Geographic Information Systems (Dept. 65)

Funded By: Public Act 91-0791 – Fees on Instruments Recorded by the County Recorder

Mission Statement: *To develop and maintain the Geographic Information System of McHenry County, providing efficient, high quality GIS leadership, coordination, infrastructure, and services that meet the needs of McHenry County and the communities we serve.*

Department Created By: *McHenry County Board Resolution R-200609-65-244, on 9/05/06*
Classification – General Government

Background: On February 18, 1997, the County Board of McHenry County, Illinois had the foresight to understand the importance of a geographical information system for the County and authorized an agreement with NIU to accomplish the final phase of the McHenry County Automated Mapping Project, now known as Geographic Information Systems (GIS). GIS takes statistical information and applies it to a map to identify how the information is affecting specific areas of the County. The demand for and reliance on the accuracy of GIS data that is being provided by the Department continues to be vital information for public safety officers (Police Departments, Fire & Rescue Departments, Emergency Management, Emergency Telephone Systems Board), local governmental agencies (Schools, Townships, Municipalities, Villages), political parties, and non-profit organizations and private business.

Functions: FUNCTIONS PROVIDED BY COUNTY BOARD

- **Core GIS Databases:** Develop and maintain the geographic information system for McHenry County, including administering and developing the parcel base data, tax district data, critical facility data, topography data, contracting for County-wide Digital Aerial Photography to enhance base maps, the development and governing of a logical enterprise-based GIS interactive web applications to allow public and organizational access to the GIS information.

- **Coordination of GIS Activity:** Manage and assist in the coordination of GIS activity across County departments to eliminate duplication of efforts and costs. Provide technical support to other County Departments and the public utilizing the County's GIS information. Review and enhance regional GIS coordination and data sharing with other governmental agencies for emergency response initiatives, comprehensive analysis, data-driven decision support, and collaboration.

- **GIS Services:** Track sex offender residency compliance, conduct crime analysis, provide critical mapping support during emergencies, create maps for court cases, and produce required cadastral maps used by County Assessors, Realtors, Title Companies, and the general public. Conduct database creation in enterprise GIS for other departments and provide support for maintenance of core GIS data by County Departments. Provide special GIS analysis and map production for departments, other governmental agencies, fire districts, and the general public. Develop and maintain interactive maps to provide transparency and ease of access to public information. These interactive maps include Athena (Property Search Viewer), PlanDev (Land Use and Zoning Information), Crime Viewer, Construction Zone Viewer, TIF Viewer (Tax Increment Finance), Historic Document Viewer, and Drainage District Viewer.

2024 Highlights

- Launched the McHenry County Drainage District Viewer. This viewer was created with the assistance of MCDOT, the County Clerk, and Planning and Development. The viewer shows where the active and inactive drainage districts are located, displays drain tile investigation documents, and historical documents of all drainage districts.
- Worked with City of Woodstock and Village of Wonder Lake on the GIS Cooperative Pilot Program. GIS Staff assisted the City of Woodstock with GIS integration for an asset management and permitting program. Staff created several GIS services for features such as sanitary and sewer, water distribution and stormwater, parks & recreation, and ADA ramps. GIS staff also created a zoning layer in GIS for Woodstock, a large format map for the Woodstock Police, and assisted the public works staff with determining the data structure for GPS asset collection data in the field. The Department is working on implementing a similar program for the Village of Wonder Lake and continues to assist the City of Woodstock.
- Completed all parcel map updates for the tax year 2023. There were a total of 433 parcel updates completed to the map. Additionally, there were 19 annexations, 2 special service areas added, and 3 changes to TIF districts. There were 16 new subdivisions added to the county containing a total of 516 new parcels.
- Created Rest Service to be utilized in new SmartGov Permitting Application for Planning and Development. GIS Staff also updated the backend process for DEVNET integration with Athena and PlanDev Viewers. This integration allows for greater stability of GIS applications that present tax data from DEVNET.
- Updated the COVID-19 Dashboard weekly until it was retired on May 23, 2024. This dashboard was created in March 2020 and received over 630,000 views over the four years it was active. Also, GIS staff created a Noxious Weeds map for the Environmental Health Department.
- Updated Tier Two Facility Map for the Emergency Management Agency (EMA). Additionally, assisted EMA with the development of a program to alert staff when a member of the public or another agency reports an issue during a storm or an emergency event.
- Updated a map for the Jury Commission with locations of local Woodstock restaurants as a tool used by the jurors each week. Each year, thousands of residents are summoned for jury duty, and many are not familiar with the Woodstock area.
- Created a map book for the Marengo Township Assessor to assist in the field.
- Developed several maps for Huntley, Richmond, and Harvard Fire Protection Districts

2025 Goals

- Complete 2025 aerial flight, including the quality control of all images, review of deliverables from vendor, and update all GIS interactive maps to reflect 2025 imagery.
- Update all building footprints, school locations, government buildings, and other special interest features based on new 2025 imagery.
- Continue to build upon the GIS Cooperative Program with the City of Woodstock, the Village of Wonder Lake and other communities.
- Complete all parcel updates successfully for deeds recorded in 2025 within six weeks of receiving documents from the Assessment Department. Map all zoning for Planning and Development requests within one week.
- Assist departments with additional GIS integration, analysis, map production, and creation of interactive maps to improve efficiency, reduce costs, and provide additional information to the public. Service, maintain, and enhance as requested existing web applications such as Parcel Viewer, Zoning and Land Use Viewer, and Crime Viewer.
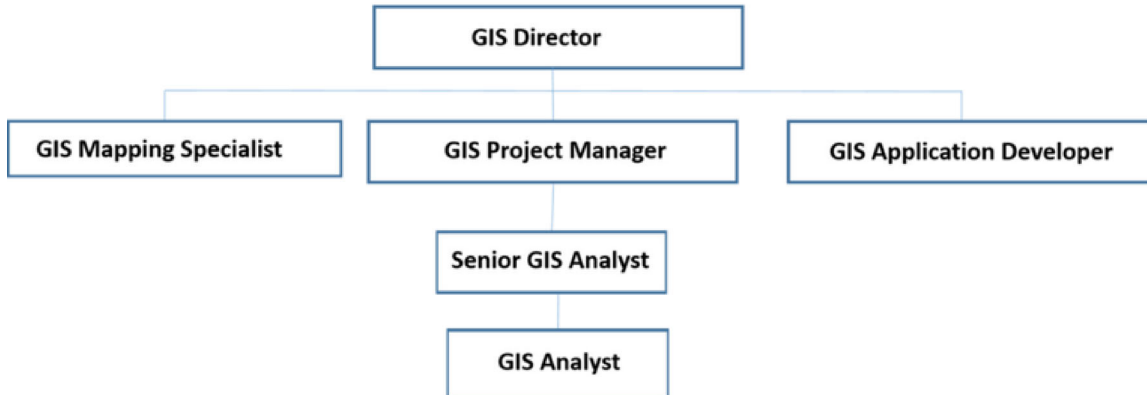
Performance Measures

Performance Indicators:	2023 Actual	2024 Projected	2024 Mid-Year	2025 Projected
Number of Parcels Maintained in GIS	149,726	150,000	149,926	149,800
Number of Data Sharing Partners	419	430	424	440
Number of Maps Created	664	800	388	850
Number of GIS Web Applications	25	26	26	28
Number of visits to Athena Parcel Viewer Website	161,092	165,000	82,775	168,000
Number of visits to PlanDev Viewer Website	28,162	27,960	13,980	28,200
Customer Satisfaction for all Map Products	99%	98%	99%	98%

Full Time Equivalents History

Job Title	2022-23 FTE	2023-24 FTE	2024-25 FTE
GIS Analyst	1.00	1.00	1.00
GIS Director	1.00	1.00	1.00
GIS Mapping Ops Spec	1.00	1.00	1.00
Sr GIS Analyst	1.00	1.00	1.00
Sr. Database Administrator	1.00	1.00	1.00
GIS Project Manager	1.00	1.00	1.00
Total Dept 65 - Geographic Inform Service	**6.00**	**6.00**	**6.00**

Organizational Chart

GEOGRAPHIC INFORMATION SYSTEMS

County of McHenry
2025 Proposed Budget
65 - Geographic Info Systems Fund

Category	FY2022 Actual	FY2023 Actual	FY2024 Appropriated	FY2024 Actual (YTD)	FY2025 Budgeted
Geographic Info Systems Fund					
80 - Fees & Charges for Service Total	1,072,054.50	790,117.19	1,313,212.00	899,669.00	1,367,043.00
95 - Interest Earnings Total	19,006.36	51,203.24	25,000.00	28,455.37	25,000.00
Geographic Info Systems Revenue	**1,091,060.86**	**841,320.43**	**1,338,212.00**	**928,124.37**	**1,392,043.00**
30 - Personnel Total	651,897.78	676,797.63	692,398.14	426,727.30	724,513.58
40 - Contractual Total	582,341.13	489,669.61	412,850.00	450,558.21	442,850.00
50 - Commodities Total	30,760.62	24,271.18	39,050.00	7,513.66	39,050.00
60 - Capital Outlay Total	-	-	27,000.00	12,972.60	-
65 - Lease Total	990.00	1,188.00	1,200.00	792.00	1,200.00
68 - Fund Balance Enhancement Total	-	-	165,713.86	-	184,429.42
Geographic Info Systems Expense	**1,265,989.53**	**1,191,926.42**	**1,338,212.00**	**898,563.77**	**1,392,043.00**

To View Interactive Budget (both Financial and Non Financial Information)

https://mchenrycountyil.openbook.questica.com/#/spotlight/efe8db06-7ac6-45bc-9f0f-845fa5d1f6d0

McHenry County Government

Fiscal Year 2025 Supplemental Request

(Include only supplemental requests not covered on the personnel and capital outlay request forms)

DEPARTMENT: Geographic Information Systems

FUND: 234 **(Use a separate sheet for each fund)**

(Please give a brief description and justification for the supplemental request)

Requested Item: 2025 County-wide digital aerial photography
Projected Cost: $150,000
Division Code: 6500
Main Account: 400100
Justification: (Please start justification on next line)

Aerial photography is a critical component for the County GIS and is used as reference for the parcel base data and for most GIS datasets. Aerial photography is used in items such as emergency response, evidence in legal cases, planning and environmental initiatives, tranportation planning, by township assessors, and by the public. This supplemental is to conduct an aerial flight for the year 2025.

Requested Item: Consulting services for a GIS Hydro Flow Model Viewer
Projected Cost: $60,000
Division Code: 6500
Main Account: 443500
Justification: (Please start justification on next line)
Consulting services to assist with the creation of GIS Hydro Flow Model Viewer to analyze the flow of water and flow accumulation. The viewer can assist with giving a general view of where water is going and coming.
This assists with understanding sediment load and spreading of nitrates.

Requested Item:
Projected Cost:
Division Code:
Main Account:
Justification: (Please start justification on next line)

TOTAL DEPARTMENT SUPPLEMENT REQUESTS: 210000

Use as many sheets as necessary

The projected cost should be posted under the supplemental column in the Questica budget data entry screen. If the supplemental request is approved it will moved into the department budget.