CALUMET COUNTY

LAND RECORDS MODERNIZATION PLAN
2010-2015

Prepared by:
The Calumet County Land Information Office

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I. EXECUTIVE SUMMARY

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C. Summary of the Plan
Calumet County is submitting this _Land Records Modernization Plan_ for review and adoption. The focus of this plan is to define land record modernization goals and objectives for the next five years. This plan will define Calumet County's goals and objectives, report the progress of its current activities, and describe new initiatives that it would like to undertake. It will describe: who maintains land records within the county; how the county has completed or plans to complete the individual framework elements of modernization; how the county will comply with state-wide standards; and how the county plans to share and integrate this information.

D. County Land Information Website: http://www.co.calumet.wi.us/
http://www.lrpmaps.com/calumetcounty/

E. Municipal Land Information Websites:
Town of Brillion - http://www.townofbrillion.com/
Town of Charlestown - http://townofcharlestown.com/
Town of Chilton - http://townofchilton.com/
Town of Harrison - http://www.townofharrison.org/
Town of Rantoul - http://www.townofrantoul.com/
Town of Stockbridge - http://www.townofstockbridgewi.com/
Village of Sherwood - http://www.villageofsherwood.org/
Village of Stockbridge - http://www.villageofstockbridge.org/
City of Appleton - http://www.appleton.org/
City of Brillion - http://www.ci.brillion.wi.us/
City of Chilton - http://www.chilton.govoffice.com/
City of Kiel - http://ci.kiel.wi.us/
City of Menasha - http://www.cityofmenasha-wi.gov
City of New Holstein - http://ci.new-holstein.wi.us

II. LAND INFORMATION MODERNIZATION AND INTEGRATION PLAN

A. Goals and Objectives
The mission of the county program is to implement a Land and Geographic Information System (LIS/GIS) that will suit the needs of the public and private sectors, as well as its users within the county and other governmental entities. The program will serve as a positive example of what a proactive Land Information Office can accomplish while remaining fiscally conservative.

- **Goal**: Continue to develop and deploy an integrated land information system.

Objectives	Timeline
Continue GIS training for LIO staff	Ongoing
Continue efforts to fill the GIS Specialist position	As Needed
Obtain new ortho imagery on a five year cycle	2010 and 2015
Fully integrate PLSS government lots with GIS data (rather than solely in AutoCAD)	2011
Develop formal needs assessment protocols via the Land Information Council	2011
Create County Plat Book (in-house)	2011 then biennially
Create County Road Map	2011 then biennially
Convert from file geodatabase environment to RDBMS (i.e. ArcSDE)	2011-2012
Deploy enterprise GIS solution via ESRI ArcSDE and ArcGIS Server	2011-2012
Acquire new application/data and web servers	2011-2012
Integrate all GIS data from other departments into central RDBMS	2012-2013
Place monument for each PLSS government lot corner	2012
Develop specialized online mapping applications for internal use by county staff	2012 then ongoing
Bring online mapping application data hosting in-house	2014
Acquire a new GPS unit for use by various departments	2013

Obtain new LiDAR data	2015

- **Goal**: Coordinate with other departments to meet their land records needs.

Objectives	Timeline
Acquire countywide utility services data for emergency use	2012
Integrate sanitary application for track systems with GIS	2012
Integrate zoning application to track permits and violations with GIS	2011
Provide Support to FoxComm (E911 Consortium)	Ongoing
Implement new countywide Register of Deeds imaging system	2011
Develop and maintain a countywide culvert and bridge inventory	2012
Work with Economic Development to develop accurate business datasets and encourage economic growth	Ongoing
Develop and maintain road sign inventory	2011
Develop and maintain a dataset and process for stormwater mapping	2011
Develop routing maps for snow plowing and road maintenance	2011 and ongoing
Develop methodologies to help predict future transportation needs	2015
Crime incident mapping	2012
Develop and maintain health services mapping and datasets	2011 and ongoing
Work with various departments to develop mapping methodologies for disaster preparedness	Ongoing
Provide support for reverse 911 system	As needed
Develop Emergency Operations Center GIS data update process	2010
Develop a complete set of countywide emergency maps using the national grid	2011
Develop karst features dataset	2010-2012
Develop GIS methodology and dataset to track conservation practices	2012

- **Goal**: Coordinate modernization activities with other land records agencies.

Objectives	Timeline
Work with Cities of Appleton and Menasha to better integrate our GIS	Ongoing
Work with adjacent counties and municipalities to better integrate our GIS	Ongoing
Work with local municipalities to enhance the GIS program to meet municipal needs	Ongoing
Work with ECWRPC to share in existing datasets and develop of new datasets (i.e. 2010-2011 Land Use)	Ongoing
Work with USDA to obtain NAIP ortho photography	As Available
Work with DNR to obtain updated hydrology datasets	2011
Complete redistricting for supervisory districts	2011

- **Goal**: Improve data accuracy and reliability.

Objectives	Timeline
Continue to develop and fill in metadata	Ongoing
Work with local assessors to develop digital file sharing	Ongoing
Update hydrology using 2010 orthoimagery	2010-2011
Update building footprints using 2010 orthoimagery	2010-2011
Update pavement edges using 2010 orthoimagery	2011-2012
Convert from file geodatabase environment to RDBMS (i.e. ArcSDE)	2011-2012
Develop link with AS400 and ArcSDE for daily update of parcel data	2013
Bring online mapping application data hosting in-house	2014

- **Goal**: Improve cost-effectiveness.

Objectives	Timeline
Create a Land Information Council	2010
Improve tools on county website to allow users to complete their own requests	Ongoing

- **Goal**: Improve access to information for users.

Objectives	Timeline
Provide training to users on the online mapping application	As Needed
Provide training to users on the in-house GIS applications	As Needed
Enhance existing online mapping application	Ongoing
Enhance access to county GIS data for local municipalities	Ongoing
Continue scanning documents to be accessed online (i.e. tie sheets, building permits, sanitary permits, etc)	Ongoing
Enhance existing Tax Inquiry System	As Needed
Implement new countywide Register of Deeds imaging system	2011
Develop specialized online mapping applications for use by municipal staff	2013 then ongoing

- **Goal**: Education of public and private sector about the benefits of the County Program.

Objectives	Timeline
Provide training workshops on new applications	As Needed
Participate in state and local GIS Day efforts	Annual
Participate in state and local programs	Ongoing
Educate emergency services providers on how to use the National Grid	2011 then as needed

1. **Keys to Achieving Goals:**

   a) **What data or information does the county need that it currently uses or can acquire from other state or local sources?**

   Calumet County relies on and uses many datasets from state and regional agencies. Among those are land use delineations, hydrography, wetlands, non-metallic mines, etc.

   b) **What data or information does the county need that it does not have and are not easily acquired? What obstacles exist to acquiring this information?**

   Calumet County is missing some datasets that are not available or not easily acquired such as geology, vegetation, oblique aerial photos, current land use, etc. The obstacles that inhibit the acquisition of these datasets mostly stem from funding and staffing levels.

   c) **How is or will the county ensure that county-maintained land information is, or can be made available in a standard industry format for use by others?**

   The Land Information Office has all of the GIS vector data available for distribution in shapefile, file geodatabase, and CAD formats. Any raster data comes in various formats such as MrSID and TIF. Tabular data is available in various formats such as dbf and ASCII file. The data is available for the cost of reproduction and supplies and can be acquired via standard electronic distribution methods (FTP, email, DVD, etc). The data can also be viewed and printed at the online mapping website. If Calumet did not create and/or does not have ownership of the data, all requests for distribution of that data will be denied and the requestor will be referred to the data originator.

   d) **How is or will the county ensure that the land information it has is geographically referenced for use by others?**

   The Land Information Office uses the Calumet County Coordinate System for all of its geographic data. If the data is not maintained by the office, but a version is stored here (i.e. non-metallic mine points), the LIO does not always re-project the data, though it often does. If Calumet did not create and/or does not have ownership of the data, all requests for distribution of that data will be denied and the requestor will be referred to the data originator.

e) How is or will the county ensure currency and continued maintenance of its digital land information?

The Land Information Office acquires updates through various means and updates both internally and externally posted datasets as the changes are made known to staff. Changes that are reasonably expected to be known by the office are made as the changes occur (i.e. annexations), but other changes are made as information is brought to the LIO (i.e. foreclosures). This data maintenance is one of the core functions of the office.

2. Database Design:

Calumet County's technological GIS environment is designed not only to be robust and powerful, but also streamlined and needs driven. The general technological platform upon which Calumet does much of its work is based in a Windows environment and an AS400.

The land records in Calumet are split between the two environments relatively evenly. Our AS400 houses the Register of Deeds, Treasurer, Finance, Real Property Lister data and the IMS21 imaging system. Our Windows servers house our GIS data, which is almost solely based in the ESRI environment in the form of geodatabases, shapefiles and various raster types. AutoDesk products are also used in-house, though their role is diminishing.

The current GIS is based on three file geodatabases: County, Parcels and PLSS. All three have proper design, metadata, and implementation based on the confinements of their prospective use and technologies. They also comply with all land records and IT standards in the county. To accommodate editing by GIS staff all three have two copies, a live copy that is used by other staff for making maps and viewing data, and a production copy that is used by GIS staff to update data. The live copy is replaced by the production copy on an as needed basis, which is usually monthly.

The state of the County GIS is in flux in 2010. The strain on the current system, by way of user numbers and requirements, has shown that there are limitations that need to be addressed. An enterprise wide relational database management system (RDBMS) would be the appropriate solution to the current issues faced by the county GIS program. The RDBMS will be included in the 2011 budget.

B. Progress Report on Ongoing Activities

The goals and objectives of the Calumet County Land Information Office have changed and evolved as the objectives of the previous plan are realized. Many of the items listed in the 2005 as "Ongoing" or "as needed" are still in the 2010 plan because they continue to be a core function of the office and are meant to be perpetual. Many objectives were accomplished as planned and on time, such as conversion to the geodatabase format. Still others were not accomplished due to loss of staff, reduction of funding and lack of data availability. Please see the "status" field in Section A for projected timeframes for each item.

C. New Initiatives

1. Proposed Projects:

a) *Acquisition of ArcGIS Server and the necessary hardware*:
   (1) The Land Information Office plans on acquiring the ArcGIS Server suite in order to better enable the accessibility and usability of land records in Calumet County.

(a) ArcSDE: This would allow the County to convert from a series of stand alone file geodatabases to a singular relational database management system via ArcSDE and SQL Server, thereby increasing efficiency and accuracy of both operations and data.

(b) ArcGIS Server: This conversion would also allow for the internalization of the County's online mapping presence. That would allow for more control of the site and data while reducing cost by removing hosting fees. ArcGIS Server would also promote use of GIS by county staff by giving the Land Information Office the ability to create custom online mapping applications that only show what staff wants to see and only allowing the tools staff needs. These custom applications have the potential to reduce costs by way of allowing for the removal of some licensing. It will also increase efficiency by putting GIS in the hands of those who need it in a format that is intuitive and powerful.

(2) Completion of this project requires the purchase of hardware, software, training, and services.

(a) Hardware: Calumet County needs to purchase an application server and a web server. Our current application server is unable to meet the needs of the new system. We do not currently have a web server.

(b) Software: Calumet County needs to purchase the ArcGIS Server suite, ESRI Developers Network Subscription, and more licenses of SQL Server 2008.

(c) Training: Calumet County will require approximately 10 days worth of training for implementation and use of the new software package.

(d) Services: Calumet County will acquire approximately five days of installation and consultation services provided by ESRI.

(3) The timeframe for this project is dependant of budgeting and staff. Implementation of the plan will begin in the first quarter of 2011.

b) *Acquisition of Register of Deeds Document Management System*:

(1) The Register of Deeds plans on acquiring a document management system to better manage in office operations and workflows as well as online availability of ROD documents.

(a) The current system consists of the AS400 and an FTP site for images. There is no real online presence. The new system will have a searchable and billable online application that allows for access to the ROD documents and links to the GIS website and the online tax application. The new system will also streamline the in-office operations by reducing redundancies and potential user error.

(2) Completion of this project requires the purchase of hardware and software.

(a) Hardware: Calumet County will need to purchase a web server, larger monitors in the ROD office, scanners and printers.

(b) Software: Calumet County will need to purchase a software package that meets all of the needs of the office.

(3) The timeframe for this project is dependant on budgeting and staff. Implementation of the plan will begin in December 2010-January 2011.

c) *Acquisition of 2015 Orthoimagery*:

(1) The Land Information Office participated in the Wisconsin Regional Orthophoto Consortium (WROC) in 2010 and a predecessor of that consortium in 2005 to obtain orthophotos. While there is no guarantee that Calumet will be part of that consortium in 2015, or that the consortium will be in existence, there is a good chance the County will be involved due to the substantial cost savings.

(a) In 2010 the county acquired 12" resolution images countywide, and 6" resolution images for the municipalities that participated in the cost sharing program.   The county hopes to have similar municipal participation in 2015.

(b) In 2010 the county accepted NGA/USGS partial funding in exchange for access to the orthoimages produced.   This resulted in the county orthoimages being part of the public domain. The Land Information Office will most likely participate in a similar program if it is available in 2015.

(2) Completion of this project does not require the purchase of any software or hardware, just the acquisition of the data.

(3) The timeframe for this project will be similar to the 2010 flight. The flight will take place in April of 2015, with final delivery taking place around October of that same year. Timeframes may vary depending on the specific process.

d) *Acquisition of 2015 LiDAR data*:

(1) The Land Information Office participated in the Wisconsin Regional Orthophoto Consortium (WROC) in 2010 and a predecessor of that consortium in 2005 to obtain orthophotos. The Land Information office acquired LiDAR data during the 2005 flight for use in the new floodplain delineations that took place in 2007-2009. Acquiring LiDAR data on a 10 year cycle for areas that have changed is a cost effective way to keep current and accurate topographic data.

(2) Completion of this project does not require the purchase of any software or hardware, just the acquisition of the data.

(3) The timeframe for this project will be similar to the 2010 flight. The flight will take place in April of 2015, with final delivery taking place around October of that same year. Timeframes may vary depending on the specific process.

e) *Disaster preparedness*:

(1) The Land Information Office will work with the Emergency Management Office, Health Department, and the Sheriff's Department to better integrate land information and GIS into emergency response plans.

(a) Data and services the Land Information Office will provide include, but are not limited to:

(i)   Data – the acquisition of datasets not currently available to emergency response professionals like utility data, water sources (including hydrants), special needs citizens and facilities, etc.

(ii)   Services – support of reverse 911 functions, assistance in plan development and implementation, training, updates for the Emergency Operations Center (EOC), routing, etc.

(iii)   Maps – (maps will utilize the National Grid) - map books, online mapping, wall maps, routing maps, emergency event mapping including plume mapping, etc.

(2) This project will require data, software, and hardware updates over time.

(3) This project is perpetual.

f) *Land use delineations*:

(1) The Land Information Office will work with East Central Regional Planning Commission (ECWRPC) to acquire land use delineations.

(2) Completion of this project requires the acquisition of the 2010 orhophotos.

(3) The timeline for the project partially hinges on acquisition of the 2010 orthophotos, as well as workloads and staffing for Calumet County and ECWRPC. The 2010 orthos are the one known aspect of the timeline and are planned to be delivered in final format in October of 2010. Final delivery of the land use delineations could be pushed as far back as 2012 or 2013 depending on various factors concerning both agencies.

g) *Regional parcel database integration:*

(1) The Land Information Office is working with the City of Appleton and Outagamie County to link up and potentially host parcel data between the government bodies. Other municipalities may be integrated in the future.

(2) This project will require the Land Information Office to acquire software, hardware and services. Please see section A of "Proposed Project" for further details.

(3) This project has been in the works for several years. All three agencies developed and implemented a common parcel geodatabase schema. The integration of the GIS is dependant on Calumet County's acquisition of the appropriate software and hardware.

Once the necessary parts are in place, the integration will begin with anticipated completion being within 12-18 months.

2. Assistance Requested

a) *Technical Assistance*: Calumet County has been active in the listserv over the years and that trend will continue. While the LIO List Server has provided good insight, more information could be published or provided on models of projects from across the State. Also, products and services available to the land information community should be more heavily promoted by the DOA. Calumet County will continue to carefully research and plan for future activities. In doing so, the services available through the DOA will surely be utilized.

b) *Finances*: The County plans to use retained user fees and grant dollars to fund the activities. The county will continue to pursue other funding (ex: grants, tax levy).

c) *Access:* The Land Information Office plans on maintaining an online presence through the web mapping application. Also, all data is available in GIS and CAD formats via standard distribution mediums (i.e. FTP, email, DVD's, etc).

d) *GIS Repository:* Calumet County plans to fully participate in the statewide GIS repository. Data sharing and distribution is one of the central pillars Calumet County Land Information Office.

e) *Procurement*: The Land Information Office has and will continue to follow county policy for procurement.

3. Problems Encountered: While there is interest in completing these initiatives as soon as possible, limited funding and staffing affect of the overall timing and implementation. Several projects and datasets have been put on hold due to the above mentioned factors. Some of those include: Acquisition of geological data (lacking funding and data availability), acquisition of vegetation cover data (lacking funding), facilities citing project (lacking training), and GIS linked permitting applications (lacking funding and staff) etc.

D. Custodial Responsibilities (§ = State Statute, * = County Ordinance)

1. Land Information Office
   a) Current Land Records responsibilities and duties
   (1) *Coordinates land information projects within the county (§59.88).*
   (2) *Prepares the Countywide Plan for land records modernization.*
   (3) *Oversees the LIS/GIS portion of the countywide computer network.*
   (4) *Creates scripts, programs, and user interfaces for mapping and LIS/GIS needs.*
   (5) *Maintains a countywide layering scheme for all mapped entities.*
   (6) *Maintains all digital parcel maps.*
   (7) *Works on special projects for individual departments, municipalities, agencies, and the public and private sector.*
   (8) *Oversees the integrity of maps and corresponding land records data submitted or created for use in the countywide GIS/LIS program.*
   (9) *Budgets and oversees grants for use in land records modernization efforts.*
   (10) *Maintains county online mapping website.*
   (11) *Responsible for the completion of the county plat book.*
   (12) *Responsible for the completion of the county road map.*
   (13) *Maintenance of digital land use and zoning maps.*
   (14) *Maintenance of digital shoreland, floodplain, and recreation maps.*
   (15) *Maintenance of digital address and rural numbering maps.*
   (16) *Maintain E911 geographic datasets.*

          (17)*Maintain a countywide database and GIS of PLSS section corners.*
          (18)*Educating users in the creation of maps and the use of GIS.*
- b) Future Land Records responsibilities and duties (expected or willing to assume)
  - (1) *Develop specialized online mapping applications for internal use by county staff and municipalities.*

2. [Register of Deeds]
   - a) Current Land Records responsibilities and duties
     - (1) *Records and stores deeds, mortgages, plats, and associated land records (§59.21) and maintains its corresponding database.*
     - (2) *Maintains a computerized tract index and grantor/grantee index (§59.21).*
   - b) Future Land Records responsibilities and duties (expected or willing to assume)
     - (1) *Responsibility for the use and management of a document imaging system.*
     - (2) *E-Transmission of transfer return forms.*

3. [Real Property Lister]
   - a) Current Land Records responsibilities and duties
     - (1) *Maintains a database of description and ownership information on all parcels (§70.09).*
     - (2) *Maintain database information on school and other special district codes,*
     - (3) *Maintain hard copy parcel maps, including property divisions, splits and merges.*
     - (4) *Maintains computer services for assessment roll, notice of assessments, summary reports, tax roll, and tax billing.*
     - (5) *Assigns new parcel identification numbers (PIN) to parcels.*
     - (6) *Maps all parcels (along with any pertinent supplementary parcel information) digitally.*
     - (7) *E-Transmission of transfer return forms.*

4. [County Clerk]
   - a) Current Land Records responsibilities and duties
     - (1) *Maintains hard copy electoral and jurisdictional maps (§5-10).**
     - (2) *Maintains highway and road relocation orders (§32.05 and 84.09).*
     - (3) *Maintain a state trunk highway system map (§84.02).*
   - b) Future Land Records responsibilities and duties (expected or willing to assume)
     - (1) *Maintenance and review of digital electoral and jurisdictional maps upon creation.*

5. [Emergency Government]
   - a) Current Land Records responsibilities and duties
     - (1) *Maintains records on hazardous chemical storage (§166.20).*
     - (2) *Maintains records on prior chemical spills (§166.215).*
     - (3) *Maintains records on emergency evacuation sites (§166.09).*
     - (4) *Maintains records on damages to public and private properties (§166.22).*
     - (5) *Maintains records on pipelines.*
     - (6) *Maintains current records of emergency response districts.*
     - (7) *Maintains reverse 911 program.*
   - b) Future Land Records responsibilities and duties (expected or willing to assume)
     - (1) *Maintain digital hazardous chemical storage and spills data.*
     - (2) *Maintain digital emergency evacuation site data.*
     - (3) *Maintain digital disaster area data.*

6. [County Surveyor]
   - a) Current Land Records responsibilities and duties
     - (1) *Maintains information on PLSS corners (§59.49).*
     - (2) *Maintains information on the High Accuracy Network (HARN) densification in the county.*
     - (3) *Maintains and reviews private and certified survey maps (CSM) as provided to its office.*
     - (4) *Oversee all monument maintenance activities.*

(5) Provide professional assistance to other County departments and other local units of government.

7. <u>Planning & Zoning Department</u>
   a) Current Land Records responsibilities and duties
      (1) Maintain zoning and land use delineations as approved by unincorporated municipalities (§59.69)*.
      (2) Maintain shoreland and floodplain zoning delineations (§59.69).
      (3) Maintain Density delineations and Base Tract data.
      (4) Maintain the countywide uniform address system and rural address maps (§59.54).*
      (5) Review land division in the form of plat and CSM reviews (§59.69).*
      (6) Track land divisions for compliance with base development yield.*
      (7) Maintain recreational trail data.
      (8) Maintain outfall data for the pre/post construction ordinance (N.R.216.07).
      (9) Track sanitary system location data.
      (10)Provide LESA modeling and other farmland preservation data.
      (11)Provide PACE tracking data.
      (12)Enforce county zoning and building ordinances (§59.69).*
      (13)Administration of farmland preservation plans and zoning.*
      (14)Administration of outdoor recreation plan.*
      (15)Enforce the county private sewage system ordinance (§59.07).*

8. <u>Land and Water Conservation Department</u>
   a) Current Land Records responsibilities and duties *(Chapter 92 §).*
      (1) Prepare land and water resource management plan (§92.10).
      (2) Maintain natural resource data including field by field soil erosion data for "T" by 2000 program (§92.025).
      (3) Maintain digital and hard copy watershed maps.
      (4) Maintain conservation plans for land owners.
      (5) Maintain and monitors Farmland Preservation Program conservation plans (§92.104).
      (6) Maintain CREP mapping database.
      (7) Maintain Well Monitoring database.
      (8) Maintain well abandonment program.*
      (9) Maintain state funded cost sharing contracts for installation and maintenance of conservation practices.
      (10)Maintain landowner and land records of compliance with state agricultural performance standards and state and federal program requirements.
   b) Future Land Records responsibilities and duties (expected or willing to assume)
      (1) Develop and maintain conservation practice mapping database.
      (2) Develop and maintain well abandonment mapping database.
      (3) Develop and maintain database of geologic features that may contribute to groundwater contamination.
      (4) Develop and maintain state agricultural performance standard compliance mapping database.
      (5) *Administration of the construction site erosion control and post construction storm water management ordinance.*

9. <u>Highway Department</u>
   a) Current Land Records responsibilities and duties
      (1) Maintain a filing system for right-of-way design and as-built plans.
      (2) Maintain control access regulations filing system (§83.027).*
      (3) Maintain a sign inventory.
      (4) Maintain a seven year road project, maintenance and improvement database.
      (5) *Maintain utility and driveway inspection records.*

   b) Future Land Records responsibilities and duties (expected or willing to assume)

> *(1) Request all road and highway design and as-built plans in digital form, for digital filing.*
> *(2) Create and maintain a GIS and database of controlled access ROW areas.*
> *(3) Utilize a countywide road database for vehicle routing and road maintenance records.*
> *(4) Create and maintain an automated utility and driveway inspection system.*

10. Clerk of Courts
   a) Current Land Records responsibilities and duties
   > *(1) Maintains a database of civil judgments and small claims on individuals and property (§799.09).*
   > *(2) Maintains a database of state tax and construction liens on persons or properties (§75.521, 806.16).*
   > *(3) Maintains a database of bankruptcy actions and sheriff sales (§806.19, 842.28, 812.16).*

11. Register in Probate
   a) Current Land Records responsibilities and duties
   > *(1) Maintains a database of probate records (§851).*
   > *(2) Maintains a database of guardianship records (§54).*

12. Treasurer
   a) Current Land Records responsibilities and duties
   > *(1) Collection of general property taxes (§74.07).*
   > *(2) Preparation of taking and sale of tax delinquent properties.*
   > *(3) Work with Real Property Lister on tax billing.*

   b) Future Land Records responsibilities and duties (expected or willing to assume)
   > (1) *Create and maintain digital database of In-Rem properties.*

13. Sheriff
   a) Current Land Records responsibilities and duties
   > *(1) Maintain Master Street Address Guide (MSAG).*
   > *(2) Quality check / verify E911 addressing database.*
   > *(3) Wireless E911.*
   > *(4) Maintain an incident database.*

   b) Future Land Records responsibilities and duties (expected or willing to assume)
   > (1) *Incident Mapping.*

14. Human Services
   a) Current Land Records responsibilities and duties
   > (1) *Maintain databases to be geo-coded.*
   b) Future Land Records responsibilities and duties (expected or willing to assume)
   > (1) *Mapping of Services.*
15. Health
   a) Current Land Records responsibilities and duties
   > (1) *Maintain databases to be geo-coded.*
   b) Future Land Records responsibilities and duties (expected or willing to assume)
   > *(1) Incident Mapping.*
   > *(2) Mapping of Services.*

16. Invasive Species
   a) Current Land Records responsibilities and duties
   > (1) Maintain databases of invasive species throughout the county.

E. Framework Data, Systems Implementation and Statewide Standards

1. Geographic Positioning Reference Frameworks

   a) **Geodetic Control Network:** The County has completed densification of the High Accuracy Reference Network (HARN) to the tertiary level using GPS and the Wisconsin Department of Transportation standards. The county will be responsible for maintenance of the HARN densification.

   b) **Public Land Survey System:** The County has completed 100% of the remonumentation and geodetic control of the Public Land Survey System (PLSS) for section and quarter section corners. This work meets the requirements established in state statutes and meets at least second order class II standards. This data includes all government lot corners throughout the county. The County also has a maintenance program where 5% of the corners are inspected each year, thus all corners will be checked at least once every twenty years.

2. Orthoimagery and Georeferenced Image Base Data

   a) **Photogrammetric Base Maps:** The County has a series of images that are available for use in a digital format which are in county coordinates. Base maps have not been produced from this data, or is no longer in use. In 2005 the County acquired LiDAR data from which two foot contours were developed.

   b) **Digital Orthophotography (DOP):** The County has a series of images that are available for use in a digital format which are in county coordinates. The dates that are available are: 1938, 1952-1953 (partial set), 1992, 1995 (Lake Winnebago shoreline only), 2001, 2005 and 2010. In 2008 the County acquired 18" leaf-on orthoimagry that was available from the USDA through their National Agricultural Imagery Program (NAIP). The County has established a five-year cycle for acquisition of new orthoimagery (2010, 2015, etc). The 2010 photos adhere to the horizontal National Map Accuracy Standards.

   c) **Digital Raster Graphic:** None

   d) **Satellite Imagery**: None

   e) **Oblique Aerial Imagery**: None, though if need is demonstrated and funds become available, then acquisition may be planned.

   f) **Historical Aerial Imagery**: The County has a series of images that are available for use in a digital format which are in county coordinates. The dates that are available are: 1938, 1952-1953 (partial set), 1970's, 1980's, 1992, 1995(Lake Winnebago shoreline only), 1995 countywide 9x9 contact prints, 2001 and 2005.

3. Elevation Data Products and Topographical Base Data

   a) **Digital Elevation Models:** See Digital Terrain Model.

   b) **Digital Terrain Model:** In 2001, the County obtained a DTM to support four foot contours. In 2005 the County acquired a full coverage LiDAR dataset to support two foot contours and it meets ASPRS Class II accuracy standards.

   c) **Triangulated Irregular Networks:** The County has not purchased TIN products; however, we have generated TIN's using internal software.

d) **Contours:** The County has LiDAR derived two foot contours established for the entire county. The LiDAR data was developed as part of the 2005 WROC orthophoto program and meets ASPRS Class II accuracy standards.

e) **LIDAR Data:** The County has LiDAR data that was developed as part of the 2005 WROC orthophoto program and meets ASPRS Class II accuracy standards. The processed LiDAR data has an approximate density (posting) of 5-meters (DEM). Three dimensional breaklines and bare earth data is also in-house.

f) **IFSAR Data:** None

4. <u>Parcel Mapping</u>

a) **Type**: The County has completed the digital parcel mapping for the entire county excluding the Cities of Menasha and Appleton. Menasha parcels are mapped by Winnebago County and Appleton maintains its own parcels. The parcel mapping is referenced to the Public Land Survey System (PLSS). The method of parcel mapping is entry by Coordinate Geometry (COGO) onto the PLSS from deeds, surveys and plats. All new CSM's and plats must be recorded in the Calumet County Coordinate System and adhere to all applicable statutes and ordinances. All distributed maps have a disclaimer that clearly indicates that the data is not a survey and is designed to give an idea of the geography of the land divisions.

b) **Coordinate System Used**: Calumet County Coordinate System

c) **Parcel ID:** The county parcel ID numbering system wholly conforms to the WLIB parcel numbering system standards, and in some cases exceeds it in scope. This standard was implemented for the creation of the 1998 tax bills.

d) **Standards:** The parcel data adheres to the WLIA Parcel Geo-Locater standard, local government standards, WLIA Digital Parcel Mapping Standard, as well as the FGDC Cadastral standard.

5. <u>Parcel Administration and Assessment Information</u>

a) **Design:** The County has developed a parcel administration design that has property records and boundary information including the PIN referenced to the PLSS.

b) **Activities**: With the primary PIN; we can establish links back to our Tax and Land systems. The County is currently working on a new document imaging system that will allow links back to actual copies of recorded documents.

c) **Standards:** The parcel data adheres to the local government standards, WLIA Digital Parcel Mapping Standard, as well as the FGDC Cadastral standard.

6. <u>Street/Road Centerlines, Address Ranges and Address Points</u>

a) **Transportation Network**: The County has a complete transportation network dataset.

b) **Right of Way**: Right of way areas were mapped during parcel conversion. The Land Information Office has defined some areas that need further work.

c) **Centerlines**: The County has mapped all centerlines for the county and meets local standards. The centerlines are maintained and kept current for use in the County's E911.

d) **Address Ranges**: Address ranges have been assigned to the centerline file and are maintained for use in the County's E911.

e) **Site Address Database**: The Land Information Office has a site address database, which is based on our parcel mapping and input from other sources. This data is in flux and is constantly being updated.

f) **Address Point, Structure and/or Driveway**: The Land Information Office has address points that are located where the driveway meets the road. This data is in flux and is constantly being updated.

g) **Road Names**: Road names have been assigned to the centerline file. The road names are maintained and kept current for use in the County's E911.

h) **Functional Class**: Functional classes have been assigned to the centerline file. The centerlines are maintained and kept current for use in the County's E911.

i) **Places/Landmarks**: The Land Information Office has a common place file created which is used for E911.

j) **MSAG**: Centerline/Addresses match the County MSAG and local standards. This is mandatory for the 911 to work properly.

k) **Emergency Planning**: Data supports a reverse 911 system, which is a program used to notify residents in case of an emergency. The LIO uses centerline, district and address data to do any routing and response mapping necessary. This portion of the land information program needs further planning and updating.

l) **Wireless 911**: The geographic framework exists to support Wireless E911.

m) **Standards**: The land information program is in compliance with local government standards.

7. Hydrography, Hydrology and Wetlands Mapping

a) **Hydrography**: Completed from planimetric mapping and DNR data. The LIO plans on updating the data based on 2010 orthophotos and/or obtaining new data from the DNR once available.

b) **Watersheds**: Completed by DNR. The LIO plans on obtaining updates to this dataset when it is available.

c) **Hydrogeology**: Completed by WNHGS. The LIO plans on obtaining updates to this dataset when/if it is available.

d) **Impacts on the Environment**: Calumet County has data on groundwater contamination and storm water runoff. The LIO plans on obtaining any other data concerning the contamination and alteration of the environment as it becomes available.

e) **Wetlands Mapping Activities**: Completed by the DNR. Calumet also has a digitized version of the 1994 Wetlands Inventory paper maps produced by the DNR. The LIO plans on obtaining updates to this dataset when it is available.

8. Soils Mapping, Land Cover and Other Natural Resources Data

a) **Soil Mapping Activities**: Completed by Natural Resources Conservation Service (NRCS). The LIO plans on obtaining updates to this dataset when it is available.

b) **Land Cover**: Not Complete. The LIO plans on obtaining updates to this dataset when it is available.

c) **Forests**: Not Complete. The LIO plans on obtaining updates to this dataset when it is available.

d) **Geology**: Not Complete. The LIO plans on obtaining updates to this dataset when it is available.

e) **Hydrogeology**: Completed by WNHGS. The LIO plans on obtaining updates to this dataset when it is available.

f) **Non-Metallic Mining:** Completed by East Central Regional Planning Commission. The LIO receives updates to this dataset when it is available.

g) **Endangered Resources:** Completed by Natural Heritage Inventory. The LIO plans on obtaining updates to this dataset when it is known to be available.

h) **Impacts on the Environment:** The LIO plans on obtaining updates to this dataset when it is available.

9. Land Use Mapping

a) **Land Use**: The County worked with East Central Regional Planning to have the existing land use mapped in 2004. The LIO is working with East Central RPC in an effort to update this dataset. The LIO will acquire the updated dataset when it is completed and available.

b) **Tax Land Use**: The County utilizes the Department of Revenue (DOR) Land Use Classification System within its assessment roll database. The land use assessment evaluations and corresponding acreage are determined by the municipal assessors, and maintained by the Real Property Lister.

c) **Future Land Use**: The County has a complete Future Land Use dataset that was developed during the Smart Growth planning process.

d) **Standards**: Land Use Mapping is compliant with local standards.

10. Zoning Mapping

a) **Zoning Districts:** Zoning districts are mapped for all areas that have some type of zoning.

b) **Shorelands**: Shoreland zoning districts have been mapped per the regulations; however, the County does not have all the navigable waterways defined.

c) **Floodplains and Floodways**: Floodplains were digitized off of the 1980's FEMA maps and used in the GIS until 2009. New digital floodplain data was created from the 2005 LiDAR contours and were implemented in February of 2009.

d) **Environmental Corridors**: Part of zoning districts. The LIO plans on obtaining updates to this dataset when it is available.

e) **Burial Sites**: Data provided from the State Historical Society. The LIO plans on obtaining updates to this dataset when it is available.

f) **Archeological Sites**: Data provided from the State Historical Society. The LIO plans on obtaining updates to this dataset when it is available.

g) **Historical/Cultural Sites**: Data provided from the State Historical Society. The LIO plans on obtaining updates to this dataset when it is available.

h) **Standards**: The zoning program is in compliance with local standards. The zoning program is in compliance with floodplain zoning standards, but is not compliant with shoreland zoning. Shoreland zoning compliance will be attained within the grace period allowed by the DNR.

11. Election and Administrative Boundary System

a) **Election Boundaries**:   The Land Information Office has supervisory and ward district boundaries. They are updated for annexations and redistricting.

b) **Legislative Districts**: The Land Information Office has legislative districts boundaries. The LIO plans on obtaining updates to this dataset when it is available.

c) **Utility Districts**: The Land Information Office has utility and telephone districts for the county as part of the E911. The LIO plans on obtaining updates to this dataset when it is available.

d) **School Districts**: The Land Information Office has school district boundaries based on the parcel data. It is updated as the parcels are updated, which is currently monthly.

e) **Tax Increment Finance Districts (TID)**: The Land Information Office has all TID's in the county.   They are updated by the municipalities, often by the LIO for the municipalities. Updates are available upon request as they become available.

f) **Agency Administrative Districts and Zip Codes**: The Land Information Office has ZIP code "boundary" as well as administrative districts datasets. The LIO plans on obtaining updates to this dataset when it is available and applicable.

g) **Census Geographies**: The Land Information Office has TIGER census data from the 2000 census. The Land Information Office plans to obtain the new data from the 2010 census when it becomes available.

h) **Civil Division Boundaries**: The Land Information Office has civil division boundaries and update them as annexations are recorded.

i) **Public Administered Lands**: The Land Information Office does maintain a public lands dataset which is updated as changes are recorded or otherwise made known.

j) **Native American Lands**: Calumet County does not have any Native American lands.

k) **County Boundaries**: The Land Information Office maintains a current county boundary. The County has no plans to update this data due to its relatively static nature.

l) **State Outline**: The Land Information Office does have the state outline data that was obtained through ESRI. The County has no plans to update this data due to its relatively static nature.

m) **Lake District**: Calumet County does have one lake district, but the Land Information Office has not maintained any datasets.

12. Critical Infrastructure and Facilities Management

a) **Emergency Service Districts**: The Land Information Office maintains datasets for fire, ambulance, first responder, towing and police districts. This is part of the E911 program and the data is updated as needed.

b) **Emergency 911 Call Center Locations and Service Areas**: There is only one E911 call center. The center and its service areas are mapped and updated when the data is available.

c) **Fire/Police Districts:** The Land Information Office maintains datasets for Fire, Ambulance, First Responder, Towing and Police Districts. This is part of the E911 program and the data is updated as needed.

d) **Fire/Police Stations:** The Land Information Office maintains datasets for fire and police stations. This is part of the E911 program and the data is updated as needed.

e) **Hospitals and Healthcare Facilities:** The Land Information Office maintains hospital and healthcare clinic point data. The data is updated as needed.

f) **Government Facilites:** The Land Information Office maintains government facility point data. The data is updated as needed.

g) **Utility (not districts):** The Land Information Office has points for the various utility facilities in the county, though the dataset is not thought to be complete. More work is needed for this dataset.

h) **Park and Recreational Trails:** The Land Information Office maintains parks and trail data. The data is continuously updated.

i) **Transit Systems:** Calumet County's transit system consists mainly of the road network and industrial rail. The transit datasets are continuously updated.

j) **Bridges, Culverts and Traffic Road Signs:** The Land Information Office is lacking in a complete dataset for bridges, culverts and road signs. Mapping bridges and culverts by the Land Information Office is planned for the next few years. Traffic sign inventory is partially kept by the Highway Department, though they do not inventory village, town or city road signs.

k) **Airports and Airfields:** The Land Information Office maintains both a current and historic airport/airfield dataset. The data is updated as needed.

l) **Harbors:** The Land Information Office maintains a harbor dataset. The data is updated as needed.

m) **Boat Landings:** The Land Information Office maintains a boat landing dataset. The data is updated as needed.

n) **Hazardous Materials Sites:** The Land Information Office has a hazardous materials site dataset in its GIS, but it is about 7 years old. The updating of this dataset is planned as part of the disaster preparedness planning process.

o) **Landfills:** The Land Information Office does have a landfill dataset. There is only one landfill in the county and data that is needed is maintained.

13. Database Design and System Implementation

a) **Design Evaluation**: Calumet County currently maintains several land information related databases on an AS400 mainframe. The primary systems on the AS400 are: Land (HTE), Tax (HTE), Financial (HTE), Imaging (IMS21) and the Register of Deeds System (in-house). The County GIS system database is designed to integrate with these systems. The GIS is Windows based and utilizes mostly ESRI products. Most of the data is stored in file geodatabases that adhere to local standards and follow accepted database design standards.

b) **Project Approach**: The County does not have any plans to redesign its existing database structure on the AS400, save for the ROD system. The ROD records management system will most likely move to a Windows based system, though that is not a certainty. The LIO is working toward conversion of the GIS from a series of single file geodatabases to an enterprise wide relational database management system.

c) **Timeline**: Both the ROD records management system and the GIS relational database management system are planned to be implemented in the first quarter of 2011, though the budgeting process may change that timeline.

d) **Metadata Policies**: Metadata exists for the County GIS datasets; however, more documentation is needed to allow further integration will all land records datasets.

e) **Security/Privacy Policies**: Security is maintained by the Information Services Department. The County adheres to all applicable privacy polices including those required by state and federal law.

f) **Implementation and Maintenance Strategy**: The County plans on altering its data structures to most efficiently take advantage of the functionality offered by the new ROD records management system as well as the ArcGIS Server software suite. All vendors under consideration for the records management system offer implementation assistance and training, both of which will be utilized by the County. The same is applicable for the ArcGIS Server software suite. Long term maintenance will be a function of the Land Information Office, in conjunction with the ROD and IS as applicable. Funding will at least be partially covered by the change in the recording fees that occurred in 2010. All AS400 datasets that are not part of the ROD system are not planned for significant alteration in the next five years.

g) **Data Quality Management**: GIS data that is maintained and / or originated by the Calumet County has been appropriately tested to assure quality, is planned to be tested, or if there are no plans for testing there is mention of that in the metadata. Each system is designed to maintain security and accuracy.

h) **Needs Assessment**: The County has a Land Information Office Council which looks at existing and future needs. Establishing a formal land information needs assessment protocol is a goal of the Council and the Land Information Office.

i) **Data Structure and Format**: New datasets are designed to fit into the existing data architecture. All GIS data is incorporated into file geodatabases where applicable. There are

plans to convert some AutoCAD data (i.e. PLSS government lots) into geodatabases. The structure and format of the data is well designed and properly deployed, but system limitations are evident to the users.

j) **GIS Data Model**: The County has data models for the major geodatabases that are currently being used. The "County" geodatabase houses the baseline data that is used in nearly every mapping application. That data includes all administrative boundaries, base map data, and environmental data. The "County" geodatabase is loosely based on several models put forth by ESRI Press and was developed using the book "Designing Geodatabases"(2004) by David Arctur and Michael Zeiler. The "Parcels" geodatabase data model was designed by Calumet County, Outagamie County and the City of Appleton as part of an intergovernmental cooperation initiative. The "PLSS" geodatabase is an offshoot of the "Parcels" geodatabase in that the original "PLSS" geodatabase was integrated within the "Parcels" design. They were separated to better suit county needs. The future design of all of these geodatabases will hinge on the implementation of ArcGIS Server, which will allow for greater integration and flexibility within the geodatabases themselves, and the entities that use them.

k) **Coding Schema**: New datasets are designed to fit into the existing data architecture and have the flexibility to conform to future architectures.

l) **Data Dictionary**: The County does not currently have a data dictionary, but the need for one is being assessed.

m) **Transaction Management**: The County does track transactions with our financial system. Data transactions are monitored by way of invoicing and license agreements.

n) **Organizational Information Flow**: As the County implements new datasets, workflows are established to ensure those datasets can be maintained. When potential data updates are available to county employees (i.e. County Clerk with annexations) the information is sent to the Land Information Office for integration into LIO data. But lines of communication can always be improved. It is one of the objectives of the Land Information Council to assist in improving communication.

o) **Data Conversion**: All of our existing data is in an 'open format' which allows for easy conversion.

p) **Integration**: By following data standards and maintaining our data in an 'open format', we are allowing for existing and future development of system integration. Conversion to a relational database management system will allow for greater integration into our AS400, most notably our ROD and RPL systems. By fully embracing this technology we will also integrate our parcels with Outagamie County and the City of Appleton, as the culmination of the intergovernmental cooperation project discussed earlier.

q) **Standards**: Calumet County adheres to data exchange standards put forth by WLIA.

F. Public Access

a) **Access**: The County is currently using several methods to provide access to customers. These methods include: Internet access to the *GIS Online Mapping System*, Internet Access to the *County Tax Inquiry System*, Public Terminals for research, FTP Subscription access for recorded documents and daily counter access. Custom data and maps can be distributed via CD/DVD's, FTP, email, memory stick, etc. Future plans for greater access include a new ROD records management system that will take the place of the FTP subscription for recorded documents. Access will also be improved via the ArcGIS Server suite. The suite will allow the

Land Information Office to bring online mapping data in-house and eventually allow the County to take full control over the online mapping application. This will improve the user experience and increase response time for changes and updates.

b) **Access via Third Party Technology**: Any data requests to the Land Information Office for Calumet County data by government agencies of any level are always completed as requested. This means any data that is posted on the internet by a government body has Calumet data, if that was part of the design (i.e. PLSS finder).

c) **Data Sharing Policies**: The County has policies that govern data sharing, copyright and data fees. County policy dictates that all data and map requests made to the Land Information Office be accompanied by a completed and signed license agreement. The purchase of data and maps is invoiced for time and materials to reproduce the data. There is no fee for the original data acquisition or creation.

d) **Open Access to Data**: See 5.a. above.

e) **Subscription Based / Public Facing Web Services**: Calumet County does currently have a subscription based online mapping application. The current policy allows for free access to the site by employees of any level of government. Any private entity must pay an access fee. The site has been online for two years and no users have paid for its services. Reevaluation of the site and its fee's is appropriate.

f) **Customized Data**: Customized data can be acquired from the Land Information Office based on the fee schedule. The purchase of data and maps is invoiced for time and materials to reproduce the data. There is no fee for the original data acquisition or creation.

g) **Internet Access**: See 5.a. above. The site is compliant with all Calumet County policies. It is hosted off-site and is subject to third party policies, with which it is compliant.

h) **System Security**: The County does have the appropriate security installed to protect its systems.

i) **Privacy Policies**: The County is compliant with all applicable privacy policies including those regulated by county regulation, and state and federal law.

j) **One/Two Dollar Fee**: The County has used the one-dollar fee, and will use the two-dollar fee to provide housing related data to the Internet. This includes such applications such as the Tax Land Inquiry and the GIS online mapping system.

k) **Standards**: The County is compliant with all access standards put forth by the WLIA, as well as state and federal open records laws.

G. Integration and Cooperation

a) **Formal Data Sharing Agreements**: The Land Information Office has no written formal data sharing agreements in place.

b) **Formal or Informal Data Maintenance Agreements**: There are some informal maintenance agreements between departments and municipalities. For example, the LIO maintains data for the E911, and maintains zoning data for many of the municipalities.

c) **Cooperative Arrangements**: The County has multiple cooperate arrangements with different agencies. For example, East Central Regional Planning Commission provides current land-use delineations with help and data from county staff.

d) **Consortia**: There are multiple examples of Calumet County's involvement in various consortia. The Land Information Office, City of Appleton, and Outagamie County have an informal parcel data integration consortium; the FoxComm consortium is a conglomeration of E911 dispatch centers that include Calumet, Outagamie, Winnebago Counties as well as the Oneida Nation; Calumet County is also actively involved in the Wisconsin Regional Orthophoto Consortium which is a group consisting of many of the counties in the state for acquiring orthoimages at a reduced cost.

e) **Collaborative Arrangements**: The Land Information Office has a few formal and a few informal collaborative arrangements. An example of a formal collaborative arrangement stems from the 2010 WROC orthophoto flight. The LIO collaborated with the majority of the municipalities in the county to pool funds for higher quality photos of areas with higher population density. Another example is a collaborative arrangement with NGA/USGS/ECWRPC to provide access to county orthoimages in exchange for partial funding of the acquisition. An example of an informal collaborative arrangement is the data sharing arrangement the LIO has developed with other regional GIS offices. There is a great sense of community in the region when it comes to technical assistance and peer review. There are multiple regional GIS user groups that help nurture that community feeling.

f) **Statutory Relationships Among Counties and State Agencies**: Calumet County has a very strong history of cooperation with other public land records agencies, both statutorily and otherwise. That outlook of openness and advancement of regional and statewide land records programs will continue in the future.

1. <u>What integrative/cooperative relationships would your county like to develop?</u>

The Land Information Office would like to develop more near-live integration of datasets between the county and other agencies. This will improve the experience for internal and external GIS users. The LIO would also like to see more integrative relationships develop between county departments as well as between the LIO and the municipalities. The county would pursue integrative and cooperative arrangements with any agency, municipality or department that would promote efficiency, utility, compatibility, and/or savings for the parties involved.

2. <u>What potential partners and mutual projects does your county plan to pursue?</u>

The county would like to expand the scope of such local and neighboring agreements by entering into agreements with larger regional entities such as regional utilities, the Department of Natural Resources (DNR), and the Department of Transportation (DOT). Over the course of the next five years the county Land Information Office specifically plans on entering into mutual projects with Outagamie County and the City of Appleton (parcel and data integration and sharing), many of the municipalities in the county (data, funding and expertise sharing), East Central RPC (data sharing), and other state and local governments (WROC), to name a few.

3. <u>What data would be shared and used in both of the above?</u>

The county will continue to freely share data with its municipalities and neighboring counties regarding parcel, right of way, and municipal boundary issues; but would also like to pursue other large-scale efforts. In addition, the county would like to work closer with local utilities, phone companies and emergency services to improve E911 services. All GIS data is freely available to all levels of government, as well as schools and libraries.

4. How does Calumet County allow for participation and coordinate funding allocations so that all departments benefit from the land information program?

The Land Information office distributes benefits from the land information program in multiple ways. It uses funding to improve and upgrade technology and training. Upgrading land records technology increases access to data by way of greater distribution and improved ease of use. Currently GIS is made available through online applications and, for some heavier GIS users, through desktop licensing of GIS and CAD software. Future land information distribution will rely more on customized internet mapping rather than desktop software. Land records funding also helps with staff training that is then brought back to the county through improved user support.

5. How does Calumet County allow for participation so that municipalities and other agencies in the region benefit from the land information program?

The Land Information Office distributes benefits from the land information program to local agencies and municipalities through several programs and opportunities. For example, the Land Information Office encouraged participation in the WROC program which allowed for higher accuracy images for those municipalities that chose to participate.
It is one of the overarching goals of the Land Information Office to include local communities and agencies in the land records program. Outreach and training is always available upon request. The LIO has offered training for the online mapping application multiple times in the past, and plans to offer more training in the future.

H. Communication, Education, Training and Facilitated Technical Assistance

a) **Data Documentation**: The County has developed metadata for its existing datasets. Data models are documented for the PLSS and Parcels geodatabase. A data model is not yet fully documented for the County geodatabase. The county also has parcel mapping documentation for use in the daily parcel mapping operation of the RPL.

b) **Resources Available**: The County does not have a formal training center; however training has been provided to users in our larger meeting rooms. Also, our LIO acts as a GIS help desk for both our internal users and our external users.

c) **Customer Needs**: Needs from internal and external customers are based on user demand and technology changes.

d) **Training**: Training will be provided both internally through the LIO and externally as needed and as funds exist. Training is also acquired by GIS staff through various local and regional user groups and WLIA. There are no agreements between the County and any educational institutions.

e) **Technology Use:** The technology is used to help train the users and public on the program. Our larger meeting rooms have appropriate projectors and screens along with network and internet access. All training is provided via those rooms.

f) **Clearing Housing**: The County does participate in the land information technical listserv and is/will participate in all statewide GIS data repositories when applicable.

g) **Education Funds**: The training and education dollars obtained through the program have been used to send staff to WLIA events and training.

I. Administrative Standards Not Associated with Foundational Elements

1. The County agrees to observe and follow the statutes relating to the Wisconsin Land Information Program and other relevant statutes.

2. The County agrees to permit the Wisconsin Department of Administration access to books, records and projects for inspection and audit.

3. The County agrees to complete the GIS Inventory Survey.

4. The County agrees to update the plan every five years and in the interim if the plan should change.

5. Development and implementation of an acceptable plan confers certain benefits on a local government within the county, including continued eligibility for program funding. A peer review process will be used to assess plan acceptability by the land information community.