JOINT COMMISSION ON SHARED SERVICES INITIATIVES
COMBINED LAND RECORDS MANAGEMENT
COUNTY/CITY WORKGROUP RECOMMENDATIONS
SEPTEMBER 26, 2013

Work Group Initiative and Mission

Initiative:
Combining/sharing land records management and geographic information systems (GIS)

Mission:
Review current responsibilities and methods used to manage land records, including the provision of geographic information systems (GIS) on a county-wide basis with a goal to identify changes to improve efficiencies, reduce duplication, and upgrade the product delivered to the internal and external users.

Work Group Team:
Facilitator:
- Brian Amundson, City of Eau Claire Director of Public Works/City Engineer
- John Genskow, City of Eau Claire Deputy City Engineer

Team Leader:
- Matt Janiak, Eau Claire County Land Information Division County Surveyor

Team Members:
- Peter Strand, Eau Claire County Geographic Information Systems Specialist
- Marion Grill, Eau Claire County Real Property Lister
- Mary Jo Wilson, Eau Claire County Information Systems ACS Programmer/Analyst
- Tom Berg, City of Eau Claire Engineering Services Technician
- Todd Bohrer, City of Eau Claire Public Works Analyst
- Sherilyn Riedel, City of Eau Claire Information Services Technician
- Tim Robertson, City of Eau Claire Information Services Technician
- Dave Walter, City of Altoona City Engineer

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EXECUTIVE SUMMARY

The **Land Records Management and GIS Workgroup** was created at the request of the Shared Services Committee to explore options and provide a recommendation for combining and/or sharing Land Records Management and Geographic Information Systems (GIS). The committee was tasked with finding the best ways to accomplish the following:

- Efficient routing of land records
- Accurate land record information
- Records updated in a timely manner
- Reduction in duplication of work
- One point of entry and responsibility
- Unified computer mapping platform

without having to assume maintenance of (1) current organizational structure/processes, (2) current physical location of personnel, or (3) current assigned duties.

RECOMMENDATIONS:

Centralize land records management duties at the County level with the responsibility of maintaining up-to-date county-wide land records and parcel base map layers. Continue to share the ACS Software System and move towards a unified GIS System. Initiate efforts to transfer City of Eau Claire parcels to the Eau Claire County data model and include City of Eau Claire parcels on the Eau Claire County WG Xtreme Guide mapping internet site.

Develop strategic and implementation plans for Land Records Management and Geographical Information Services to create a County-wide Land Records Entity and centralize land record management duties at the County level.

There are two elements to the Work Group's charge:

1. Recommend steps necessary to create a unified county-wide map and land records system that can be managed efficiently and without duplication of data entry.
2. Recommend steps to develop a geographical information system (GIS) based on the land records system and county-wide map that can be used in a variety of ways by internal and external users seeking parcel-based information within the county for a variety of existing and potential uses. The GIS needs to be able to provide parcel maps and data sets that meet the needs of the end uses and meets or exceeds the requirements of Act 20.

This committee recommends the following items in two parts: **Required Actions** and **Strongly Recommended Actions**.

Required Actions:

1. Develop and execute a formal agreement to centralize land records management duties at the County level with the responsibility of maintaining county-wide land records and parcel base map layers. The agreement will include requirements and responsibilities for each agency with details on: funding, hardware and software maintenance, server location, software licensing, data backups, archival storage, system security, data entry schedules, use of data, and liability for use of data. The agreement will include details on keeping the information up-to-date and modifying the information to meet future state land information requirements. This agreement is to be modeled after the Intergovernmental Cooperative Agreement For Implementation of the ACS Land Development Office and Assessing Office.
2. Complete a unified county-wide base parcel layer. This is needed for the state, for the shared land records system, for agency map-integrated application support, and to meet state land information requirements.
3. Establish rules, conventions, and standards for the base layer map governing data updates, software updates, data standards, and documentation.
4. Publish the unified base map for citizen access via the internet on the County site. The City website will link to the County site.
5. Unify county-wide ESRI licensing, including all agencies, to better share available resources and insure compatibility of software and to commit to unified upgrades by all agencies.

Strongly Recommended Actions:

1) Create a GIS Administrator position that will:
    a. Be responsible for implementing all rules governing the management, updating, and use of the GIS base map.
    b. Be the liaison to all City and County departments working with the base map, or who need to have map integration with their applications.
    c. Provide direction for County and City IT staff regarding the ESRI application servers and GIS database servers.
    d. Provide assistance and direction for County and City technical staff who work with production and published versions of the map database.

    e. Direct the activities of the technicians assigned to improve and manage the base map.

2) Develop a strategic 3-year GIS plan and update regularly.
3) Train County and City departmental GIS technicians and users.
4) Train County and City IT staff on maintaining GIS application and database servers.
5) Redesign the map database such that the merged unified product has easy-to-migrate datasets, a well-defined data dictionary, and recognizable data structure standards.
6) Develop the metadata for the base map layers.
7) Map all parcels with coordinate geometry (COGO) with line work attributes.
8) Amend the formal agreement for Land Records Management to include the role of the GIS Administrator, and training.
9) Include a staff member from the City of Eau Claire on the Land Information Council.

BACKGROUND

In 1856, Eau Claire County recorded its first deed for a parcel of land. In 1939, Eau Claire County first started parcel mapping and assigning parcel numbers. In 1974, city and county real estate data began to be converted into a computerized system. In 1988, the parcel maps were replaced with aerial photos and parcel overlay maps.

1992 Land Records Modernization Plan

In 1992, Eau Claire County prepared a Land Records Modernization Plan. The purpose of the plan was to:

1. Assess the status of land records at the time.
2. Establish guidelines and directions for further development or modernization of existing records and new records.
3. Promote coordination and cooperation amongst all parties that maintain land records or develop land information for areas within the political boundaries of Eau Claire County in order to develop an integrated, county-wide system of land records and to avoid duplication of land information.

The plan was also intended to satisfy the requirements for county-wide land records modernization plans as established in 1989 Wisconsin Acts 31 and 339 creating the Wisconsin Land Information Program (WLIP) and Wisconsin Land Information Board (WLIB) and providing a funding mechanism for implementation on a county-wide basis. County participation in the WLIP program entitles the county retain a portion of recording fees collected at Registers of Deeds offices and to apply for Grants-In-Aid.

Key elements of the modernization plan were to:

A. Establish an Eau Claire County Geographic Framework.
B. Initially digitize parcel maps and then draft the parcels using coordinate geometry based on the Wisconsin State Plane Coordinate System.
C. Convert parcel numbering to Parcel Identification Numbers consistent with the WLIP.
D. Integrate wetland mapping.
E. Integrate soil mapping based on U. S. Soil conservation Service Soil Surveys and Maps.
F. Digitize and incorporate zoning maps.
G. Establish Institutional Arrangements with the Cities of Eau Claire and Altoona, and other municipalities as they become involved, to ensure cooperation between all parties in the establishment of the County GIS.

H. Provide efficient and effective access to the Land Information System as it is developed.
I. Create a Land Records Modernization Committee.

This plan has been amended over the years to remain compliant with the WLIP.

1992 Memorandum of Understanding – Land Records Modernization Program Between Eau Claire County and City of Eau Claire

In 1992, after the 1992 Land Records Modernization Plan was completed, Eau Claire County and the City of Eau Claire entered into a Memorandum of Understanding (1992 MOU). The agreement is in Appendix A. This document recognized that "Eau Claire County (COUNTY) is committed to the Wisconsin Land Records Information Program and its intent to create a cooperative and coordinated effort with and between government jurisdictions and the private sector to pursue land records modernization with all potential users and producers of land records." The 1992 MOU also recognized that "the City of Eau Claire (CITY) has already started a process of land records modernization after consultation and assistance from representatives of the COUNTY." The 1992 MOU concluded that "it will be to the public best interests that the CITY and COUNTY cooperate on the implementation of the goals and objectives of the Eau Claire County Land Records Modernization Plan."

The main components of the 1992 MOU are:

1. The CITY will provide the COUNTY with a base map of the CITY on a digital form.
2. The COUNTY will procure and install software and hardware system that is compatible with the geographic information system (GIS) currently in use by the CITY.
3. The COUNTY will provide the CITY with a tax parcel map of all of Eau Claire County in digital form.
4. The COUNTY agrees to provide the CITY with an annual accounting of the amount of additional recording fees collected each year as a result of the implementation of the fee schedule outlined in Wisconsin Statutes s. 59.57.

1994 Land Records Modernization Council

In 1994, Eau Claire County adopted an ordinance creating a Land Records Modernization Council (LRMC) to assess the implementation of the Land Records Modernization Program established in the Eau Claire County Land Records Modernization Plan as well as to assist in updating the plan as necessary.

The LMRC was tasked with: maintaining current information of the status of land records; evaluate and identify needs for land records modernization; recommend updates to the Land Records Modernization Plan; develop budgets and recommend strategies for implementing the Plan, including recommendations for expanding Recording Fee funds; and recommend grant applications, coordinate all land records modernization projects with local, regional, state, federal, and private agencies.

The LMRC was designated to have 7 members: a member of the Committee on Planning and Development, a representative of the Land Information Office, the Director of the Department of Planning and Development, a representative from the City of Eau Claire, a representative from the City of Altoona, a representative from the West Central Wisconsin Regional Planning Commission, and a private sector representative.

2010 Land Information Council

In 2010, Eau Claire County repealed the County Code pertaining to the Land Records Modernization Council and recreated the section with the creation of the Land Information Council (LIC). The LIC was established as set forth in Wis. Stat. s. 59.72(3m) and is tasked with reviewing priorities, needs, policies, and expenditures of the land program and advising the County on matters affecting the Land Information Office.

The LIC is comprised of: Register of Deeds, Treasurer, Real Property Lister, a member of the Committee on Planning and Development, a representative of the Land Information Office, a realtor, a public safety or emergency communications representative, and the County Surveyor.

2011 ACS Agreement

In 2011, Eau Claire County and the City of Eau Claire entered into an Intergovernmental Cooperative Agreement for the Implementation of the ACS Land Development Office and Assessing Office (2011 ACS Agreement). This agreement is found in Appendix B. The purpose of the 2011 ACS Agreement is to provide services to develop shared City-County land Records application and maintain in working order a Land Records Server and Storage System utilized by the parties to this agreement. The 2011 ACS Agreement established cost sharing for licensing, equipment purchases, maintenance, and software development. This agreement also called for the server and software to be located at the County Courthouse Computer Room and for County staff to be responsible for providing system administration and backup services.

An oversight committee was established including: County Information Services Director, and representatives from: City Planning, County Planning and Development, County Treasurer, County Finance, and City Finance.

How Cities Are Mapped In Other Wisconsin Counties

Most of the counties in Wisconsin incorporate municipalities into the County map. Exceptions are Rock County, which incorporates the City of Beloit but not the City of Janesville, and Eau Claire County. Some counties have agreements on how the information may be used by the municipalities.

Act 20

Act 20, the biennial state budget for the state fiscal years 2014 and 2015, includes a directive to create an implementation plan for a statewide digital parcel map. Act 20 also directs counties to coordinate their digital parcel mapping with the state. The implementation planning process will define the end product envisioned for a five-year process of statewide digital parcel map development - geographic information system (GIS) that meets the end users' business need, whether at the state or local levels of government, as well as those of the private sector.

Act 20 provides some funding mechanisms similar to current funding from retaining a portion of recording fees and provides for some grants for eligible counties.

CURRENT PROGRAMS

Land Records Management (ACS)

The City of Eau Claire and Eau Claire County provide and maintain current ownership and related property details for all real property as it applies to the yearly assessment and tax cycles. The information is derived from the daily recordings at the Register of Deeds Office and is then applied to other City and County programs, and made available to the private sector, municipal and state agencies. The City of Eau Claire and Eau Claire County land records data are currently combined under the ACS Computer System, hosted by Eau Claire County, with land record management duties divided between City and County staff.

Geographic Information Systems (GIS)

The City of Eau Claire and Eau Claire County GIS programs support both internal and external users by providing access to public land records. GIS publishes geographic data fulfilling mapping and data-distribution requests from various departments for their use, as well as requests from other government agencies, enterprises and private citizens. The City of Eau Claire and Eau Claire County maintain separate ESRI (Environmental Systems Research Institute) GIS Computer Systems. The City of Eau Claire provides an internal GIS intranet site. The City provides large single use PDF maps that are available on the internet. Eau Claire County provides a GIS Map and Database on the internet for use by the public, as well as internal staff and municipal and state agencies.

Appendix C "GIS Health Check" summarizes current and potential users and currently available information.

Current Land Records Process and Schedule

Appendix D includes flow charts showing the current land records process for both Eau Claire County and the City of Eau Claire.

COMBINED LAND RECORDS MANAGEMENT ANALYSIS

The Land Records Management and GIS Workgroup was created at the request of the Shared Services Committee to explore options and provide a recommendation for combining and/or sharing Land Records Management and Geographic Information Systems (GIS). The committee was tasked with finding the best ways to accomplish the following:

- Efficient routing of land records
- Accurate land record information
- Records updated in a timely manner
- Reduction in duplication of work
- One point of entry and responsibility
- Unified computer mapping platform

without having to assume maintenance of (1) current organizational structure/processes, (2) current physical location of personnel, or (3) current assigned duties.

The committee first produced and reviewed the current land records processes and workflows. The shared ACS Land Records system is mostly completed. That project

has already, or soon will, effectively accomplish many of the stated aims of this committee's charter. Efficient routing of records, updated in a timely manner, with duplication kept to minimum and single points of entry and responsibility are the byproduct of the ACS Land Records system solution and other efforts by both agencies.

What remains is to take the unified land records input and make sure the City and County have accurate land record information on a unified computer mapping platform. Currently each agency maintains a base map parcel layer on a separate GIS system. There are different rules and processes for data input, maintenance, and access via applications/map services.

In addition to the work groups charge, Act 20, the Wisconsin State Budget for 2014 and 2015, includes language that calls for a statewide digital parcel map through the Wisconsin Land Information Program. Section 186 of Act 20 directs the DOA to create an implementation plan for a statewide parcel map and directs counties to coordinate their digital parcel mapping with the state.

The importance of accuracy and a unified platform for the 18 agencies of Eau Claire County cannot be understated. Departments and staff at all levels of Eau Claire area governments are now more dependent on there being a single accurate digital map from which to work than ever before. There is also increasing pressure from citizens and business to be able to access land record information as well as data produced by the agencies. Requests for information are expected to increase as agencies and outside users become more familiar with geographical information system (GIS) applications. Providing this information will reduce staff time spent answering questions and providing information over the phone, to walk up requests, or by appointment. This may not result in the ability to reduce or reprioritize staff assignments. It may result in agencies being able to respond to more demands for services with existing staff.

Option Discussion

Creating a Unified Map

1. Continue current practice: Continue with separate parcel maps and require users to blend information together. This is not practical because it is both cumbersome to the end user and will not meet the requirements identified in Act 20.
2. Copy current City map onto County map: Continue with separate parcel maps. Periodically copy and paste City map as it is currently configured into County map as separate layer. This option will not be functional for GIS applications, will be

cumbersome to the end user, and will not meet the requirements identified in Act 20. This option should not be considered further.

3. Copy conformed City map onto County map: Continue with separate parcel maps. Bring the City map up to County standards then periodically copy and paste into County map as separate layer. This option will not be functional for GIS, will be cumbersome to the end user, and will not meet the requirements identified in Act 20. This option should not be considered further.
4. Periodically import City map into County Map: Continue with separate parcel base maps, conform the City map to County standards, periodically import the City map into the County map. The City map would need to be imported frequently to be useful. The mechanics of combining the maps frequently make this an impractical option for efficient utilization of staff time. This option should not be considered further.
5. Centralize the county-wide map at the County: The City map would be conformed to County standards and then migrated into the County map. County staff would be responsible to update map after the migration. End users would have access to a unified map and the end product would comply with the requirements identified in Act 20.
6. Centralize the county-wide map under the supervision of a GIS Administrator. The City map would be conformed to County standards and then migrated into the County map. County and City staff would continue to update the map under the supervision of the GIS Administrator. Staff would remain with each agency but supervision would come from the GIS Administrator. Staff from each agency would be responsible to meet the needs of end users within their jurisdiction such as permitting, addressing, property notification, project special assessment and design. End users would have access to a unified map and the end product would comply with the requirements identified in Act 20.
7. Centralize the county-wide map under an agency. The City map would be conformed to County standards and then migrated into the County map. Staff would be shifted from each agency to a centralized location under the supervision of a GIS Administrator. The GIS Administrator would establish all budgets and schedules to meet the needs of end users such as permitting, addressing, property notification, project special assessment, and design. End users would have access to a unified map and the end product would comply with the requirements identified in Act 20.

Land Records

1. Continue Current Practice: Continue to have both County and City staff inputting land records. Both entities input data directly to the shared ACS Software System.
2. Continue with both City and County staff inputting data to the shared ACS Software System under the supervision of a GIS Administrator. Staff would remain with each agency but supervision would come from the GIS Administrator. Staff from each agency would be responsible to meet the needs of end users such as permitting, addressing, property notification, project special assessment, and design.
3. Centralize data entry to the shared ACS Software system at Eau Claire County. Staff and budget would need to be shifted from the City to the County. Create an agency to update records in the shared ACS Software System. Staff would be shifted from each agency to a centralized location under the supervision of a GIS Administrator. The GIS Administrator would establish all budgets and schedules to meet the needs of end users such as permitting, addressing, property notification, project special assessment, and design.

GIS

1. Continue Current Practice – Each agency will continue to provide services, utilizing the available maps and land records each agency prepares.
2. Hire a GIS Administrator at the County to supervise GIS applications for all agencies within the county. The GIS Administrator will consider all needs and requests and establish all implementation schedules. Staff and budget would be shifted from the City to the County.
3. Hire a GIS Administrator who would report to both the County and the City Administrations. The staffing would be organized similar to the joint Purchasing Departments for the County and the City. Staff would remain with each agency but supervision would come from the GIS Administrator. Staff from each agency would be responsible to meet the needs of end users within the jurisdiction. The GIS Administrator would determine needs from end users outside of the County agencies and establish technical requirement software needs, hardware needs, budgets, and schedules to meet those needs.
4. Create an agency. Staff would be shifted from each agency to a centralized location under the supervision of a GIS Administrator. The GIS Administrator would consider all needs and requests from end users from both County agencies and outside, and establish all implementation needs including technical requirements, software needs, hardware needs, budgets, and schedules.

RECOMMENDATIONS

Centralize land records management duties at the County level with the responsibility of maintaining up-to-date county-wide land records and parcel base map layers. Continue to share the ACS Software System and move towards a unified GIS System. Initiate efforts to transfer City of Eau Claire parcels to the Eau Claire County data model and include City of Eau Claire parcels on the Eau Claire County WG Xtreme Guide mapping internet site.

Develop strategic and implementation plans for Land Records Management and Geographical Information Services to create a County-wide Land Records Entity and centralize land records management duties at the County level.

There are two elements to the Work Group's charge:

1. Recommend steps necessary to create a unified County-wide map and land records system that can be managed efficiently and without duplication of data entry.
2. Recommend steps to develop a geographical information system (GIS) based on the land records system and county-wide map that can be used in a variety of ways by internal and external users seeking parcel-based information within the county for a variety of existing and potential uses. The GIS needs to be able to provide parcel maps and data sets that meet the needs of the end uses and meets or exceeds the requirements of Act 20.

This committee recommends the following items in two parts: **Required Actions** and **Strongly Recommended Actions**.

Required Actions:

1. Develop and execute a formal agreement to centralize land records management duties at the County level with the responsibility of maintaining county-wide land records and parcel base map layers. The agreement will include requirements and responsibilities for each agency with details on: funding, hardware and software maintenance, server location, software licensing, data backups, archival storage, system security, data entry schedules, use of data, and liability for use of data. The agreement will include details on keeping the information up-to-date and modifying the information to meet future state land information requirements. This agreement is to be modeled after the Intergovernmental Cooperative Agreement For Implementation of the ACS Land Development Office and Assessing Office.

2. Complete a unified county-wide base parcel layer. This is needed for the state, for the shared land records system, for agency map-integrated application support, and to meet state land information requirements.
    a. Establish rules, conventions, and standards for the base layer map currently used by the County.
    b. Conform the City map to those standards.
    c. Migrate the City map into the County map.
3. Establish rules, conventions, and standards for updating the base layer map.
4. Publish the unified base map for citizen access via the internet on the County site. The City website will link to the County site.
5. Unify county-wide ESRI licensing, including all agencies, to better share available resources and insure compatibility of software and to commit to unified upgrades by all agencies.

Strongly Recommended Actions:

1) Create a GIS Administrator position that will:
    a. Be responsible for implementing all rules governing the management, updating and use of the GIS base map.
    b. Be the liaison to all City and County departments working with the base map, or who need to have map integration with their applications.
    c. Provide direction for County and City IT staff regarding the ESRI application servers and GIS database servers.
    d. Provide assistance and direction for County and City technical staff who work with production and published versions of the map database.
    e. Direct the activities of the technicians assigned to improve and manage the base map.
2) Develop a strategic 3-year GIS plan and update regularly.
3) Train County and City departmental GIS technicians and users.
4) Train County and City IT staff on maintaining GIS application and database servers.
5) Redesign the map database such that the merged unified product has easy-to-migrate datasets, a well-defined data dictionary, and recognizable data structure standards.
6) Develop the metadata for the base map layers.
7) Map all parcels with coordinate geometry (COGO) with line work attributes.
8) Amend the formal agreement for Land Records Management to include the role of the GIS Administrator, and training.
9) Include a staff member from the City of Eau Claire on the Land Information Council.

Estimated Schedule

Milestone	Months																											
Develop and Execute Agreement to create and maintain a shared parcel base map																												
Establish and document Base Map and data rules, conventions, and standards																												
City of Eau Claire to conform base map to established standards																												
Migrate City map into County map																												
Establish rules conventions and standards for base layer map governing data updates, software updates, data standards, and documentation													Ongoing															
Publish unified base map																												
Unify county wide ESRI licensing																												

Appendices:

1992 Agreement

2011 ACS Cooperative Agreement

GIS Health Check

Land Records Flow Charts – Eau Claire County, City of Eau Claire

MEMORANDUM OF UNDERSTANDING

LAND RECORDS MODERNIZATION PROGRAM
BETWEEN
EAU CLAIRE COUNTY & CITY OF EAU CLAIRE

WHEREAS, Eau Claire County (COUNTY) is committed to the Wisconsin Land Records Information Program, and its intent to create a cooperative and coordinated effort with and between governmental jurisdictions and the private sector to pursue land records modernization with all potential users and producers of land records, and

WHEREAS, the City of Eau Claire (CITY) has already started a process of land records modernization after consultation and assistance from representatives of the COUNTY, and

WHEREAS, both the CITY and COUNTY support the Wisconsin Land Information Program (WLIP), and

WHEREAS, the COUNTY has completed a plan titled the Eau Claire County Land Records Modernization Plan dated April 6, 1992, which has been submitted to the Wisconsin Land Information Board (WLIB), and

WHEREAS, it will be to the public best interests that the CITY and COUNTY cooperate on the implementation of the goals and objectives of the Eau Claire County Land Records Modernization Plan.

NOW THEREFORE BE IT MUTUALLY AGREED, as follows:

1. That the CITY and COUNTY will work together to further promote the modernization, cooperation, and integration of land records.

2. The CITY agrees to resurvey certain U.S. Public Land Survey corners based on a coordinate system which can easily be converted to a legislatively established datum, such as NAD 83-91.

3. The COUNTY agrees to provide assistance in the adjustment and compilation of the final data resulting from the above stated resurvey.

4. The CITY will provide the COUNTY with a base map of the CITY on a digital form.

5. The COUNTY will procure and install software and hardware system that is compatible with the geographic information system (GIS) currently in use by the CITY. Changes in the systems will be mutually agreed upon before implemented.

APPENDIX "A"

6. The COUNTY will provide the CITY with a tax parcel map of all of Eau Claire County in digital form.

7. It is recognized that this memorandum of understanding does not contain specific funding obligations. the COUNTY agrees to assist the CITY in obtaining any available grants from the State of Wisconsin for land records modernization.

8. The COUNTY agrees to provide the CITY with an annual accounting of the amount of additional recording fees collected each year as a result of the implementation of the fee schedule outlined in Wisconsin Statutes s. 59.57.

9. the COUNTY agrees to work with the CITY towards conducting an aerial flight as part of Phase Two in the spring of 1994 that will include the lands lying within the City Limits of Eau Claire, and to provide financial assistance from the additional recording fees collected by the COUNTY for this purpose.

10. The CITY and COUNTY agree to work towards a common parcel identification numbering system for better retrieval and tracking of land transactions and records.

11. It is agreed that the information obtained from land records modernization is public information.

FOR: EAU CLAIRE COUNTY	FOR: CITY OF EAU CLAIRE
By: [illegible]	By: [illegible]
Title: County Administrator	Title: CITY MANAGER
Date: 6/25/92	Date: 6/24/92

EAU CLAIRE CITY-COUNTY INTERGOVERNMENTAL COOPERATIVE AGREEMENT FOR IMPLEMENTATION OF THE ACS LAND DEVELOPMENT OFFICE AND ASSESSING OFFICE

I. PARTIES

This Agreement is between **Eau Claire County**, Wisconsin, a quasi-municipal corporation, ("County") located at 721 Oxford Avenue, Eau Claire, Wisconsin 54703, and **City of Eau Claire**, a municipal corporation, ("City") located at 203 South Farwell Street, Eau Claire, Wisconsin 54701.

II. PURPOSE OF CONTRACT

The purpose of this contract is to provide services to develop shared City-County Land Records application and maintain in working order a Land Records Server and Storage System utilized by the parties to this agreement. Intergovernmental Cooperative Agreements are specifically authorized under Wis. Stat. §§ 59.52(7) and 66.0301.

III. TERM OF CONTRACT

Services under this Agreement shall commence February 1, 2011 and shall continue through the life of the ACS Software Solution.

IV. OPTION OF RENEWAL AND TERMINATION.

Providing that the parties are not in default of the terms hereunder, this Agreement shall automatically renew itself for one-year periods. Each party shall give notice to the other parties in writing of its request to exercise its option to terminate this Agreement at least one (1) year in advance.

If any party gives notice and terminates participation under this Agreement, it forfeits any rights to any of the shared equipment or software or any compensation for its expenditures for the shared equipment or software. The last party participating shall own all of the shared equipment, including the server, software and software licenses. If the County is not the last remaining participant, costs of relocating the equipment from the County courthouse, Information Systems Department, shall be borne by the party where the equipment will be located.

V. COSTSHARING FOR LICENSING, EQUIPMENT PURCHASES, MAINTENANCE AND SOFTWARE DEVELOPMENT

The County has purchased County-wide software licenses from ACS. In addition, the County has purchased servers for the ACS programs at a cost of $49,000. The County and City agree that ACS licenses shall be purchased by the County and future equipment purchases related to the ACS programs shall be shared on a ratio of 70% for the County and 30% for the City. The breakdown of yearly maintenance fees will be assessed on a 70%/30%

APPENDIX "B"

basis depending on participation. ACS has provided a Statement of Work (SOW) for the Land Development Implementation Project (Project). A summary of the SOW is attached as Exhibit A. The SOW allocates project costs in the following manner:

County	$189,000
City	$179,000

The County shall be the lead agency and shall sign contracts related to the Project. The City shall reimburse the County for the City's share of Project costs as shown in the SOW within 30 days of receiving an invoice from the County.

Costs for customized reports shall be borne by the requesting party. Incidental costs, such as reimbursements to ACS for travel and training shall be split 70% to the County and 30% to the City.

The formula for shared cost will be reviewed eighteen (18) months after the commencement of this Agreement and modified as appropriate. Any additional equipment or software that benefits all parties will be funded by all of the parties per the cost sharing formula in effect at the time of the purchase.

VI. INDIVIDUAL COSTS

Each party is responsible for funding their own workstations and the cost of connection to the network as well as any additions that benefit only one party.

VII. LOCATION OF EQUIPMENT

The server and software will be located in the County courthouse computer room. County staff will be responsible for providing system administration and backup. The City will pay to the County 30% of the system administration and backup costs, figured as one (1) hour/week or approx. $2500\year. These costs will be reviewed annually and be adjusted to reflect the actual time and costs including the increased costs of wages and benefits. Any costs in addition to the standard system administration and backup costs incurred by the County will be billed 30% to the City. Other major project costs, not yet identified, shall be split 70% to the County and 30% to the City.

VIII. OVERSIGHT COMMITTEE

The County Information Systems Department Director, the City Information Services Director and one (1) representative from each of the following departments: City Planning, County Planning and Development, County Treasurer, County Finance, and City Finance shall be responsible for managing the City-County ACS solution project. The Committee shall meet at least twice a year. The individuals on the Committee will report back annually to their respective governing bodies regarding the status of the City-County Land Records / ACS integration project.

IX. NOTICES

Notices required or deemed advisable under this Agreement shall be placed in writing and delivered personally or by registered or certified mail upon the County to: **Dave Hayden**, Information Systems Director, 721 Oxford Ave., Eau Claire, WI, 54703, Telephone (715) 839-4841; upon the City to: **John LeBrun,** Information Services Manager, 203 S. Farwell St., Eau Claire, WI 54703, Telephone (715) 839-5044.

X. MUTUAL INDEMNIFICATION

The parties agree fully to indemnify and hold one another harmless from and against all claims, actions, judgments, costs, and expenses, arising out of damages or injuries to third persons or their property, caused by the fault or negligence of the said party, its agents, or employees, in the performance of this Agreement. The parties shall give to each other prompt and reasonable notice of any such claims or actions and the other party shall have the right to investigate, compromise, and defend the same.

XI. WAIVER OF BREACHES

No waiver of any breaches of this Agreement shall be held to be a waiver of any other or any subsequent breaches. All remedies afforded in this Agreement shall be considered to be cumulative and in addition to any other remedies provided by law.

XII. APPLICABLE LAW

This contract shall be governed under the laws of the state of Wisconsin and is made at Eau Claire County, Wisconsin, and venue for any legal action to enforce the terms of this Agreement shall be in Eau Claire County Circuit Court.

XIII. SECTION HEADINGS

The headings of the several sections, and any table of contents appended hereto, shall be solely for convenience of reference and shall not affect the meaning, construction or effect hereof.

XIV. NON-ASSIGNMENT OF AGREEMENT

The parties agree that there shall be no assignment or transfer of this Agreement, nor of any interests, rights or responsibilities herein contained, except as agreed to in writing.

XV. MODIFICATIONS TO AGREEMENT

There shall be no modifications to this Agreement, except in writing, signed by both parties.

XVI. INTEGRATION OF AGREEMENT

The entire agreement of the parties is contained herein, and this Agreement supersedes all previous agreements, where written or oral and all negotiations as well as any previous agreements presently in effect between the provider and the County relating to the subject matter.

This Agreement represents the entire agreement between the parties hereto and supercedes all prior negotiations, representations or agreements, either written or oral.

All parties hereto having read and understood the entirety of this Agreement consisting of three (3) typewritten pages hereby affix their duly authorized signatures.

EAU CLAIRE COUNTY BY:

J. Thomas McCarty

J. THOMAS McCARTY
COUNTY ADMINISTRATOR

3/15/2011
(Date)

CITY OF EAU CLAIRE BY:

Mike Huggins

MIKE HUGGINS
CITY ADMINISTARTOR

Feb. 28, 2011
(Date)

CNTX-189

Eau Claire, WI

Joint City and County
GIS HealthCheck
February 20-21, 2013

APPENDIX "C"

GEOGRAPHIC INFORMATION SERVICES, INC.
2100 Riverchase Center Suite 105, Birmingham, AL 35244
Phone: (205) 941-0442 | Fax: (205) 982-7733

GIS HealthCheck Outline

1. Executive Summary
2. Technical Diagnostics
   - Data storage
   - Data quality
   - Software holdings
   - Architecture
3. GIS Utilization Assessment
   - Governance and funding
   - Awareness and training
   - Functional adoption
   - Enterprise deployment and e-government
4. General Prescription (Recommendations)
5. Departmental Prescriptions (Recommendations)
6. Summary

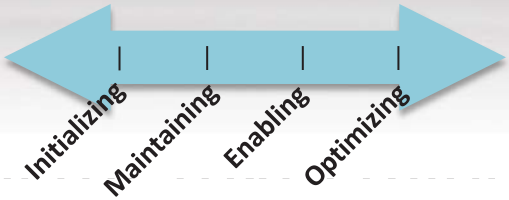
Executive Summary

- The City of Eau Claire and Eau Claire County jointly contracted with GISi to perform a GIS HealthCheck.
  - ✓ *Medical health check* - includes diagnostics (tests), a lifestyle assessment, and prescriptions or recommendations for improvement.
  - ✓ *GIS HealthCheck* – includes similar components: a technical diagnostic of the GIS, an assessment of the business utilization of the GIS, and suggestions for improvement.
  - ✓ GIS HealthCheck Interviews were performed on February 20-21, 2013, as facilitated by the City's Information Services Department.
- Eau Claire **recognizes the value of geographic information systems and has the building blocks to build a true enterprise GIS**:
  - **Hardware and network infrastructure are available.**
  - **Enterprise desktop and server software are licensed.**
  - **GIS data exists with opportunities to improve data reliability and access.**
  - **Agencies wish to look for chances to partner.**
- The agencies each have a strong desire to improve efficiencies in their GIS implementation. Departments recognize the value of GIS and wish to create a more streamlined, unified program. Stakeholder support will be a tremendous help to make significant gains in integrating GIS into the agency's business processes. Ultimately, this will save time and money, expand capabilities and improve access to information.
  - Existing data in each organization provides a foundation for growth.
  - Some ArcGIS for Server framework technologies are licensed and ready to provide value.
  - ArcGIS Online can simplify access to data and applications.
  - Opportunities to integrate business systems data and GIS for spatial analysis.

Technical Diagnostics

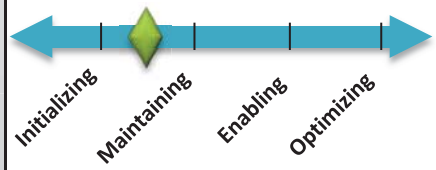
- ☑ Category definitions
  - Data storage: which GIS data formats are used and how data is organized
  - Data quality: data completeness and the degree to which business/spatial intelligence is enforced within GIS data
  - Software holdings: types of GIS software owned how it is used by the organization
  - Architecture: the system design for GIS and the way in which end-users consume data/services

Technical Diagnostics

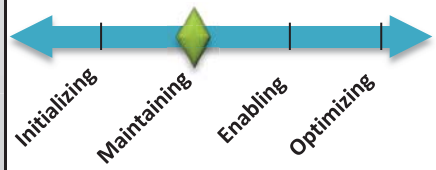


- ☑ Data storage and quality maturity levels
  - Initializing: GIS data is maintained in flat files using no formal modeling methodology. Very little or no metadata exists for any of the feature classes.
  - Maintaining: GIS data is maintained in a combination of flat files and geodatabases with little or no data modeling and/or object intelligence.
  - Enabling: GIS data is maintained in geodatabases utilizing a formal data model. Topology rules, subtypes, and domains are used to streamline data maintenance tasks. Metadata exists at the feature class level for most data sets.
  - Optimizing: GIS data is maintained in an enterprise geodatabase using industry-standard data models leveraging topology rules, subtypes, and domains. Attributes fully support existing or planned business processes. Metadata exists for all GIS data at both the feature class and feature levels. Attribute and spatial indexing are set and performing.

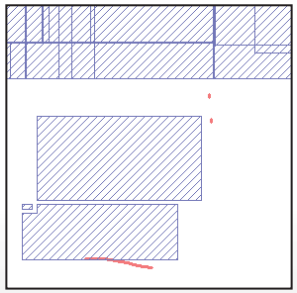
Technical Diagnostics

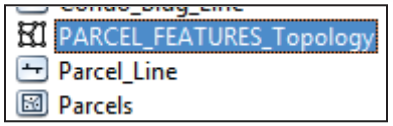
Category	Maturity Level	Supporting Information	Implications
Data Storage and Organization		• Corporate GIS data is organized in a mixture of storage and software formats. • Most data is stored by departmental users and not centrally shared by the organization. • SQL enterprise databases are managed chiefly for one department. • Most staff are not aware of what GIS data is available or where/how to access it. • Standard data models are not currently used. Core datasets have widely different structures between agencies. • Potential redundant data and duplication of effort exists between departments and agencies. • Database replication has been implemented with moderate success. • GIS data needs integration with other business systems. Related data in other systems is not regularly made available to GIS users. • No metadata is present for feature classes or features. • Aerial photography is not widely used throughout the organization.	• Data stored in a central database repository allows the data to be used by everyone with GIS access. An unclear data organization system prevents efficient data management, timely sharing and utilization. • ArcSDE versioned databases improve editing workflows through simultaneous multiuser editing access. • Data duplication leads to inefficient business processes. • The lack of standard data models can make the data difficult to incorporate or share with other entities. This limits the use of industry applications and tools based on respective standards. • The lack of metadata can cause confusion regarding data source, currency, authority, structure, etc. • New storage mechanisms ease raster management and improve performance. Publishing imagery services can increase accessibility.

Technical Diagnostics

Category	Maturity Level	Supporting Information	Implications
Data Quality		• Core GIS base datasets are managed to jurisdictional boundaries (e.g. parcels). Addressing and street centerlines are jointly maintained, hosted by the County. • Concern exists over the quality of some enterprise data. There is confusion over data ownership, maintenance responsibility, and data currency. • Use of advanced geometry types and database structures (domains, subtypes, topologies, networks). • GIS datasets are not linked to other business systems. • Data maintenance and design is focused on individual departments rather than enterprise needs. • Quality and coverage of aerial photography is unclear.	• Improving data quality and clarifying data ownership, particularly of foundation datasets, builds confidence in the system and leads to better decision-making. • The use of standard GIS data models will assist in creating relationships between GIS features and external data tables, which will in turn enhance the utility of the GIS data. • Advanced attribute and geometry structures improve capability and reliability. • Primary keys should uniquely identify a record and allow integration between systems. • Established QA/QC standards will help ensure that the data within the enterprise database conforms to enterprise standards and meets the desired level of consistency and quality. • Lack of metadata leads to questions of data quality, source, and usage limitations. Lack of feature-level metadata inhibits understanding of feature source and age. • Current imagery provides great detail for a variety of purposes including feature extraction.

Current Data Review

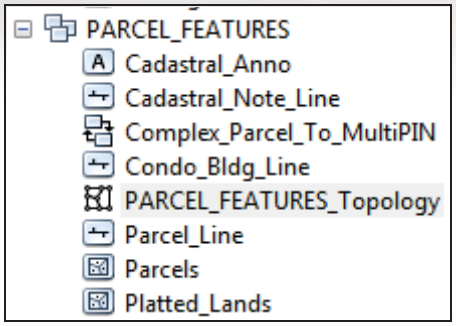


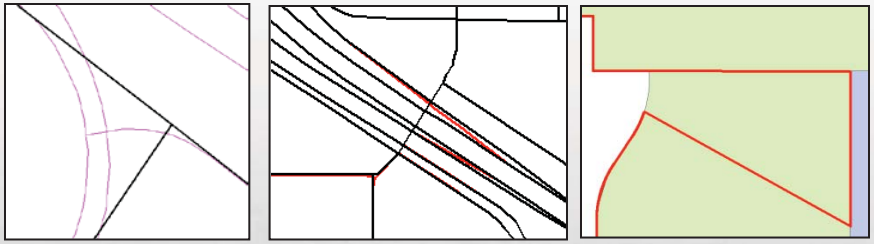


Complex GIS objects such as topologies or geometric networks safeguard accurate data. Be sure to regularly check for and correct errors.

Evaluate data for redundant or unneeded feature classes.

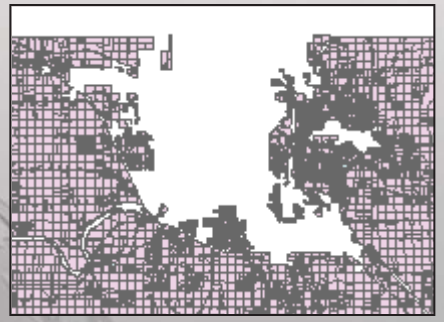
Inconsistent data models reduces confidence in data and inhibits data sharing.





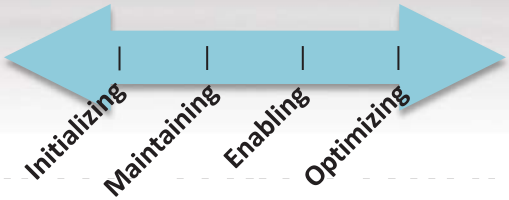
Discrepancies between agency data leads to confusion. Shared datasets encourage collaboration.

Geometry gaps prevent cooperative business processes.



- Lack of central database or share-by-request leads to errors in departmental decisions.
- Base reference data is not stored in enterprise geodatabase.
- Lack of metadata prohibits understanding of data purpose.
- Lack of QA/QC procedures places enterprise data and business processes at risk.

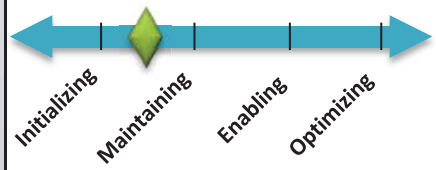
Technical Diagnostics



- ☑ Software and architecture maturity levels
  - Initializing: GIS technology exists but does not support business.
  - Maintaining: GIS technology is used to support business within departments but is not shared.
  - Enabling: GIS technology is shared across the organization but does not support enterprise applications. Current software versions are used.
  - Optimizing: GIS fully supports enterprise applications. Current software versions are used.

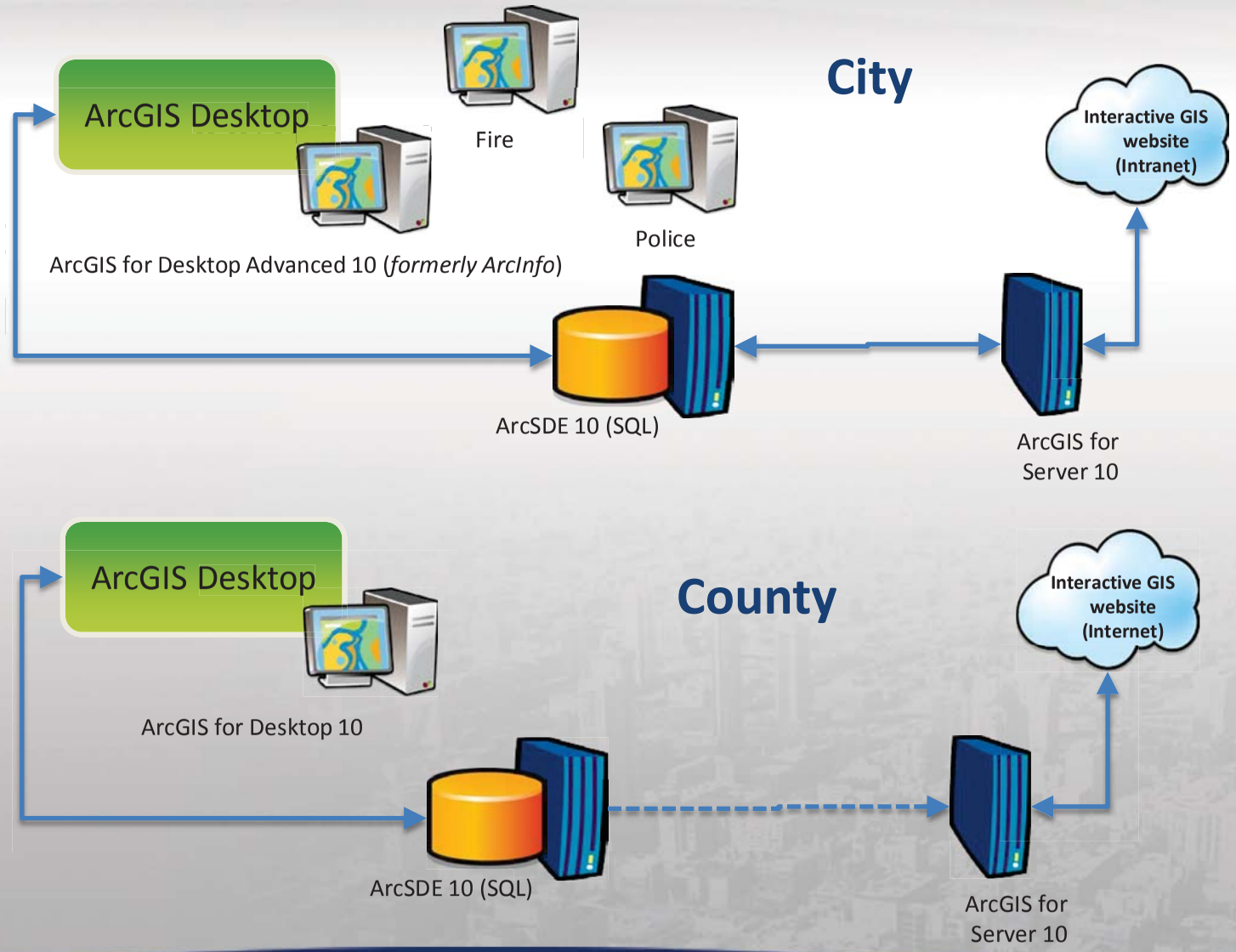
Technical Diagnostics

Category	Maturity Level	Supporting Information	Implications

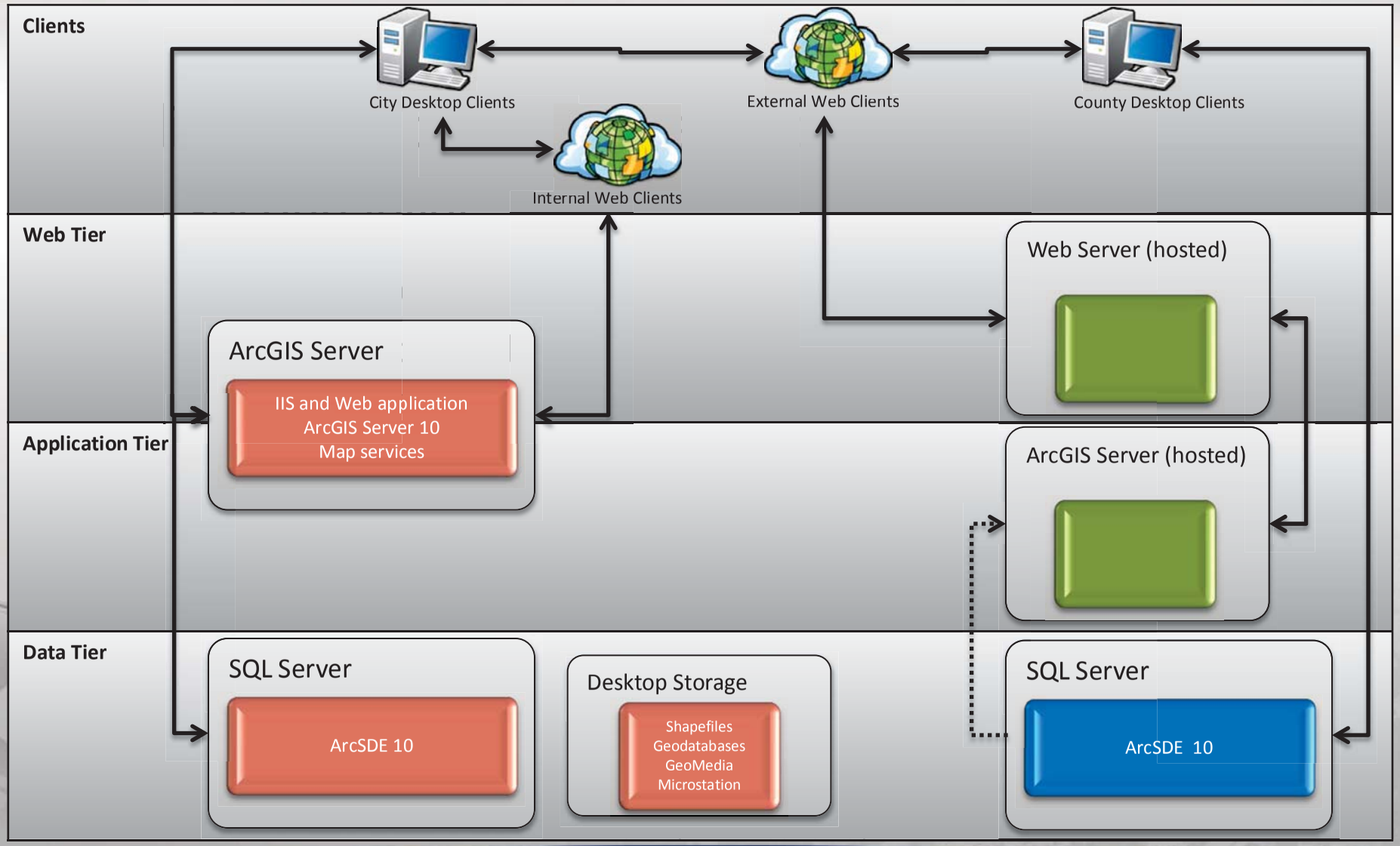
Software Holdings		• **GIS: City**
		  • ArcGIS for Desktop 10.0
		  • ArcInfo (4 concurrent, 2 single)
		  • ArcGIS for Server 10.0
		  • ArcSDE 10.0
		• **GIS: County**
		  • ArcGIS for Desktop 10
		  • 2 ArcInfo, 4 ArcView (all concurrent)
		  • ArcSDE 10.0
		• **Other software**
		  • ACS Land Records
		  • AssessPro (CAMA)
		  • Bing Maps
		  • GeoComm AVL
		  • GeoMedia
		  • Google Maps / Earth
		  • Lucity Asset Management
		  • MicroPaver
		  • MicroStation
		  • Omega FireView
		  • StrataPoint
			• Software licensing is managed independently by departments rather than through Information Services. Version compatibility between systems may be at risk.
			• Different software versions between agencies limits ability to automate data sharing processes.
			• Consolidating licenses to a single account per agency eases management and improves availability.
			• An ELA provides maximum flexibility and growth potential for GIS licensing.
			• ArcGIS for Server provides great GIS functionality but is not being utilized to its full capability. Its flexibility potentially allows additional service delivery for agency staff and the general public.
			• Lack of County ArcGIS for Server prevents providing internal services to agency.
			• Lack of automated data migration processes limits the frequency and efficiency of data updates.
			• Integration with other software systems is limited by data structure, storage practices, and server technology.
			• Use of ArcGIS for Server and web-based applications driven by a single department.

Technical Diagnostics

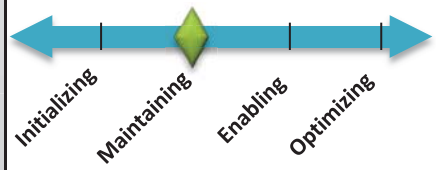
Category
Architecture Software



Server Architecture



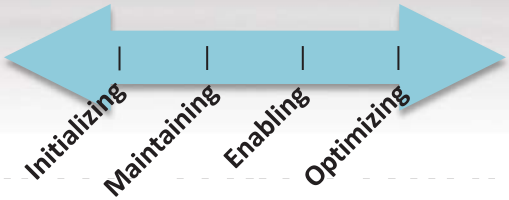
Technical Diagnostics

Category	Maturity Level	Supporting Information	Implications
Architecture		• The City currently has at least 1GB fiber network between facilities. • Most servers are virtualized and balanced/redundant offsite. • County stores GIS data in SDE on a SQL Server. Web and application server is hosted. • Offsite disaster recovery processes exist for current virtual machines. While servers are duplicated, data is not replicated to offsite systems. • Integration with other business systems is lacking.	• With architecture improvements the GIS is capable of being used as a hub technology throughout the agency. • Unused capabilities of ArcGIS for Server can improve access and use of GIS data and services across the agency. • Need exists for a system that can scale to the demand of the GIS. A virtualized environment allows for the rapid deployment of GIS-specific servers in the future. • Virtualization should allow for simplified disaster recovery and failover processes. • Opportunities exist to business systems together allowing users to have one information portal.

GIS Utilization Assessment

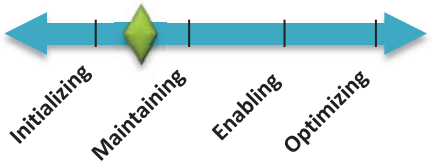
- ☑ Category definitions
  - Governance and funding: how GIS activities are managed, organized, and funded
  - Awareness and training: how GIS capabilities are communicated and how training programs are made accessible to staff
  - Functional adoption: how GIS is deployed across the various departments within the organization
  - Enterprise deployment and e-government: the perspective of how GIS is used – from a desktop solution to departmental use and eventually an enterprise approach

GIS Utilization Assessment



- ☑ Maturity levels
  - Initializing: GIS is in the formative stages, either recently established or with only basic capabilities
  - Maintaining: GIS solutions are deployed, most resources supporting their use with modest enhancement efforts.
  - Enabling: GIS solutions are deployed with resources helping functional areas leverage them for business improvement (productivity, service, quality, etc.).
  - Optimizing: GIS solutions are being used to create new capabilities or business strategies.

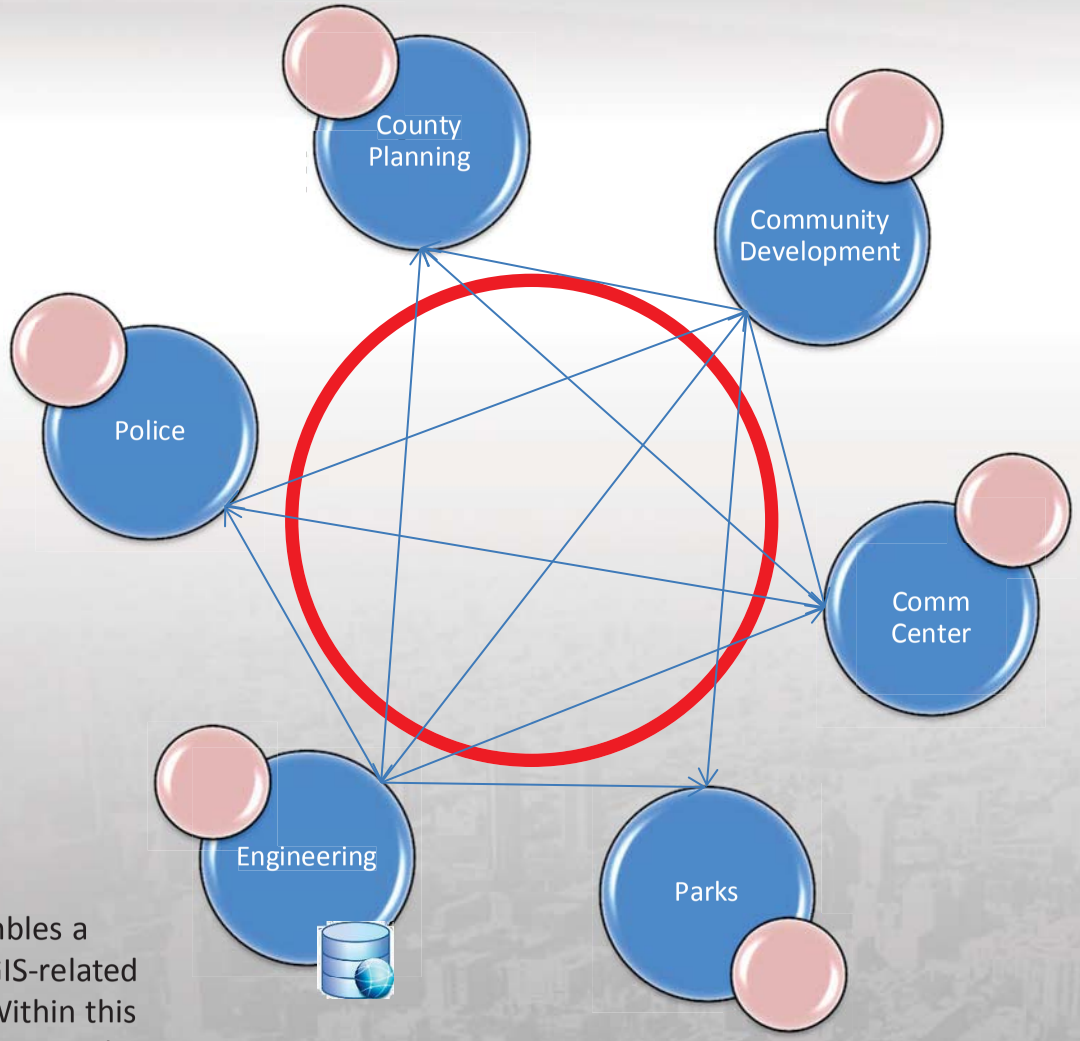
GIS Utilization Assessment

Category	Maturity Level	Supporting Information	Implications
Governance and Funding		• GIS coordination occurs through the Engineering department (City) and Land Information Division (County). • No dedicated GIS manager exists at either agency. • The agencies lack a formal GIS governance model but are closest to a distributed model. Nearly all activities are isolated within the departments. • The GIS is funded through a separate budget with no charge backs. • Data ownership and editing responsibilities are sometimes unclear. • No formal standards exist for data or products. • No communication plan exists for GIS users within either agency. User groups and email distribution lists are lacking. • No formal training plan exists. Most staff were last trained 5 years ago during the initial adoption of Esri software.	• For GIS to be successful there needs to be a centralized management of GIS for the entire agency. This allows for the ability to set data standards, manage projects and provide efficient services. • Current staffing and expertise is likely inadequate. Additional support will be needed for increased capability. • A centralized model provides strong control of GIS from an enterprise perspective. Staff demands can become a resource constraint. • A strong funding source is in place to support GIS. • Lack of in-house control on GIS data limits use across the organization. Delayed updates and incomplete data prevent confidence in the system. • User groups and committees encourage interactions and can provide guidance and support for the needed goals and objectives of a successful program. • Continuing education helps ensure agencies receive the most value out of their investment.

GIS Utilization Assessment

Departments

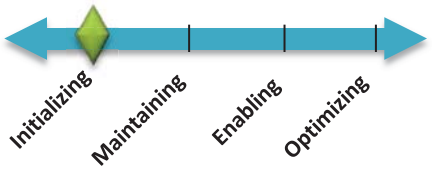
Staff using GIS



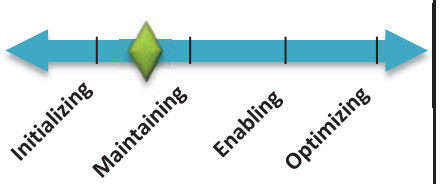
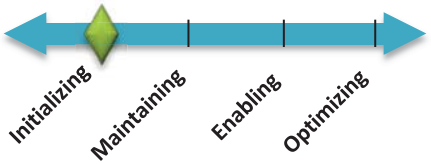
The current governance model most closely resembles a distributed model. The distributed model has all GIS-related actives occurring within individual departments. Within this model, staff are responsible for all core aspects of GIS and without central management for an enterprise approach.

Note: This diagram is representative of the distributive nature in the agencies. It is not intended to inclusively document every link between departments.

GIS Utilization Assessment

Category	Maturity Level	Supporting Information	Implications
Awareness and Training		• City maintains an interactive GIS website accessible for internal use. County exports data to a hosted site for external access. • Staff and management have limited awareness of GIS capabilities and activities. • Most users have had no additional training since initial adoption of system several years ago. • No formal enterprise GIS training plan is in place. • Most map products are created by PW Engineering (City) and Land Information Division (County). Most staff understand GIS as the website. • Regular communication among GIS users and between agencies is limited. • Departmental staff indicate they desire more and easier access to information .	• Opportunities for data partnerships (exchange or cost sharing) may improve operations efficiency. • GIS data exists in each agency but is widely dispersed among users. • A general web-based solution gives most staff the ability for basic interaction with the data. • Executives may not be able to leverage GIS in decision making. Therefore they might not be able to articulate what GIS means to the agency and how the value received from it can impact budget and jobs. • Attending conferences, seminars and training opportunities and facilitating an internal GIS users group are a key to maximizing GIS investments. • Lack of a formal communications plan will continue to limit awareness of the GIS capabilities, updates, etc.

GIS Utilization Assessment

Category	Maturity Level	Supporting Information	Implications
Functional Adoption of GIS		• The agencies have no division clearly responsible for GIS for the organization. • Most data is maintained internally but not readily shared to the organization. • GIS products and are regularly referenced but not currently an integral part business processes. • There is a general desire for increased access to GIS technology and products to improve existing business processes.	• A central GIS department or contact is a great foundation for a successful GIS within the agency. • Not providing GIS to the agency at an enterprise level limits the usefulness of GIS as a decision making tool. • Increased integration of GIS with other business systems and departmental adoption of basic tasks will significantly increase efficiencies.
Enterprise Deployment and E-Government		• Minimal ArcGIS Server capability is being used. • The City Public Works and County Land Information GIS databases are built upon ArcSDE and SQL Server. These are not utilized as central enterprise data stores across the organization. • Other agency business systems are not linked to GIS. • User training is a constraint.	• Deployment via the ArcGIS Server platform (map, imagery, geoprocessing services) can help to streamline integrations with other business systems. • Components of Esri's ArcGIS for Local Government initiative are a convenient and cost effective way to expand utilization. • Automated scripts and tools can simplify update processes and add value to agency data. • Users should stay current on new software tools to ensure efficient workflows.

Current GIS Summary

Technical Diagnostics

Data storage and organization

Data quality

Software holdings

Architecture

Current GIS Summary

Utilization Assessment

Governance and funding

Awareness and training

Functional adoption

Enterprise deployment and e-government

Eau Claire

Enterprise Prescription

Geographic Information Services, Inc.

2100 Riverchase Center Suite 105
Birmingham, AL 35236
Web: www.gisinc.com
Fax: (205) 982-7733

esri Partner Network Platinum

Rx

General Prescription

- ❑ Short-term Prescription
  - Quick Win
  - Maintaining & Enabling
  - Building the Quick Win
- ❑ Mid-term Prescription
  - Enabling & Optimizing
- ❑ Long-term Prescription
  - Optimizing

☐ Label
☒ No Substitutions

Signature GISi

General Prescription – Short-term

Initializing

Maintaining

Enabling

- **Short-term Prescription – Maintaining and Enabling the GIS Foundation**
  - Update Desktop Software
    - Update ArcGIS for Desktop 10.1 software and latest service pack.
      Review desktop hardware requirements before installation.
  - Update Server and Enterprise Geodatabase
    - Update ArcGIS for Server 10.1 software and latest service pack.
      Review server hardware requirements before installation.
    - Upgrade the database to ArcSDE 10.1 software and latest service pack.
      (The database should be the last component upgraded. Prior to upgrading the production environment, it is highly recommend to implement the change in a development or staging environment to establish process and validate functional implications.)
  - Software Licenses
    - Combine all licensing into one account per agency and convert to concurrent-use licenses.
    - Maintain consistent software version across the organization and between agencies.
      - Forward database compatibility is enabled after version 10 SP 2. This should ease version requirements between agencies.
    - Consider deploying ArcGIS for Desktop Basic (formerly ArcView) for key users.
      - Not all staff who think they need GIS will require ArcGIS for Desktop. Many will have their needs met through focused web applications.
  - Staffing
    - Create and hire a GIS Manager position to support the development and management of the enterprise foundation. Candidate should have demonstrated GIS experience. Ideally this position is part of Information Services.
      - The agencies might consider jointly-funding this position to oversee implementation across each organization and between agencies.

General Prescription – Short-term

Initializing

Maintaining

Enabling

- **Short-term Prescription – Maintaining and Enabling the GIS Foundation**
  - Redesign the Agency Geodatabase
    - Create separate database instances for Staging, Production and Publishing.

      (This will improve performance, maintenance and test environment)
      - **Staging** – This database is intended for building and testing new applications and data.
      - **Production** – This database is intended for editing spatial data.
      - **Publishing** – This database contains periodically published (i.e., daily, weekly, etc.) versions of the production data. All users will connect to this database for viewing data only. No editing will be performed in this database.
    - Merge core datasets to eliminate fragmentation across boundaries.
    - Create scripts to migrate data between production and publishing databases.
    - Implement SDE replication between agencies to share data where appropriate.
    - Create centralized address locators.
    - Develop a geodatabase maintenance plan.
    - Develop a data matrix documenting data ownership, updates and frequency.
  - Take Advantage of Esri's ArcGIS for Local Government Initiative (significant ROI)
    - Select and implement free editing and web application templates

      (e.g. Address Management, Utility Network Editing, Operations Dashboard)
    - Download the ArcGIS for Local Government Information Model (LGIM)
      - Develop crosswalks to compare existing data to the LGIM.
      - Migrate *operational* data necessary to support desired applications.
    - Optimize map services with ArcGIS for Server (cartographic design, caching strategy)
  - Leverage ArcGIS for Server
    - Provide standardized map and data services for internal users
    - Publish imagery services
    - Emphasize simple, focused applications over general purpose viewers

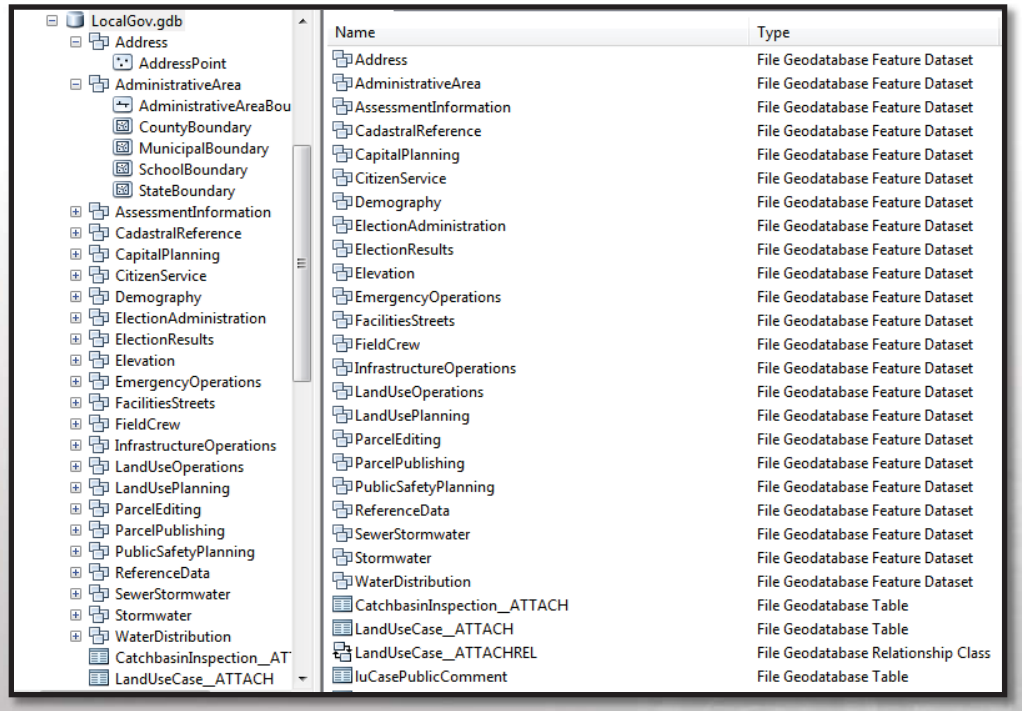
General Prescription – Short-term

Initializing

Maintaining

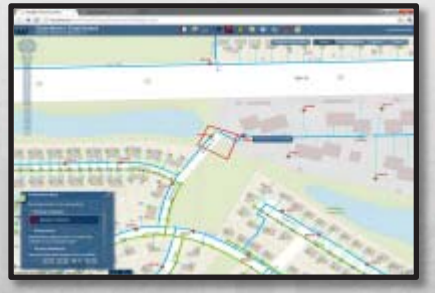
Enabling

Esri Local Government Information Model



Utility Network Editing

Operations Dashboard



By using the Local Government Information Model from Esri, the agency can quickly take advantage of the maps and apps published on the ArcGIS Resource Center as part of the ArcGIS for Local Government initiative.

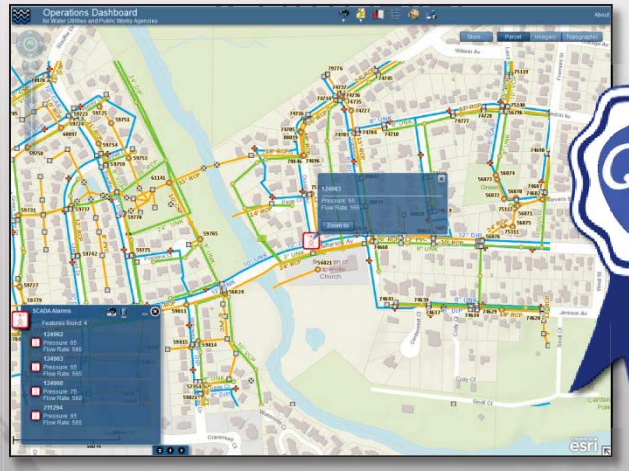
General Prescription – Short-term

Initializing

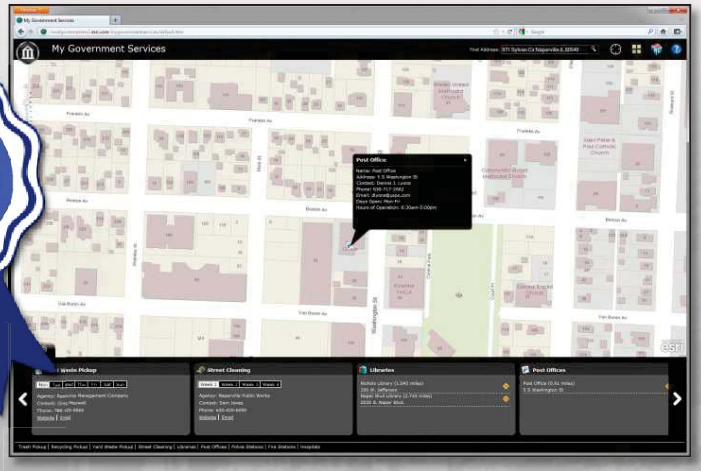
Maintaining

Enabling

- **Short-term Prescription – Maintaining and Enabling the GIS Foundation**
  - Download the Infrastructure Operations Dashboard and the My Government Services web application templates.
  - Migrate the necessary operational data into the LGIM.
  - Publish the map services in ArcGIS for Server and ArcGIS Online.
  - Configure the web applications.
  - Publish success in press releases to GIS news sites and regional GIS groups.



Infrastructure Operations Dashboard



My Government Services

General Prescription – Mid-term

Maintaining

Enabling

Optimizing

- **Mid-term Prescription – Data, Editing & Maintaining**
  - Data Storage & Organize Data
    - Migrate *all* data to the Local Government Information Model (LGIM) geodatabase. Archive and remove old datasets. Evaluate and extend as truly necessary.
      (To build the quick win migrating only the needed data first will speed up the win, migrating additional data over as you push new applications. This schema does not have to be adopted for each database, but rather could serve as the publishing model only, if preferable, which may require some data translation.)
    - Create a centralized ArcSDE database repository for production data available to all users.
    - Create a central Network Storage Area to allow users to store all related GIS data, MXD's, projects, etc.
      (This will ensure that all projects have central storage and backups are being preformed.)
    - Design a Network Storage Policy. *(Naming conventions, directory schema, etc.)*
    - Create an ArcGIS Online for Organizations subscription to improve data access and enable mobile workflows.
  - Data Quality
    - Review each of the core layers for data completeness and the degree to which business/geometric intelligence is enforced within the GIS data.
    - Define data maintenance responsibility and procedures. Consider combined maintenance of integrated core datasets.
    - Establish streamlined procedures to address concerns regarding data currency and completeness.
    - Maintain the GIS data in the LGIM or another geodatabase utilizing a formal data model. Topology rules, subtypes, and domains should be used to streamline data maintenance tasks and ensure data integrity.
    - Leverage the Attribute Assistant editing extension to populate primary keys and ease repeated data patterns.
    - Develop a data maintenance plan. The data layers can be prioritized based on business need and frequency may be driven based on the variable dynamic nature of each dataset.
  - Data Acquisition
    - Establish similar data collection standards and methods for City and County datasets.
    - Work with City and County agencies to provide data with additional value to agency processes.
    - Acquire new aerial imagery.
      (Consider establishing inter-local agreements to share the cost of new imagery with other State, county, and local agencies.)
    - See Department data needs and recommendations.

General Prescription – Mid-term

Maintaining

Enabling

Optimizing

- **Mid-term Prescription – Data, Editing & Maintaining**
  - Metadata
    - Develop feature class level metadata for most data sets, especially the core data.
    - Leverage the Attribute Assistant editing extension to feature level metadata.
    - Ensure that all external data sources also include metadata.
  - Data Maintenance
    - Develop a data matrix indicating ownership and maintenance responsibility.
    - Consider combined maintenance of integrated core datasets between City and County.
    - Store all enterprise data in a centralized database with read access to all users.
    - Document standard operating procedures (SOP) to keep the GIS data complete and accurate to support business intelligence. Include GPS, field notes, and development activities.
  - Data Layers (Examples of Data Improvements)
    - Parcels: Integrate the City and County parcel datasets to produce a single seamless dataset. Adopt a data model which will meet the business needs (attribution and time frame) of both agency. Establish a regular data update routine for owner information from ACS. Manage schema incompatibilities through database changes or migration scripts.
    - Addresses: Leverage the Local Government Information Model (LGIM) to support multiple national addressing data standards. Create address locators stored in the geodatabase.

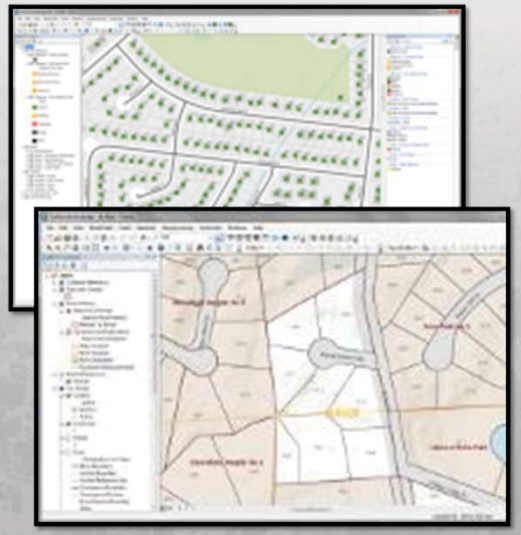
General Prescription – Mid-term

Maintaining

Enabling

Optimizing

- **Mid-term Prescription – Software**
  - Standardize GIS map products and analysis using Esri ArcGIS software
    - Improve enterprise data sharing by reducing software fragmentation
    - Ensure Information Services has role in all software selection
  - Utilize Esri's Local Government Resource Center
    - Base maps provide consistent context, (e.g. General Purpose, Hybrid Imagery).
    - Freely available apps can be configured to specific business needs.
      - Parcel and address management
      - Utilities maintenance
      - Tax parcel and emergency management map book production
  - Engage Departments to Develop and Maintain Data
    - County Planning
    - Community Development
    - Public Works
    - Emergency Services
    - Parks
  - Train Departmental Users
    - A more knowledgeable user base will help optimize the agency's investment in GIS and will drive future data and application development that directly addresses business needs.



General Prescription – Mid-term

Maintaining

Enabling

Optimizing

- **Mid-term Prescription – Training (Example Plan)**

  (Note: use version 10.1 training resources as they become available)

  - Recommended Training (Enterprise-wide Plan)
    - All Users (Introductory to Beginner) – those with little experience
      - Getting Started with GIS (for ArcGIS 10.1)
      - Using ArcMap in ArcGIS Desktop 10
      - Basics of Raster Data (for ArcGIS 10)
    - Departmental Users – those who maintain GIS spatial data
      - Learning ArcGIS Desktop (for ArcGIS 10)
      - Getting Started with the Geodatabase (for ArcGIS 10)
      - Address Geocoding with ArcGIS 10.1
      - Editing in ArcGIS Desktop 10
      - Versioned Editing Workflows for the Multiuser Geodatabase
      - Working with Geodatabase Domains and Subtypes (for ArcGIS 10)
    - GIS Analyst – those who publish and maintain maps and apps
      - Python for Everyone Using ArcGIS 10.1
      - Learning ArcGIS Desktop (for ArcGIS 10)
      - Turning Data into Information Using ArcGIS 10
      - Creating Map Books Using Data Driven Pages
      - Building Models for GIS Analysis Using ArcGIS 10
  - Specialized Training
    - Shoulder-to-shoulder training with a consultant
    - Server administration
    - Maps and apps configuration
    - Geoprocessing and analysis

General Prescription – Mid-term

Maintaining

Enabling

Optimizing

- **Mid-term Prescription – Training**
  - Information Services
    - Information technology staff responsible for maintaining servers and databases need adequate training and understanding of the software and hardware systems.
  - Internal Users
    - Create a GIS users group for staff to come together to discuss tips, tricks, issues, and accomplishments.
    - Create an email distribution list for GIS users to quickly contact others in the organization.
    - Encourage collaboration among users between agencies.
    - Leverage ArcGIS Online to access and share content .
  - Internal Web Users
    - Provide agency staff with training on how to use or look up data via online maps and apps. This could be accomplished through brief, periodic sessions.
    - Offer training on how to leverage the maps and apps to generate printed map products that help users articulate their message through location.
    - Develop “how-to” videos for web based applications and offer easy and direct access to the videos through the specific sites.
  - External Web Users
    - Provide a class to the general public and development community on how to use the web based maps to find and search for data.
    - Establish a mechanism to accept feedback on applications to help guide the priority of future deployments.

General Prescription – Long-term

Maintaining

Enabling

Optimizing

- **Long-term Prescription – Enabling & Optimizing the Agency**
  - Optimize the Data
    - Continue to maintain the enterprise geodatabase using an industry-standard data model that leverages topology rules, subtypes, and domains. Make sure that attributes fully support existing and planned business processes. All data should have metadata at both the feature class and feature level. Attribute and spatial indexing should be established and functioning.
    - Establish data integration with business systems.
    - Develop and implement formal QA/QC procedures for all GIS data layers.
    - Require all internal and external GIS data to have formal metadata.
  - Continue to Build GIS Awareness
    - Create and encourage participation in a GIS users group between agencies, continuing and expanding current coordination efforts.
    - Provide ongoing training for users maintaining GIS data.
    - Develop a formal GIS Training Plan, with specific emphasis on training opportunities that leverage existing applications and functionality and focus on departmental users.
    - Demonstrate data and functionality that is available to agency staff.
    - Periodically perform a survey of GIS technology users to get feedback.
    - Promote communication among GIS users (e.g. email group) for news, questions, tips, etc.

General Prescription – Long-term

Maintaining

Enabling

Optimizing

- **Long-term Prescription – Enabling & Optimizing the agency**
  - Funding
    - Perform formal and detailed return on investment (ROI) methodologies in targeted areas to support GIS budget needs and to illustrate successes.
    - Expand cost-sharing by departments to help fund and maintain an enterprise GIS.
  - Governance of GIS
    - Move to a hybrid model of governance, with centralized system management and distributed data ownership and responsibility as users become more GIS savvy.
    - Manage the GIS program as part of the overall information technology plan
    - Hire additional GIS staff (manager, floating tech) to provide direct GIS support to departments.
    - Develop and closely follow a detailed three- to five-year strategic GIS program work plan
    - Update the mission, goals and objectives for the GIS program to keep them current and relevant as technology and user demands evolve.
    - Increase public access to GIS data, which leverages the investment in GIS and offers additional services with potentially nominal effort.
    - Establish a single point of entry into the GIS data for all analysis and maintenance procedures.

General Prescription – Long-term

Maintaining

Enabling

Optimizing

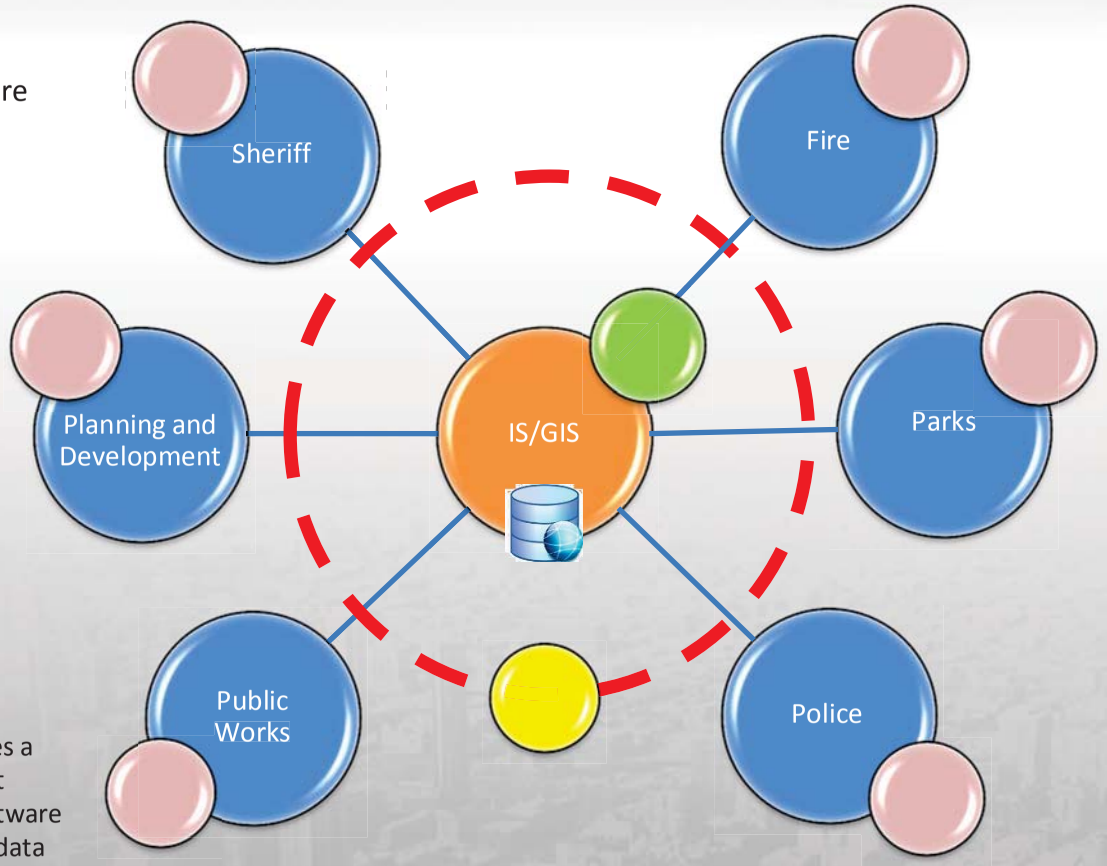
Centralized GIS Data, Hardware & Software (IS Division)

Departments

Staff using GIS

Dedicated GIS Staff

Shared GIS Resource



The suggested hybrid governance model provides a centrally managed GIS within IS/GIS Division that supports agency-wide GIS infrastructure and software needs while each department is responsible for data maintenance. Additionally, establishing an IS/GIS staff member as a shared resource to support the GIS needs of other departments is often a cost effective and efficient approach.

General Prescription – Long-term

Maintaining

Enabling

Optimizing

- **Long-term Prescription – Enabling & Optimizing the agency**
  - Mobile GIS
    - Deploy ArcGIS for Server Advanced to develop and support the agency's mobile applications.
    - Take advantage of Esri templates to support the agency's mobile needs.
    - Enable website access from agency vehicles and devices with internet connection.
    - Develop an integrated automated vehicle tracking (AVL) plan to track and manage equipment.
    - Deploy tablet and/or iOS apps for field crews and public access.
  - Websites
    - Develop a plan to migrate existing web application to a platform that can be supported using different devices (Android, iOS, Windows, etc.).
    - Consider an ArcGIS Online for Organizations account to streamline web and mobile deployments.
    - Keep web applications updated via technology and/or UI enhancements to keep them relevant and to provide continued positive user experiences for both the public and agency staff.
    - Release new web applications to address specific business needs.

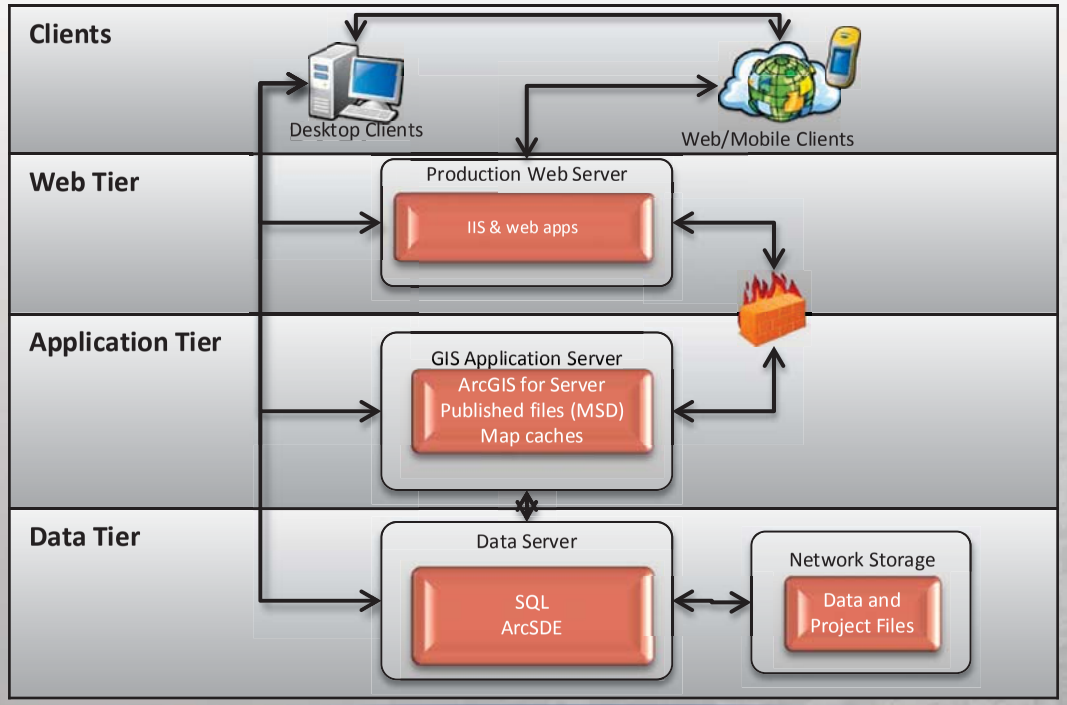
General Prescription – Long-term

Maintaining

Enabling

Optimizing

- **Long-term Prescription – Enabling & Optimizing the agency**
  - Architecture
    - Continue to leverage virtual environment.
    - Consider the implementation of a robust three-tier architecture that separates the Web server from the GIS application server to help ensure system performance.
    - Consolidate or bring server tiers in-house to support both internal and workflows.
    - Publish services for clients to consume rather than directly access data tier.



General Prescription – Long-term

Maintaining

Enabling

Optimizing

- **Long-term Prescription – Enabling & Optimizing the agency**
  - Document GIS activity policies and procedures, including (but not limited to):
    - Data Management
      - Permissions management – read, write, administer, etc.
      - Data maintenance workflows – check-in/check-out guidelines, etc.
      - Version management – reconcile/post frequency, version structure, etc.
      - GIS data standards – topology/network connectivity, attribute validation, etc.
      - QA/QC procedures – percent review, acceptable accuracy and error, etc.
      - Metadata maintenance – which format, when is it required, etc.
    - Request Management
      - GIS data creation/acquisition requests – process for submission, guidelines for justification, etc.
      - Non-GIS data creation/acquisition requests – sources, data relationships, etc.
      - New GIS application requests – functional requirements, platform, etc.
      - Training requests – justification, available formats, budget allocation, etc.
      - GIS analysis and mapping product requests – standard delivery timeframe, elements, etc.
      - External GIS data requests – submission requirement, data sharing limitations, etc.
    - Application Management
      - GIS application error submissions – mechanism for reporting, process for correction, prioritization, etc.
      - GIS application version upgrades – frequency, impact, scope (i.e., agency or Department), etc.
      - GIS application enhancements – decision process, funding source, etc.

Eau Claire

Departmental Prescriptions

Geographic Information Services, Inc.

2100 Riverchase Center Suite 105
Birmingham, AL 35236

Web: www.gisinc.com *Fax: (205) 982-7733*

esri Partner Network Platinum

Rx

Departmental Prescription

- ❑ Information Technology / GIS
- ❑ Executive Management
- ❑ Backflow / Conservation
- ❑ Customer Service
- ❑ Distribution
- ❑ Engineering

☐ Label
☒ No Substitutions

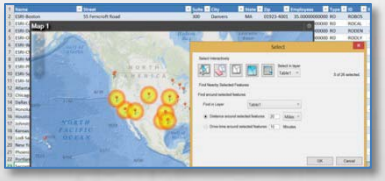
Signature GISi

Information Services

- **Role of IT: the Backbone of the Enterprise GIS**
  - Support the GIS hardware and software infrastructure
  - Support application deployment
  - Serve as the hub through which all departments can share GIS data and applications

Executive Dashboard

- **GIS Software and Application Prescription**
  - **Functional Considerations**
    - Manage all GIS infrastructure and processes as part of core enterprise IT strategy. Transfer core processes out of departments.
    - Evaluate data maintenance/migration and database backup procedures.
    - Provide a centralized data warehouse with separate archive.
    - Simplify access to current GIS data by end users.
    - Create isolated development and production environments.
    - Maintain consistent software versions across the enterprise and between agencies.
    - Standardize software purchasing requirements to ensure integration with other core systems.
    - Disaster recovery can be accomplished using same mechanisms as for VM server images.



Esri Maps for Office

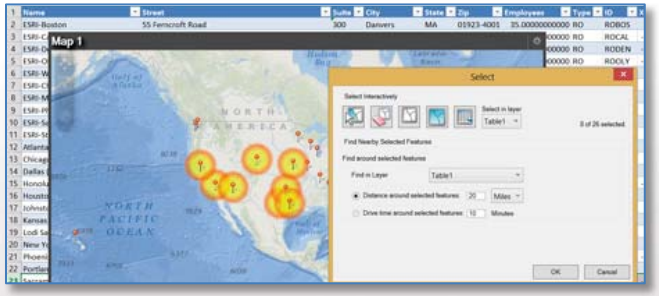
  - Application Considerations
    - Implement the My Government Services application template.
    - Implement the ArcGIS Online Executive Dashboard.
    - Leverage ArcGIS Online as a portal to organize applications and services for staff and the public.

Information Services (continued)

- **GIS Data Prescription**
  - Standardize on a single version of ArcGIS software to ensure compatibility between all users. Consider data transfer methods if standardization not possible (i.e. third party applications).
  - Develop formal data sharing agreements with external agencies.
  - Leverage SDE as a centralized data store for enterprise data. Migrate enterprise data from departmental databases.
  - Provide a separate centralized data storage for departmental datasets.
  - Utilize Esri software tools to manage geodatabases.
  - ArcGIS Online for Organizations provides simplified access to data services and device agnostic application solutions
  - Facilitate use of desktop and mobile technologies to manage enterprise data.
- **GIS Training Prescription**
  - Develop a cross-training plan to minimize the risk of employee turnover.
  - All users should acquire training on the current software version.
  - IT staff should pursue training on managing and tuning ArcGIS for Server 10.1, application management and deployment, map service and cache optimization, database schema management, scripting and automation, and web development via the Esri web APIs.

Health

- **GIS Software and Application Prescription**
  - **Functional Considerations**
    - Address points and geolocators shared from central location.
    - Display locations of testing locations.
    - Analyze hot spots and trends.
    - Refine locations of wells and septic tanks within parcels.
    - Display locations of restaurants and recent inspection scores.
    - Analyze distribution of WIC participants.
    - Use mobile devices for field inspections.
  - **Applications to Consider**
    - Esri Maps for Office
    - ArcGIS Online editing template



Esri Maps for Office

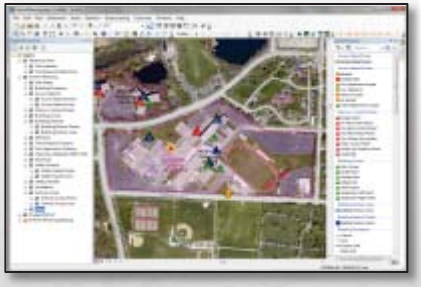
- **GIS Data Prescription**
  - Create point feature classes for wells and septic tanks (possibly GPS).
  - Create a database of public health facilities and schools.
  - Leverage centralized addresses and geolocators.
- **GIS Training Prescription**
  - Lack of training indicated as primary concern for leveraging the technology. Training should focus on required business processes.
  - See the training sections “All Users (Introductory to Beginner)”, “Specialized Training” and “Internal Web Users”.

Fire

**Note: This department was not interviewed. Recommendations are based on general observations and experience with similar agencies.*

- **GIS Software and Application Prescription**
  - **Functional Considerations**
    - Access to pre-plans while in field.
    - Common operational picture accessible in field.
    - Improve hydrant inspection workflow.
    - Simplified production of map books and wall maps.
    - Service area and response time analysis.
  - **Applications to Consider**
    - Implement the Pre-Fire Planning editing template.
    - Implement the Emergency Management Maps templates.
    - Implement the Public Safety COP application.
    - Implement the Public Safety Damage Assessment application.
    - Implement a Fire Hydrant Flow Logger mobile application.
- **GIS Data Prescription**
  - Manage fire hydrants as part of water utility network.
  - Access centralized routable street centerlines and address point data.
  - Acquire and utilize ArcGIS Network Analyst for response time analysis.
  - Develop a process to visualize fire call locations.
- **GIS Training Prescription**
  - See the training sections “All Users (Introductory to Beginner)”, “Specialized Training” and “Internal Web Users”.

Public Safety COP



Pre-Fire Planning

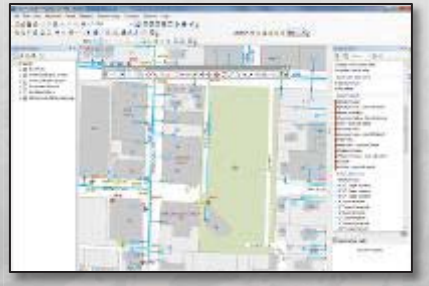
GISi Fire Hydrant Flow Logger

Parks, Recreation, and Forestry

- **GIS Software and Application Prescription**
  - **Functional Considerations**
    - Forestry inventory hosted by StrataPoint unavailable to others.
    - Fertilizing and weed control planning.
    - Mobile requirement for update/inventory work.
    - Redlining on map image.
    - Irrigation system within parks.
    - Hosted cemetery records management.
  - **Applications to Consider**
    - Implement the Parks Finder application.
    - Implement the Citizen Service Request application.
    - Implement the Water Utility Network Editing template.
    - Lucity asset management and forestry module.
    - Implement a simple mobile viewer for information access.
    - ArcGIS Online for Organizations provides device agnostic application solutions
- **GIS Data Prescription**
  - Migrate data to centralized data store.
  - Develop a process to retrieve information from hosted providers.
  - Provide Public Works access to tree locations for design purposes.
- **GIS Training Prescription**
  - See the training sections “All Users (Introductory to Beginner)”, “Specialized Training” and “Internal Web Users”.

Park and Recreation Finder

Citizen Service Request



Water Utility Network Editing

Planning Division

- **GIS Software and Application Prescription**
  - **Functional Considerations**
    - Consider jointly-funded GIS initiative for management of core datasets (parcels, addresses, roads) with County
    - Improve access for data sharing.
    - Standardize on single GIS software package.
    - Review workflows to leverage ArcGIS across organization.
  - **Applications to Consider**
    - Implement the Tax Parcel Viewer application.
    - Implement the Community Addressing application.
    - Implement the Land Use Comment application.
    - Implement the Land Use Public Notification application.
- **GIS Data Prescription**
  - Establish standard data editing protocols.
  - Create a centralized network data storage location.
  - Develop process to acquire more frequent parcel geometry and attribute updates
  - Migrate all shapefile formats to geodatabases to share with the rest of organization (e.g. zoning, permits, variances, various district boundaries)
  - Leverage Esri geodatabase formats rather than converting to other formats (e.g. liquor licenses, billboards, trails, ETJ, service areas to GeoMedia)
  - Locate and download updated Census and HUD data from 2010 survey.
  - Consider subscription to Esri Community Analyst for demographic data.
- **GIS Training Prescription**
  - Refresher training needed for current software version.
  - See the training sections “All Users (Introductory to Beginner)”, “Specialized Training”, “External Web Users” and “Internal Web Users”.

Tax Parcel Viewer

Land Use Public Notification

Citizen Service Request

Planning

- **GIS Software and Application Prescription**
  - **Functional Considerations**
    - Consider jointly-funded GIS initiative for management of core datasets (parcels, addresses, roads) with City
    - Hosted ArcGIS for Server environment.
    - Improve access for data sharing within agency.
    - Automate data sharing process with other organizations.
  - **Applications to Consider**
    - Implement the Address Data Management template.
    - Implement the Tax Parcel Viewer application.
    - Implement the Citizen Service Request application.
    - Implement the Community Addressing application.
    - Implement the Land Use Public Notification application.
- **GIS Data Prescription**
  - Create separate tax-year and current parcel geometries to improve use for internal permitting and by other organizations.
  - Share data editing processes with City to improve confidence in data.
  - Develop process to deliver more frequent parcel geometry and attribute updates.
  - Develop a process for access to permitting and inspection information by field staff.
  - Leverage current information for delinquent accounts.
  - Provide access to historical account information (trends, value history)
- **GIS Training Prescription**
  - Refresher training needed for current software version.
  - See the training sections “All Users (Introductory to Beginner)”, “Specialized Training” and “Internal Web Users”.

Tax Parcel Viewer

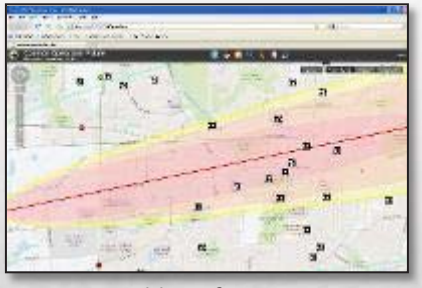
Community Addressing

Land Use Public Notification

Police

- **GIS Software and Application Prescription**
  - **Functional Considerations**
    - Access to and quality of core enterprise data.
    - Centralized standard geocoding service.
    - Automate regular parcel owner information updates.
    - Spatial Analyst for hotspot, density analysis.
    - Timely crime occurrence updates.
    - Special events planning.
  - **Applications to Consider**
    - Implement the Emergency Management Maps template.
    - Implement the Public Safety Special Event Planning template.
    - Implement the Public Safety COP application.

Public Safety Special Event Planning

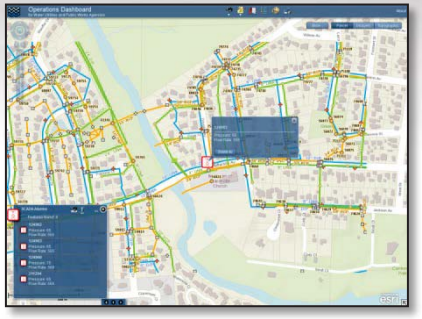


Public Safety COP

- **GIS Data Prescription**
  - Migrate data to centralized data store.
  - Work with other departments to gain access to timely data updates.
  - Develop processes to automate visualization of CAD/RMS data and other routine workflows.
  - Obtain cell tower locations from providers.
- **GIS Training Prescription**
  - See the training sections "All Users (Introductory to Beginner)", “Departmental Users”, “GIS Analyst”, "Specialized Training“ and "Internal Web Users”.

Public Works

- **GIS Software and Application Prescription**
  - **Functional Considerations**
    - Core processes managed in department.
    - Availability of in-house data for reference and business processes.
    - Access to current parcel owner information.
    - Integration with Lucity asset management.
    - Improved editing workflows in core software and specialized templates.
    - Access to authoritative parcel attribute information.
    - Spatial accuracy of operational and referential datasets.
    - Standard symbology, print templates and disclaimers on map products.
  - **Applications to Consider**
    - Implement the Utility Network Editing template.
    - Implement the Infrastructure Operations Dashboard application.
    - Implement the Infrastructure Capital Improvement Planning editing template.
    - Implement the SnowCOP application.
    - ArcGIS Online for Organizations provides device agnostic application solutions



Infrastructure Operations Dashboard

Infrastructure Network Editing

SnowCOP

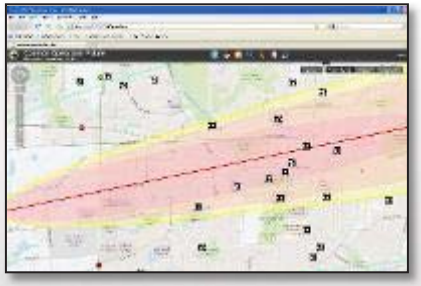
Public Works (continued)

- **GIS Data Prescription**
  - Migrate data to centralized data store.
  - Create processes/tools to incorporate and automate data updates. Determine methods to remove overlap along City boundaries.
  - Implement a formal data model such as the Local Government Information Model for Utilities.
  - Execute a data review for accuracy and completeness of datasets. Determine best data for business needs and archive the remaining.
  - Identify requirements for Lucity database and build in development environment. Migrate to production when complete.
  - Review spatial accuracy of maintained and provided datasets.
  - Replace or update AVL systems to integrate with other core GIS software.
  - Acquire updated aerial photography.
- **GIS Training Prescription**
  - See the training sections “All Users (Introductory to Beginner)”, “Departmental Users”, “GIS Analyst”, “Specialized Training” and “Internal Web Users”.

Sheriff

- **GIS Software and Application Prescription**
  - **Functional Considerations**
    - Consider partnership with City Crime Analyst to collectively identify best practices.
    - Access to imagery and land information in field.
    - Access to all crime locations for visualizations and analysis.
    - Operational awareness for desktop and mobile users.
    - Leverage GIS for special events planning.
    - Obtain the ArcGIS 10.1 Spatial Analyst extension to support crime analysis.
  - **Applications to Consider**
    - Implement the Special Event Planning editing template.
    - Implement the Public Safety COP web application.
    - Implement an internal crime mapping viewer.
- **GIS Data Prescription**
  - Develop a process to visualize citations and crime locations from TRACS.
  - Consider ArcGIS Online and Esri Maps for Office to visualize Excel spreadsheets (QRep reports)
  - Develop and maintain a dataset to track sex offenders.
  - Establish access to GIS data from surrounding counties.
- **GIS Training Prescription**
  - See the training sections “All Users (Introductory to Beginner)”, “Specialized Training” and “Internal Web Users”.

Special Event Planning



Public Safety COP

GISi Crime Mapping

City of Altoona

- **GIS Software and Application Prescription**
  - **Functional Considerations**
    - Digital records management.
    - Leverage existing GIS databases for parcel information.
    - Consider shared services with City of Eau Claire or the County for a regional GIS approach.
  - **Applications to Consider**
    - Esri ArcGIS software for improved coordination with other agencies.
    - Implement Address Data Management editing template.
    - Implement the Infrastructure Network Editing template.
    - ArcGIS Online templates and Esri Maps for Office to share Excel spreadsheets.

Address Data Management

- **GIS Data Prescription**
  - Request updated taxable values from the County.
  - Work with the City of Eau Claire and Eau Claire County to acquire initial datasets.
  - Convert paper records to digital spatial formats.
  - Evaluate use of DataView information in light of updated datasets from the County.

Infrastructure Network Editing

- **GIS Training Prescription**
  - See the training sections “All Users (Introductory to Beginner)”, “Specialized Training” and “External Web Users”.

Departmental Recommendation Summary

This table summarizes some of the key recommendations by department to allow prioritization at a glance. *(Note: Apps that require true custom development are not included.)*	Information Services	Parks	Planning (City)	Planning (County)	Police	Public Works	Sheriff	City of Altoona	Elections	Fire
Function										
Centralized data storage	X	X	X	X	X	X	X	X	X	X
Improve data access	X	X	X	X	X	X	X	X		
Application										
Address Data Management			X	X				X		
Citizen Service Request		X	X	X						
Community Addressing	X		X	X	X		X	X	X	X
Crime Mapping					X		X			
Economic Development			X	X						
Election Polling Place Finder									X	
Executive Dashboard	X							X		
Infrastructure Mobile Map						X		X		
Infrastructure Operations Dashboard						X		X		
Land Use Public Notification			X	X						
My Government Services	X									
Parks & Recreation Finder		X								
Public Information Center	X									
Public Safety COP					X	X	X			X
SnowCOP						X				
Special Event Planning		X	X	X	X	X	X			X
Tax Parcel Viewer			X	X						
Utility Network Editing		X				X		X		

X* = Potentially customized version of an existing template

= Did not participate in the onsite interviews.

Eau Claire, WI

Summary

The Southfield Story (Case Study on ArcGIS for Local Government)

The story of Southfield, Michigan is relevant to Eau Claire as a possible vision of building a solid and mature GIS program to boost utilization and increase the relevance of GIS both within the agencies and for the citizens.

Destination Southfield, a successful implementation of Esri's ArcGIS for Local Government initiative, includes the portal, maps and apps, and the local government information model. The City of Southfield, MI has a large enterprise GIS that incorporates data from various sources including Southfield's assessing system, Southfield's infrastructure management program, and Oakland County GIS. The new portal is a landing pad for City staff and citizens to get access to maps and apps. The maps and apps are organized into a gallery and around information and services citizens need in order to do business with the City. With ArcGIS Server, Cloud, Information Model and maps and apps gallery in place, the City is launching new maps and apps more frequently, making the GIS more relevant. Take a look: http://maps.cityofsouthfield.com/destinationsouthfield/.

"In today's economic climate, ArcGIS for Local Government offers us the best opportunity to deploy low cost applications that support our business, provide citizen engagement, and allow us to become more efficient," says Sally Price, GIS Coordinator for the City. "GISi helped us to realize this vision and Esri's commitment to support these applications ensures compatibility with future ArcGIS software release cycles."

The City of Southfield GIS group has deployed the apps and maps gallery template: Destination Southfield and three applications; "GISi Silverlight Template Viewer", "Polling Places", "Parks & Rec Finder" and the City plans to have many more apps added in the coming months.

The **GISi Silverlight Template Viewer application** provides a wealth of geospatial information to its residential and business community, supporting public service delivery 24/7. The City and GISi migrated its former WebADF application to the ArcGIS Server 10 platform using Microsoft Silverlight™ version 4. Resources like the City's Internet Mapping Portal reflect the type of investments Southfield is making to ensure a vibrant business climate exists. This site helps promote the growth of existing business and attract new investments into the city while providing vital information to its citizens. Residents and nonresidents alike are able to view property ownership, zoning, voting districts, refuse and recycling information and many more commonly used data layers.

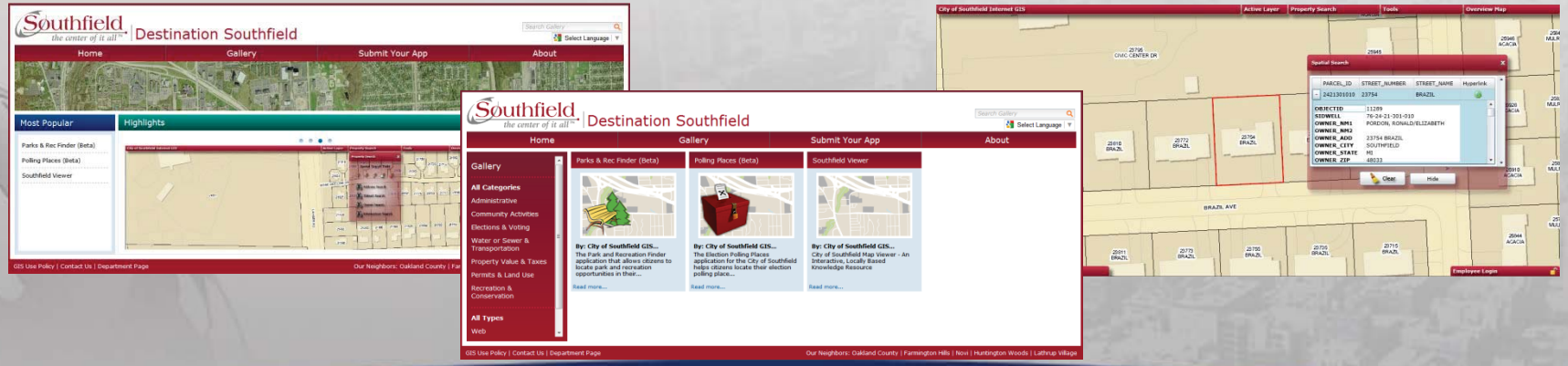
(Continued on next page…)

The Southfield Story (Case Study on ArcGIS for Local Government)

The **Election Polling Places application** helps citizens locate their election polling place and obtain information about current elected officials. This application is typically used by citizens during an election season, but can be used throughout the year to determine which elected official represents the precinct they reside in. To locate a polling place, simply click on the map or enter an address in the search box. The polling place and respective voting precinct will then be highlighted on the map and relevant information about the polling place and elected officials will be presented in two tabs at the bottom of the application. The application will also provide directions from the searched address to the associated polling place location.

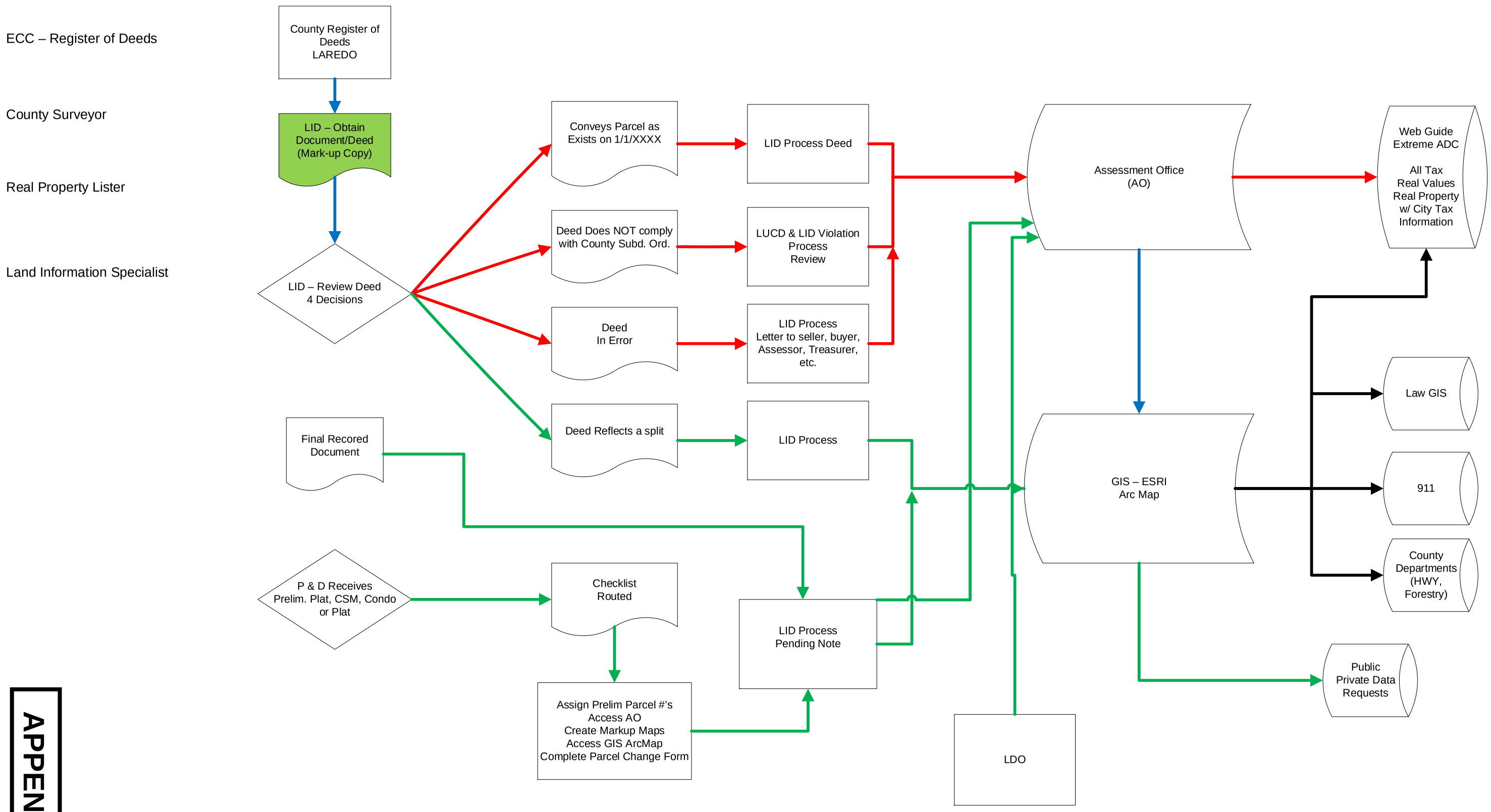
The **Park and Recreation Finder application** helps residents locate a park and obtain information about recreation activities in their community. This application is typically used by residents in a community, but can be used by visitors to locate a park or recreation area near them, or one that offers the activity they are interested in. To locate a park, simply enter an address or activity in the search box. The park(s) or recreation area(s) will then be highlighted on the map and relevant information about available recreation activities are presented to the user.

About the City of Southfield, MI: The City is a municipal government, incorporated in 1958, with an approximate population of 78,000. It is located in the Detroit Metropolitan region in Oakland County, MI.

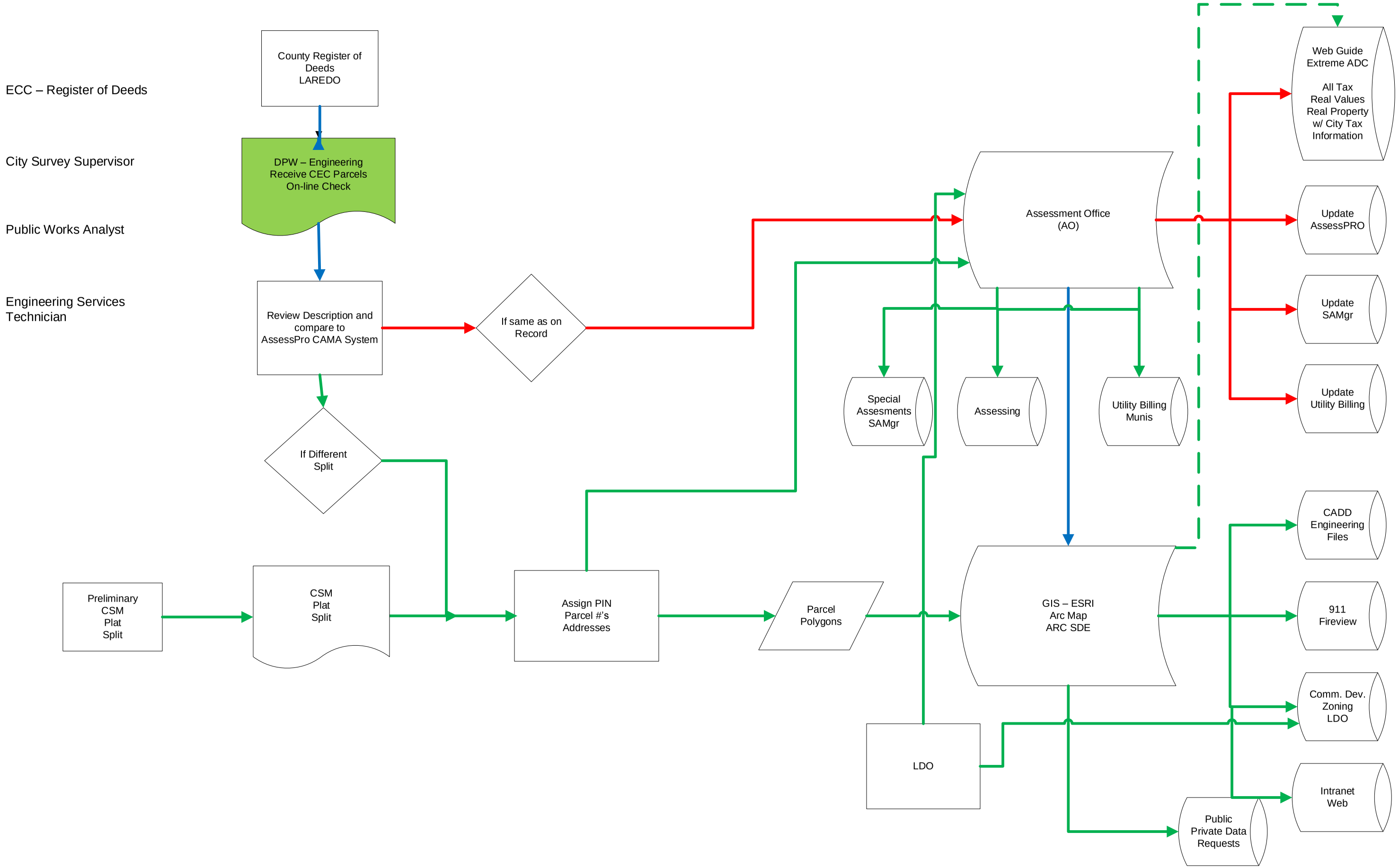


Summary

- The City of Eau Claire and Eau Clair County realize the need for an enterprise GIS and desire to expand on the existing program. By striving toward a shared system with improved data access, agency staff will notice the enhanced benefits across each organization over time. During the onsite discussions, users and beneficiaries of the current system showed support for improving the foundation and renewing active use of the system in their daily activities. However, there is widespread concern regarding data storage and access, maintenance responsibilities and current software functionality. The underlying infrastructure and process enhancements including data, applications, staff and training will ensure even higher levels of customer services. Many of these benefits will only be obtained beyond the immediate timeframe.
  - Defining a core GIS data and business management policy will be necessary to bring GIS to the enterprise level.
  - Investing in GIS training for IT and departmental staff will continue to develop and sharpen skills required to keep the GIS at peak performance.
  - Implementing the latest Esri ArcGIS for Server and ArcGIS Online portal technologies will streamline workflows and improve access to the data bringing increased value to the agency investment.
  - Developing focused, GIS-based web applications will result in improved customer experience and new capabilities.


ECC – Register of Deeds
County Surveyor
Real Property Lister
Land Information Specialist
County Register of Deeds LAREDO
LID – Obtain Document/Deed (Mark-up Copy)
LID – Review Deed 4 Decisions
Conveys Parcel as Exists on 1/1/XXXX
Deed Does NOT comply with County Subd. Ord.
Deed In Error
Deed Reflects a split
LID Process Deed
LUCD & LID Violation Process Review
LID Process Letter to seller, buyer, Assessor, Treasurer, etc.
LID Process
Final Recored Document
P & D Receives Prelim. Plat, CSM, Condo or Plat
Checklist Routed
Assign Prelim Parcel #'s Access AO Create Markup Maps Access GIS ArcMap Complete Parcel Change Form
LID Process Pending Note
Assessment Office (AO)
GIS – ESRI Arc Map
LDO
Web Guide Extreme ADC
All Tax Real Values Real Property w/ City Tax Information
Law GIS
911
County Departments (HWY, Forestry)
Public Private Data Requests

APPENDIX "D"


ECC – Register of Deeds
City Survey Supervisor
Public Works Analyst
Engineering Services Technician
County Register of Deeds LAREDO
DPW – Engineering Receive CEC Parcels On-line Check
Review Description and compare to AssessPro CAMA System
If same as on Record
If Different Split
Preliminary CSM Plat Split
CSM Plat Split
Assign PIN Parcel #'s Addresses
Parcel Polygons
LDO
Assessment Office (AO)
Special Assesments SAMgr
Assessing
Utility Billing Munis
GIS – ESRI Arc Map ARC SDE
Public Private Data Requests
Web Guide Extreme ADC
All Tax Real Values Real Property w/ City Tax Information
Update AssessPRO
Update SAMgr
Update Utility Billing
CADD Engineering Files
911 Fireview
Comm. Dev. Zoning LDO
Intranet Web