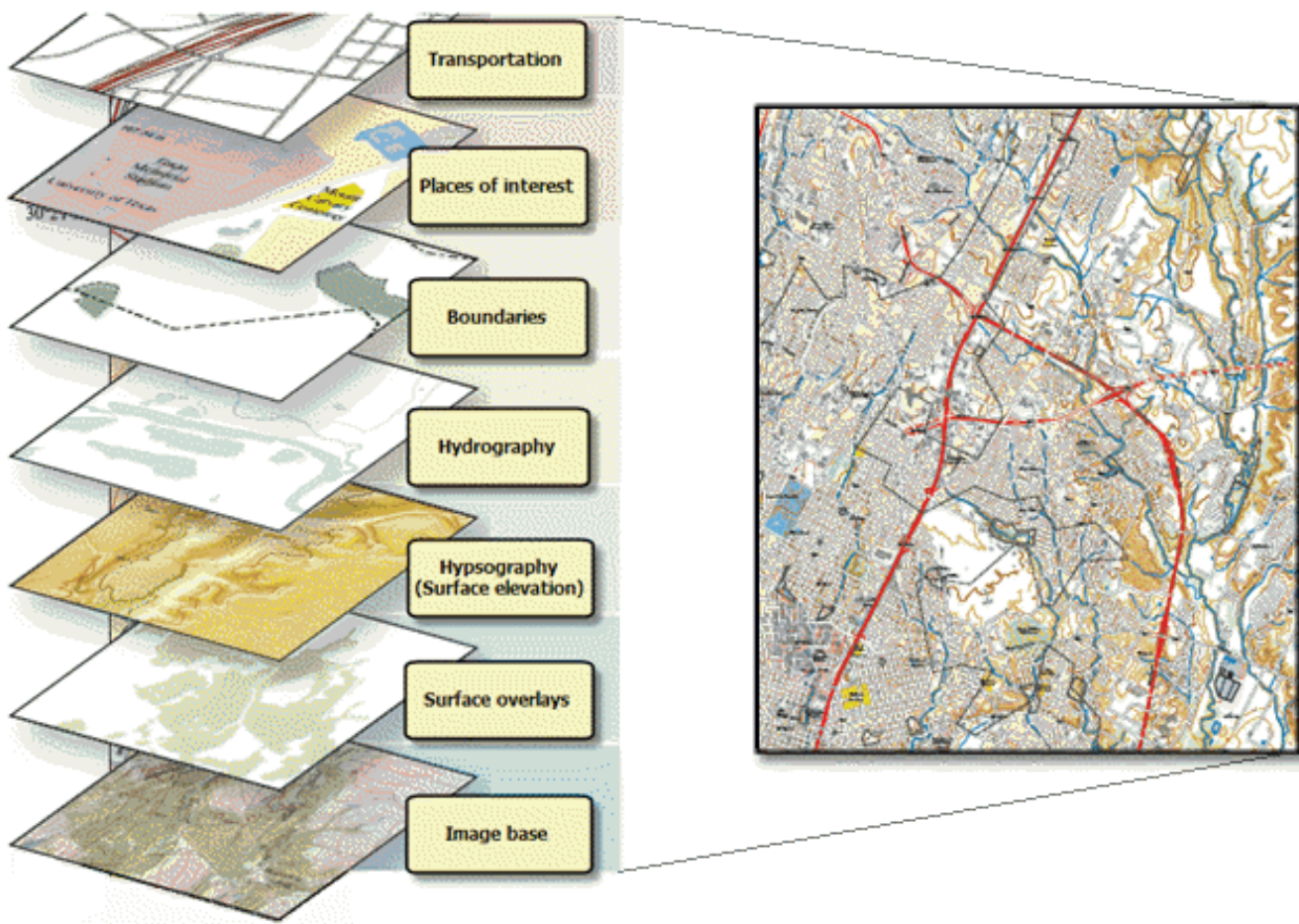


CARROLL COUNTY, IL GEOGRAPHIC INFORMATION SYSTEM(GIS) COST AND FEE STUDY

2023



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

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DESCRIPTION OF STUDY:

Provided within 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 funding of the 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.) as well as from the internal 2017 GIS Cost study, and updated to reflect fiscal year 2023 financial figures.

The GIS Cost Study that was executed in 2017 established a yearly true cost of operation of \$81,308. The average recording volume used was 3,021 documents per year. The average GIS revenue was \$8,072 per year. Subtracting the true cost of operation \$81,308 against the average yearly revenue \$8,072 left a remaining \$73,236. Dividing the remainder \$73,236 over the yearly average recording volume 3,021, calculated a total justified GIS Resolution Fee of \$24.24 per recording, or a \$12.24 increase from the previous \$11 GIS Resolution Fee. On January 1st 2018, the GIS Resolution Fee was increased by ordinance 1117-4 to \$19 per recorded document. This has generated an average of \$61,700 per year by way of the portion collected for GIS through recording.

It is also the intention of this study 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.

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 GIS Department is responsible for maintaining and managing geographic data, maps, and other spatial information for the county. The main objective is to provide accurate and up-to-date spatial information to support the county's decision-making processes and to help county staff, residents, and businesses make informed decisions.
- III. The 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 map layers of interest, which include:
 - 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 13,893 individual parcel files. The parcel layer is used to assist the Assessor in making tax value determinations using acreage, land use and soil productivity ratings.
 - 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 & other important tax districts.
 - e.) SURVEY SYSTEMS: This includes maintaining township & range sections, entering, and maintaining surveyed section corners whenever possible.
 - f.) TRANSPORTATION DATA: This includes entering and maintaining right of way distances, maintaining, and displaying all road, rail road and trail centerlines and 911 Address Point Data throughout the county.
 - g.) OTHER IMPORTANT GIS LAYERS: Aerial imagery, flood zones, zoning, topographic, water features, dimension text data and zoning/building/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 filing 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. These 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 recommended funding required for operating GIS on a yearly basis.

TABLE 1: Non-Labor, Labor and Capital Costs of GIS based on costs from 2022-2023 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	\$2,000	8	\$250
Paper, Supplies & Postage	\$1,500	1	\$1,500
Software Licenses	\$5,500	1	\$5,500
Projects			
Plat & Atlas Books	\$10000	3	\$3300
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:	\$15,150

GIS Labor Costs			
<u>Description:</u>	<u>Costs:</u>	<u>Funding Period (Years)</u>	<u>Yearly Cost</u>
GIS Salary	\$61,500	1	\$61,500
Health Care	\$7,800	1	\$7,800
		Total Labor:	\$69,300

Capital/General Costs			
Aerial Imagery	\$30,000	5	\$6,000
Workstation (computer)	\$3,000	6	\$500
Large Format Printer/Scanner/lamination	\$8,000	10	\$800
Part Time Help/Contracted Services	\$4,000	1	\$4,000
		Total Capital:	\$11,300

True Cost of Operation: \$95,750

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 offset the costs of GIS. The current break down of the Carroll County recording fee includes \$19 to GIS, \$25.50 to General Fund, \$6.50 to Recorder and \$9 to the Rental Housing Support Program (RHSP) for a total fee of \$60.

The amount of revenue generated by the GIS Resolution is directly dependent on the volume, or the number of recordings that take place in a year. Taking into consideration the 2016 recording volume of 2,863 and the \$11 GIS Resolution fee, the GIS income generated in 2016 through recording was \$31,493. **Table 2**, included below illustrates Carroll County applicable recording volumes from 2003 to 2023. **The average recording volume used in this study will be 3,155 documents a year, averaged from the most recent 6 full years of recording data, 2017 – 2022.**

TABLE 2. RECORDING VOLUMES 2003 - 2023

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

YEAR:	2017	2018	2019	2020	2021	2022	2023
RECORDING VOLUME:	2791	853	3211	4246	4233	3596	850 (April 2023)

In the 2017 Cost Study the average recording volume used to establish the recording fee rate increase was 3,021 documents per year. The 2017 established true cost of funding \$81,308 was subtracted against other revenue resources and determined that \$73,236 additional funding was needed. Dividing the remaining additional funding \$73,236 by 3021 recordings a year provided a justified GIS Resolution fee increase up to \$24.24 per recording.

To help offset the remaining GIS funding requirement and provide partial reimbursement for non-related Zoning & Building duties, the General Fund has contributed financial support to the GIS FUND at a rate of approximately \$14,000 per year. This transfer is also a way to utilize a portion of permit fee revenue, which is collected in the general fund with the purpose “to defray the expenses of administering ordinances” (Ch. 360-3 Fees, Page 1).

It is my opinion that the General Fund contribution should remain and meaningfully increase to better reflect the distribution of duties between GIS, Zoning & Building; as well as to better appropriate the incoming permit fee revenue recorded in GF 11-3031 “zoning & permit income”.

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 & Assessment Website which provides access to viewing and printing map/assessment data over the internet. Carroll County GIS also recovers revenue from the sale of custom maps, books and from the leasing of GIS digital datasets.

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 \$9,092, the 5-year average taken from the previous 5 full years of revenue data, 2018 through 2022.**

TABLE 4. GIS REVENUES 2018 - 2022

Budget year Ending:	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
GIS Sales (Maps & Data):	1702	3189	2098	825	2108
Plat & Atlas Books:	820	395	105	40	40
Website Subscriptions:	5800	4920	6720	8320	8380
TOTALS:	\$8322	\$8504	\$8923	\$9185	\$10528

Fiscal year 2021 & 2022, the GIS Fund also received contributions from 911 Fund with \$10,000 distributions each year. This money has been used to fund outlier projects uniquely related to 911, including a 911 Atlas Map project and NexGen 911 Dataset/Software upgrades. It is uncertain if the 911 financial contributions will continue. For this study I have purposely excluded them from the operating revenue formula, however; future studies may need to incorporate this revenue, depending on if the funding contributions continue.

Over the past several fiscal years the **GIS Department 44, End of Year Reserve Fund Balance** has increased slightly from fiscal year 2018 at \$32,185 to fiscal year 2021 with approximately \$43,000. This reverses a worrying trend in which, before the 2017 GIS Resolution Fee increase, the GIS Fund End of Year Fund Balance Reserves had approximately 1 or 2 fiscal years remaining before being depleted.

COST STUDY CONCLUSION:

- The 2023 updated annual true cost of operation of GIS is \$95,750.
- The average recording volume established by study is 3,155 documents per year.
- The average GIS revenue reported by study is \$9,092 per year.
- Subtracting the true cost of operation \$95,750 against the average yearly revenue \$9,092 leaves a remaining \$86,658.
- Dividing the remainder \$86,658 over the yearly average recording volume 3,155, justifies a total GIS Resolution fee of up to \$27.50 per recording, or an \$8.50 increase from the current \$19 per recording.
- However; continuing to use General Fund reimbursement contributions of \$14,000 leaves a remainder of required funding of \$72,658. Dividing this amount against the average recording volume 3,155 brings the increase of the GIS Resolution Fee to \$23, an increase of \$4 per recording.
- It is therefore my recommendation to increase the GIS Resolution Fee to \$23, a \$4 increase.
- A \$23 recording GIS Resolution Fee distribution would generate approximately \$72,565 in the GIS Resolution Fund per year. The General Fund reimbursement contribution currently adds \$14,000 a year and the GIS Sales Revenue generates an additional \$9,000. Bringing the total yearly funding of GIS to approximately \$95,565.
- With a \$23 GIS Resolution Fee, the mandated Rental Housing Support Program (RHSP) fee of \$18, an additional \$1 for the recorders total of \$7.50 and \$1 additional dollar going towards the general fund total of \$26.50, this would bring the total Carroll County Recording Fee up to \$75 per document.

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Copies of the State Law 55 ILCS 5/3-5018, the Carroll County GIS Cost Recovery Policy, the 2004 WIPFLI Cost Study, the 2017 GIS cost study and this study are available by request and are also posted online for public display on the Carroll County Website: www.carrollcountyil.gov

Chapter 170

State of Illinois
Before the County Board of Carroll County
Ordinance No. 1117-4

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 2004 and found the actual cost to equal \$12.78 per recording, after which the Carroll County Board approved an increase to \$12.00 per recording on January 20, 2005; and

WHEREAS, the Carroll County GIS Department conducted another cost study in 2017 and found the actual cost to cover the operation of the GIS Department equaled \$20.24 per recording; and

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 \$12 (twelve dollars) to \$20 (twenty dollars) per filing with \$19 (nineteen 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 January 1, 2018. Passed this 2nd day of November, 2017.

Carroll County Board

By

[Signature] Vice-Chairman
Chairman

Attest:

[Signature]
Brian Woessner, Carroll County Clerk