to companies, other governmental bodies and non-profit organizations.

Below is **Table 4** which shows the actual end of year totals for GIS Revenue’s generated over the past 5 years. The annual GIS Revenue used for this study will be **\$8,072**, the 5-year average taken from the years 2012 through 2016.

TABLE 4. GIS REVENUES 2012 through 2016

Budget year Ending:	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
GIS Sales (Maps & Data):	3315	3067	3919	2465	2808
Plat & Atlas Books:	2315	1619	937	321	5382
Website Subscriptions:	0	2520	3960	3410	4320
TOTALS:	\$5,630	\$7,206	\$8,816	\$6,196	\$12,510

Two new sources of revenue have been added to the GIS Department over the past 5 years. The revenue collected from the sale of plat & atlas books and the sale of website subscriptions for accesses to the GIS/Assessor website. As an attempt to generate additional revenue, the cost of plat books was increased in 2016 from \$25 to \$35 a book. As a part of solving the long-term funding of the GIS Department it will be important to review and possibly increase fees for the services provided by GIS, however, revenue generated is currently used to cover the cost of GIS projects and only provides a slight net gain in profits to the department.

Over the past several fiscal years the **GIS Department Fund 44 Reserves** have been drawn upon at a rate of approximately \$13,000 a year. This GIS Fund Reserve would ideally be used as the department savings account for the less common and larger department expenditures like the replacement of equipment and aerial photography projects.

The GIS Department Reserve has approximately 1 or 2 fiscal years of available funds remaining. When the reserve is depleted the funding of GIS will become completely dependent on the GIS Resolution, GIS Income and the contributions made by the General Fund.

Solutions available to the county would be to permanently increase the contributions from the General Fund at the tune of approximately \$40,000 a year, or to address the short comings of the GIS Resolution Fund by increasing the portion of the recording fee allocated to GIS.

COST STUDY CONCLUSION:

- The 2017 updated annual true cost of operation of GIS is \$81,308 (*Page 6*).
- The average recording volume established by study is 3,021 per year (*Page 7*).
- The average GIS revenue is \$8,072 per year (*page 11*).
- Subtracting the true cost of operation (\$81,308) against the average yearly revenue (\$8,072) leaves a remaining \$73,236.
- Dividing the remainder (\$73,236) over the yearly average recording volume (3,021), the potential increase of the GIS Resolution Fee would be \$24.24 per recording, or a \$12.24 increase from the current \$12.
- However, continuing to use General Fund contributions to cover capital costs removes an additional \$12,083 of required funding, leaving \$61,153. This is the annual amount of additional funding needed to cover the cost of operation of the Carroll County GIS Department. This brings the increase of the GIS Resolution Fee to \$20.24 or \$8.24 increase per recording.
- It is my recommendation to increase the GIS Resolution Fee to \$20, an \$8 increase, with \$19 going to GIS and \$1 going to the recorders special fund.
- A \$19-dollar recording fee distribution would generate approximately \$57,400 in the GIS Resolution. The General Fund would ideally continue to contribute \$13,000 a year (earmarked for capital purchases) and the GIS Revenue's would generate \$8,000. Bringing the total funding of GIS to approximately \$78,400.

Copies of the State Law 55 ILCS 5/3-5018, the Carroll County GIS Cost Recovery Policy and the 2004 WIPFLI Cost Study are available by request.