Juneau County

Modernization Plan

2010-2015

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J. Executive Summary

A. Identification and Contact Information

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B. Participants in the Planning Process

The Juneau County Land Information Council

Alan Peterson, County Board Chairman	Edward Brown, First Vice Chairman
Mike Kelley, Second Vice Chairman	Mike Hunkins, IS Director
Christie Bender, Register of Deeds	Dave Donnelly, Zoning Administrator
Gary Dechant, County Surveyor	Bret Davies, Land Information Officer
Liz Housworth, GIS Technician	Brian Loyd, County Forester
Denise Giebel, Treasurer	Vacant - Realtor
Dennis Weiss, Public Works Director	Steve Coronado, Road Captain

C. Summary of the Plan

The purpose of this plan is to outline a strategy for Juneau County land records modernization development, maintenance and distribution. The Juneau County Land Information System Plan is a developmental level plan that will be used to document the goals, objectives, and initiatives of the Land Information Office. The Plan is intended to provide county, town and city officials, state agencies, private entities and any other interested parties with basic knowledge of Juneau County's efforts in land records modernization and its potential applications.

D. County Land Information Web Links
http://gis.co.juneau.wi.us/pvweb22/
    this is the GIS Mapping Site
https://landshark.co.juneau.wi.us/LandShark/login.jsp
    Register of Deeds site
http://gcs.co.juneau.wi.us/GCSWebPortal/search.aspx
    Treasurer Tax Information site

E. Municipal Websites

The county currently has formal working relationships with 2 (Village of Necedah, City of Mauston) municipalities for Web Based Mapping. I believe that the City of Elroy has a separate mapping site that is maintained by private company and that link has not been made public.

II.   Land Information Modernization and Integration Plan

A. Goals and Objectives

It is the goal of Juneau County to develop a modern geographic information system (GIS) that is horizontally and vertically integrated; one that provides useful quality information for its citizens, agencies, businesses, and other users of land information in an equitable and efficient manner.

The objectives of Juneau County are:
*   Continue maintenance of the previously monumented and geographically referenced PLSS corners. This ensures that all data is usable by others.
*   Maintenance of a countywide digital parcel map.
*   Acquisition of Personal Computers (PC's) for Public Access Terminals
*   Continue coordinating Juneau County land records modernization efforts with those of all county departments, Department of Natural Resources, Emergency Management, Local Municipalities and the Private Sector.
*   Juneau County will continue to make a concerted effort to discuss and forward ideas and problems on to regional and state levels as well as maintain representation in the appropriate arenas.
*   Continue coordinating efforts of sheriff's department in the utilization and enhancement of the wireless 911.
*   Continued development or acquisition of additional data sets for use within in the county.
*   Continue the development and integration of Juneau County Land Records utilizing current technology. Currently the county serves up ESRI Shape files with plans to upgrade to Geo-Databases within the next five years.

In order to realize the goals, objectives and ensure currency and continued maintenance of its digital land information. The county must meet a number of critical success factors. Critical success factors are those attributes, assets, or skills that will be needed for the successful implementation of a GIS. The critical success factors include:

*   County Board of Supervisors support and commitment.
*   Coordinated Federal, State, and Local Government involvement with the development and implementation of a GIS program.

- Openness to new technology, improved workflow and reduced redundancy between departments and agencies participating in the Juneau County Land Records Modernization Program.
- Provide ongoing education and training of county GIS staff and administration.
- Provide ongoing computer hardware and software upgrades as recommended by our Information Systems Department and the Land Information Department.

B. Progress Report on Ongoing Activities.

Juneau County is has obtained the planimetric information needed, completed the parcel mapping and has acquired geodetic control on the PLSS corners.

The efficient and effective implementation of a modern geographic information system that is horizontally and vertically integrated is dependent on the continuation of the Wisconsin Land Information Program (WLIP) grants, retained fees collected, and funding from the tax levy. Geographic information system implementation will increase the **quality** of the products and services offered to the public and minimize the need for the public to search from department to department for requested information.

Juneau County has remonumented and has provided all necessary geodetic control for all Public Land Survey System (PLSS) corners for 18 of the county's 19 townships (note: the 19th Township is the refuge, and there are not immediate plans to remonument). The remonumentation program will move into the maintenance phase of the remonumentation program and develop a program to do so in areas that have been monumented and provided with geodetic control through the County Surveyor Office.

Juneau County obtained digital black and white orthophotography for all of Juneau County in 1999, color "leaf off" in the spring of 2003, and color "leaf off" in the spring of 2010. The 1999 and 2003 orthophotography was produced at 1.5' pixel resolution, while the 2010 product is 1'. It is our hope to conduct flight every 5 to 7 years in order to build historical data and to keep up the ever-changing landscape.

An initial county wide rural addressing project has been completed in co-operation with Wisconsin Department of Natural Resources and the Land Information Department will continue to work with the DNR and other county departments to maintain the addresses as current as possible. Annual updates are forwarded to WDNR around the middle of January at their request.

Over 50 different data sets have either been completed or acquired and are currently being used in a recently implemented web-based mapping application that has been put into operation in house.

Juneau County is also utilizing a Computer Aided Drafting (CAD) based software program (PARCEL-IN©) to maintain the accurate parcel base map layer. Utilizing coordinate geometry (COGO) it is the goal of Juneau County to eventually produce an accurate base map referenced to the Juneau County coordinate system and the PLSS network.

Juneau County has gone on-line with over 40 different data sets and made them accessible to the public and private entities through the internet. The Land information office also played a critical role in helping both the Register of Deeds and Treasures office go on-line with their data.

The land information is currently looking forward to converting our mapping data sets over to Geo Databases to take full advantage of current technology.

The County Surveyor has acquired a large format scanner is in the process scanning and cataloging all surveys on file in the office.

C. New Initiatives.

1. Proposed Projects
Plat Books

Conversion to a Geodatabase.

Upgrade Internet service and advance the integration of the current web based applications providing various county services to the public and private sectors.

Provide ability to access copies of All Surveys and survey information from the County Surveyor files over the internet

The land records modernization of Juneau County will require the acquisition a Public Access Terminal for the County Surveyor's Office. With a PC this office will then be able to access land records off of a network. The ability to query deed images, tax info, and survey data would provide for more efficiency and a backup to any and all hard copy data. This would also allow this department to have access to the internet from which they can utilize Wisconsin Land Information Program (WLIP) Internet, Land Information Clearinghouse and Technical Lister Server.

Juneau County has implemented an optical imaging system in the Register of Deeds Office for all recorded real estate documents. All current documents are scanned into the system. As time and budget allows, we plan on inputting the hardbound documents from prior years.

The County also recently implemented an on-line tax information program. The implementation of this program now allows the public to research and retrieve information directly from their computer at their home. The owner information is maintained on a daily basis to keep it as current as possible.

Addressing has also been identified as a critical need. A co-operative project was entered into with the Wisconsin Department of Natural Resources. After completion of the initial phase, it may be determined to undertake additional steps to make sure all addresses in the county are correctly referenced to the adopted fire grid for the county. This information has proved invaluable to additional projects such as E-911 and the health department and tracking vital statistics.

In addition, the remonumentation and geodetic control work completed in Juneau County represents a large investment in terms of time and money. Therefore, it is important that these corner locations be protected. A warning sign stating that there is a corner nearby is helpful in informing landowners, utility companies, road crews and others about these important corner locations. The signs also state that there is a fine for disturbing or removing the corner and gives a telephone number of whom to contact if there are questions.

Assistance requested - Currently the county implements projects and selects software that allow us the greatest amount of flexibility for securing technical assistance and support. We work with projects that other counties and regional planning commissions have already led the way with. We talk with these entities and maintain good working relationships with them to help guide us through the development and implementation of the project we are working on. If the county does not have the technical expertise in-house then we will contract outside vendors to assist in the project and adhere to our strict standards and guidelines.

Finance – We continue to utilize retained fees and grants as much as possible. The county has also allocated levy dollars on specific need projects. The DOA needs to continue to support the Wisconsin Land Information Program. The county is continuously evaluating and review additional funding opportunities that would benefit us.

Access - All of our projects are selected with the public and public needs in mind. What will best serve our role as public servants and how are we going to deliver these projects to the right customers.

GIS Repository When a GIS repository is made available the county will evaluate this and make a decision at that time as the level of participation that will have.

Competitive procurement procedures are done according to standing county policies.

Problems Encountered - The county has the normal road blocks towards modernization efforts, money, time, access to data and support of the decision makers. These are constant issues that common and we are continually working to educate, inform and involve the critical decision makers to help continue the modernization efforts within the county.

D. Custodial Responsibilities.

The following departments have been identified as potential users and custodians of land records within the county. Brief Summaries of the department custodial responsibilities are included and the authority for custodianship is noted in ( ).

Land Information Office and additional duties
Maintain the county's assessment rolls, tax rolls and other related information on the new GCS Tax program. The database includes: computer number, owners name, owners address, legal description references, surveys, acreage, last assessment and legal description change date, document numbers, assessments, tax parcel maps, and the development and maintenance of over 50 different datasets for the county.

The land information has been assigned the custodial duties of the Real Property Lister (§70.09)

Other responsibilities of the Land Information Office include:
    Implement the Land Information Plan (§59.72)
    Store and distribute digital orthophotography (internal policy)
    Maintain GIS base map layers (internal policy)

Register of Deeds
The Register of Deeds Office receives, records, and/or files all real estate documents pertaining to land information. The system for locating these documents is by the grantor/grantee index or the tract index. These records are used daily by abstractors, attorneys, realtors, appraisers, credit bureaus and other county offices and the general public. The Land Information Office receives a list of all documents that change ownership interest. (§59.43)

Zoning
The Juneau County Zoning Department administers, maintains and enforces ordinances that include comprehensive zoning, floodplain, shoreland and wetland zoning, and private sewage system. They also maintain a permit database and file Elevation Certificates, wetland maps and FEMA Maps. (§59.69, §145.20, com 83.54 and other internal policies)

Treasurer

The Juneau County Treasurers Office maintains all financial information for all tax parcels in the county. Other duties include planning and administering the county's tax collection system, managing tax settlements and administering the lottery credit program. (§59.25)

County Surveyor

The Juneau County surveyor office is responsible for maintaining an index and filing system for all surveys filed in the county, maintenance of the HARN and the Juneau County GPS Network, periodic inspection of areas that have been monumented and provided with geodetic control, attends Land Information Modernization Committee meetings, assists the general public as well as land related offices regarding interpretation of problems that may arise from filed surveys, prepares annual budget, and performs related work as required by state statutes. (§59.74) and (A-E 7.08)

Sheriff

Maintaining and initiating data sets identified as needed, with the advice of the Land Records Committee for the PSAP applications and emergency response. (§146.70 and internal policies)

Other Departments

There are various other departments within the county that have begun or will, in time, be able to share and use a developed county GIS. Departments such as Land Conservation, Highway, Forestry, Health Department, Emergency Government and the Extension Office. Key individuals will be identified as the custodians of the data that is developed and they will be required to maintain and develop distribution guidelines for their data.

The land information department would be willing to take custodial responsibility for any data set the county board feels is in the best interest of the county for us to be responsible for.

E. Framework Data, system Implementation and Statewide Standards:

1. **Geographic Positioning Reference Frameworks**

   The importance of developing high precision ground control for Juneau County can not be underestimated. Quality geodetic control is necessary for mapping activities, and most importantly, it determines the mathematically correct ground location of the framework (monumentation) which all-legal ownership information is based. With county coordinates assigned to existing PLSS (Public Land Survey System) monumentation, the exact spatial relationship between monuments can be determined allowing accurate base mapping efforts to take place.

Geodetic control networks. In 1996 Juneau County completed geodetic densification from the stations within the Wisconsin High Accuracy Reference Network (HARN). The network consist of 5 - 1ppm stations within the county, only 3 are networked within Juneau County. A total of 9-1ppm stations are networked between Adams, Juneau and Sauk County. In addition Juneau County established 14-2ppm stations with a total of 19 networked between Juneau, Monroe, and Wood counties in 1996. And additionally, 48-4ppm were established within Juneau County's network. This network was established using the 'Guidelines to Support Densification of the Wisconsin High Accuracy Reference Network (HARN) using Global Positioning System Technology' standards specifications which were current at that time This is adequate horizontal geodetic control placed strategically throughout the county to meet other users needs and ours. Coordinate values are available in Juneau County, State Plane, and Latitude/Longitude. The county assumes the responsibility for the densified control stations.

Public Land Survey System. Juneau County has completed their remonumentation program that complies with the requirements if Wis Adm Code AE 7.08(2) and/or state statute. We plan to enable a maintenance program of the restored corners. We established geodetic control on the PLSS corners using a combination of conventional survey techniques and GPS technology meeting or exceeding the FGDC Third Order Class II for Horizontal Coordinate Values. Coordinates are maintained in the Wisconsin Juneau County Coordinate System, which is mathematically relatable to the North American Datum (NAD) 83(91).

2. **Orthoimagery and Georeferenced Image Base Data**

Photogrammetric base Maps-The county updates planimetric features using digital orthophotography. We have a current 2010 flight, 12" resolution that we are working with. The mapping will adhere to National Map Accuracy Standards for 1"=200' scale mapping. The county intends to maintain the custodial responsibility.
Digital Orthophotography (DOP)-The county participated in the statewide digital orthophography consortium and acquired color 12" resolution imagery. We plan on updating the imagery every 5-7 years as funding will allow. Future imagery may be at higher resolution. The county intends to maintain the custodial responsibility.
Digital raster Graphics-The county has scanned several hard copy documents, (wetlands inventory, flood plain, and quadrangle maps). These are georeferenced and used as needed for various projects within the county. There is not a long term plan to update the scanned documents.
Satellite imagery-There has not been a county commitment to utilize this technology at this time. It will be review as needed.
Oblique aerial imagery-The county has reviewed this product for use with the sheriff's dispatch, however due to funding constraints there has not a

commitment to acquire the product.

Historical Imagery-The county has acquired hard copy images of a 1938 flight of the county. These images were scanned and have been used as needed for various historical research projects. There are no plans at this time to provide these photos on our website. They are available in the office on an as needed basis.

3. **Elevation Data Products and Topographic Base Data**

Digital Elevation models (DEM)-The county obtained DEM's as part of the 1999 DOP project and this DEM was updated in 2010. The county intends to maintain the custodial responsibility.

Digital Terrain Models-The county does not have any plans to create a DTM at this time but could create a limited dataset from our DEM if Needed.

Triangulated irregular networks (TIN)- The county does not have any plans to create a DTM at this time but could create a limited dataset from our DEM if Needed.

Contours-The county acquired contours as part of the recent LIDAR project done in the spring of 2010. They are 2' contours in both AutoCAD DWG formant and ESRI shape files. The county intends to maintain the custodial responsibility.

LIDAR-The county acquired LIDAR information as part of Grant received in 2010. All associated information is in both AutoCAD DWG format and ESRI Shape files. The data complies with National Standards for Spatial Data Accuracy (NSSDA) *Guidelines and Specifications for Flood Hazard mapping partners.* The county intends to maintain the custodial responsibility.

IFSAR-The are not any plans to acquire or utilize Interferometric Synthetic Aperture Radar (IFSAR) data at this time

4. **Parcel Mapping**

Parcel maps prepared suitable for accurate land title boundary line, land survey , or planning purposes- The counties parcel maps are referenced to the Public Land Survey System (PLSS). The county Invested many years in getting the entire county remonumented and county coordinates assigned to each government corner with the county. This has created a solid foundation for all of our parcel mapping and other data sets. The county parcel mapping can be used to *assist* with land title and boundary line locations. *It is not intended to be substituted for a properly conducted field survey by a professional land surveyor.* Our parcel mapping is suitable for planning purposes. The county followed the WLIB digital parcel mapping standard for index mapping where is was feasible.

Coordinate System- The county parcel maps have all been produced on the

Juneau County Coordinate system which is reprojectable to the North American Datum (NAD) 83(91).

Parcel ID- Every parcel identified on the base map has a unique parcel identification number assigned to it. The present County parcel identification number (PIN) does not fully conform to the WLIB parcel numbering system. The county does not have any plans to migrate from the current numbering system to the WLIB standard.

5. **Parcel Administration**

   Design and Integration-The Juneau County Land Information Office is responsible for the assignment of parcel identification numbers countywide. In addition Juneau County maintains an extensive parcel based tract, and assessment roll that is warehoused on the GCS Property Assessment Software. A link has been developed to connect this data to the web based parcel maps.

   Juneau County has implemented document imaging within the Register of Deeds Office. The Register of Deeds Office maintains the grantor/grantee indexes, which are also warehoused on the IBM AS/400 and LandShark (which provides the Internet access). As time and budget allows, we continue inputting documents from prior years. In the future imaging could be expanded to include other land records such as building permits, tax records, survey maps, etc. This system will link imaged documents to the various indices maintained by the Register of Deeds with the Parcel ID being the Key.
   Activities: (The county intends to maintain the items as indicated below and adhere to applicable standards that we determine are necessary.)
       Parcel ID-This a unique number determined, assigned and maintained by the county. This number is used to link land information from different departments.
       Tax Data-The tax data is maintained through the GCS program the county implemented 2 years ago. Identified data (as determined by committee and the County Treasurer) is linked with the parcel mapping shape files. This data is linked using the unique Parcel ID.
       Site Address- This is maintained through the county treasurers office and linked with the parcel mapping data by the parcel ID. The county intends to "reverse populate" the treasurers data base with field information obtained through a joint rural addressing project between the county and the Wisconsin Department of Natural Resources.
       Owner name & Address- This information is maintained by the Land Information office and resides in the County treasures office.
       Description/current Document pertaining to parcel-The county maintains last deed of record, along with a very abbreviated legal description for each tax parcel listing. This information is maintained by the Land information office under the direction of the Juneau County treasurer.
       Document Imaging-Deeds and other evidence of title are imaged by the

Register of deeds office. They are stored and retrieved using the IMS21 system. These document are linked manually to the GIS mapping system by the Land information office once they are reviewed and it is determined what parcel number(s) they need to be associated with. Currently the county survey is scanning all surveys and survey related information and there are plans to develop a link for the web mapping system for access to these documents. An in-house unique numbering system was developed for the surveys.

Real estate Transactions-The Register of Deeds records these transactions and maintains a tract index and searches can be made by grantor, grantee, legal description, document number, volume/ page, and parcel ID. Images are available on line through the Register of Deeds "LandShark" software.

Easements and restrictions, including conservation easements-The Register of Deeds records these records and maintains a tract index of said records.   The land information department maps easements as they are discovered. There is no plans to title searches to find all easements within the county, they are mapped and maintained as they are determined.

Tax exempt status-This status is maintained in the real property tax data base and is linked to the parcel mapping by the unique parcel ID assigned.

Zip codes (including +4)-These are maintain in the real property tax data base by the Land Information Department under the direction of the Juneau County treasurer.

Assessment Classes-are assigned by the assessor and incorporated into the property tax data base. This information can be linked to the parcel mapping using the unique Parcel ID.   This information is maintained according to the Department of Revenue Assessment classes.

Public Lands-This information can be derived from simple queries using tax exempt status, or ownership (i.e.: Juneau county as owner). Maps can then be generated based on the results.

Liens- The Register of Deeds records these records and maintains a tract index of said records. We do not maintain a listing of this information to link this data to the parcel mapping.

Evidence of title- The Register of Deeds records these records and maintains a tract index so searches can be made by grantor, grantee, legal description or document number.

6. **Street/Road Centerline and Addresses**

Transportation network- The county maintains its planimetric base map that was initially developed from aerial photography and has been modified and updated as surveys and additional information is obtained. This includes centerlines of all named public and private roads in the county. This work is being coordinated with the Sheriffs Department for use in PSAP and to maintain consistent data throughout the county and help eliminate duplication of efforts. We are using the Master Street Address Guide and Local

governments to ensure the highest quality product

Rights of way- The right-of-way of public roads have been developed as part of the parcel mapping process.

Centerlines- See street/ centerline above.

Address ranges-Currently we have address ranges developed utilizing the MSAG for the rural areas in the county and a few of cities and villages. The county intends to complete these for the incorporated areas as time permits.

Site address Database- Currently addresses are maintained and assigned by the governing body in which the site falls. We can extract existing information from the Address point shape file. See Address point below.

Address point, structure and/or driveway- this information was collected as part of a DNR fire project 3 years ago. The continually updates address points as they are provided the 911 coordinator in the sheriffs department.

Road names-Road name are assigned by the local governing body in which the road resides. We maintain a currently listing of roads that was developed initially from the MSAG. This information is updated as changes are needed.

Functional class- The county relies on the DOT local road inventory and has access to their digital data via Wisconsin Local Road (WISLR) internet site.

Places/Landmarks-Current the land information department does not maintain any data base with places/ land marks. The county does plan on working with the sheriffs department to develop one as time and resources permit.

Integration with the County's/City Master Street Address guide (MSAG)- See street/ centerline above.

Ability to support emergency planning, response and mapping-The land information office works with county dispatch in annually updating their Computer Aided Dispatch (CAD) system. The county also has recently acquired wireless laptop computers that can access our GIS mapping site real time in the field.

Ability to support wireless 911-As stated in the responses above we actively work with the sheriffs department to ensure compatibility with, and that we can support and update their CAD system.

7. **Hydrography, Hydrology and Wetlands mapping**
   Hydrography- The county currently maintains a shape file digitized from orthophotography. This data set can be updated as needed.

   Watersheds- The county currently doesn't maintain watersheds. The County does not currently have plans to develop this layer.

   Hydrogeology-The county currently does not have any plans to create the is data. If the need would arise for this data the county would develop it or try and acquire it from a source that would be compatible with our system and accuracy standards.

   Impacts on the Environment-The county currently relies on the Bureau of Remediation and Redevelopment Tracking System (BRRTS) to identify groundwater contamination or related Brownfield data.

   Wetlands Mapping activities-The county currently utilizes digitized data

from DNR wetlands boundary maps. If updated by the DNR the county would evaluate for including in our data sets.

8. **Soils Mapping, land Cover and other Natural Resources Data**
   Soils mapping activities-The county currently uses the completed digital soil survey that was completed by the DNR. The county does not maintain this data.
   Land cover-The county acquired a large scale digital land cover map from the Wisconsin DNR. The county has also worked with the local municipalities during the development of their comprehensive plans and have incorporated the Land cover/Land Use maps developed during this process. There is not presently a plan in place to maintain these maps.
   Forests-The county's tax database contains the DOR classification code that is assessable in the tax database and can be linked to the parcel mapping, which if needed, could be used to create a generalized map of forest land. The county also can identify county, state and federal owned lands using the same process.
   Geology-The county does not have, maintain or have plans to create this data. If it would become necessary we would try to obtain it from outside sources.
   Hydrogeology-See "Hydrogeology" in Section 7. above.
   Non-Metallic mining-The county plans to continue maintaining the non-metallic area and site locations with our planning & zoning department as part of the reclamation requirements.
   Endangered resources-The county forester maintains site specific information regarding endangered resources. Currently there are not any plans to incorporate into the GIS mapping system.
   Impacts on the environment-See "Impacts on the environment" in Section 7. above.

9. **Land Use Mapping**
   Mapping of existing land use-The counties comprehensive plan includes a general area map that has been included in the GIS mapping. The county developed this map using the county's tax database that contains the DOR classification codes and linked to our parcel data set. If needed this can be updated using the same methodology.
   Mapping of planned land use-The county does not have a complete planned use map. We have incorporated various municipality maps that were completed in the process of completing their comprehensive plans. There is not currently a plan to develop this map in any greater detail.

10. **Zoning Mapping**
    Zoning districts-Juneau County does not have county wide zoning. We do have a couple of zoning maps that were developed in cooperation with various municipalities in the county. We update these maps as requested by government body that is responsible for zoning.
    Shore lands-The county does not maintain a GIS zoning layer. The county

has generated general shore land zoning boundaries by creating a buffer from waters edge (as determined from orthophotography) as a site specific request by the county zoning administrator. There is not a current plan to create or maintain anything more comprehensive.

Floodplains and Floodways-The county currently utilized hardcopy FIRM maps. The DNR is currently working on determining updated flood boundaries from LIDAR information last spring. This information will be incorporated in the GIS system when it is provided to us.

Environmental Corridors-There are not any plans to develop this data set at this time. If the need arises we will work with appropriate individuals in the creation of this data set.

Burial sites-The county does not maintain this information at this time. Cemeteries could be located utilizing the tax data base to locate cemeteries only. We will continue to review this and maintain compliance with state statutes as necessary.

Archeological sites- The county currently does not maintain this information. There are not any plans to develop this data set at this time. We will continue to review this and maintain compliance with state statutes as necessary.

Historic/ cultural sites- The county currently does not maintain this information. There are not any plans to develop this data set at this time. We will continue to review this and maintain compliance with state statutes as necessary.

11. **Election and Administrative Boundary System**
    Election districts-The county has current voting ward, aldermanic and county board supervisory districts. These are adjusted as annexations occur and we plan to update after 2010 census and redistricting is completed.
    Legislative Districts-The county maintains State Assembly districts and will adjust if necessary after redistricting is completed.
    Utility districts-The county GIS parcel maps have been linked to the tax data base and can be searched based on the sanitary district in which they may be located. A general map could be generated if the need were to arise.
    School Districts-School district maps have been generated using a code contained in the counties tax data base. This map is updated continuously.
    Tax incremental financing districts-The county's tax database includes a code designating which parcel are within a TIF and if a need were to arise a map could be produced by linking to our parcel dataset.
    Agency Administrative districts and zip codes- The county's tax database includes zip codes which is linked to our parcel dataset. If a need were to arise a map could be produced. This information is continuously maintained.
    Census Geographies-All information that is generated to the census will be evaluated for incorporation into the county's GIS mapping system.
    Civil division boundaries-Civil boundaries were generated using parcel boundaries and cross checking again annexation records in the register of deed office and records acquired from the Wisconsin Secretary of State's Office.

Public Administered lands, i.e. parks, forest, etc.-The county does not maintain or have a specific map of this information. A generalized map could be generated utilizing the tax data base if the need were to arise.

Native American lands- The county does not maintain or have a specific map of this information. A generalized map could be generated utilizing the tax data base if the need were to arise.

County Boundaries-We maintain our County boundary.

State Outline-The county does not maintain a State Boundary but would attempt to acquire one from state resources if the need were to arise.

Lake districts- The county GIS parcel maps have been linked to the tax data base and can be searched based on the lake district in which they may be located. A general map could be generated if the need were to arise.

12. **Critical Infrastructure and facilities management Database Design**

Emergency Service districts-The County has created, and maintains, emergency services zone maps in cooperation with land Information, Sheriff and Emergency Government Departments.

911 call center service areas & center locations-The county one PSAP located in Mauston, all dispatches go through this location.

Fire/Police Districts-These districts are maintained as part of the Emergency districts.

Fire/Police Stations-These locations have been identified and incorporated into our GIS mapping system in cooperation with the Emergency Government Director. The county plans to continue to maintain this dataset and update as necessary.

Hospitals and healthcare facilities- These locations have been identified and incorporated into our GIS mapping system in cooperation with the Emergency Government Director. The county plans to continue to maintain this dataset and update as necessary.

Government facilities- These locations have been identified and incorporated into our GIS mapping system in cooperation with the Emergency Government Director. The county plans to continue to maintain this dataset and update as necessary.

Utilities – Not districts-The county does have general utility maps that were acquired from the state. They for internal use at this time. We do not maintain them.

Parks & recreational trails-The county has developed, mapped and published both digital and hard copy maps of the parks and recreational trails. This information is updated on a regular basis as needed.

Transit systems-There are no plans to develop this at this time.

Bridges, culverts, traffic road signs-The land information office has several on-going projects with the county highway department and several municipalities to map and maintain this information. This information is updated as time and availability permits.

Airports and airfields-The county does not have or maintain a specific dataset containing this information. There currently is not any plan to create this data however, this information could be developed rather quickly using in-house institutional knowledge.

Harbors- NONE

Boat landing-The county developed this dataset in conjunction with DNR 3 years ago while creating the counties rural addressing book. This dataset is reviewed maintained on an annual basis.

Hazardous material sites-The County's Emergency Government Office will continue to maintain a data base for active onsite storage by Industries as part of their emergency response plan.

Landfills-The county Zoning department currently maintains a database of these locations within the county. There are not any current plans to develop a GIS dataset of this information.

13. **Data Base Design and System Implementation**

    Design evaluation-The Department Heads/ Elected Officials meet on a regular basis to discuss applications and future direction on the Modernization program in Juneau County. Departmental benefits and public service are the primary concerns with consideration of minimizing duplication and data set consistency.

    Project approach-Every project undertaken within the county is reviewed and evaluated to determine the most cost effective and beneficial way to proceed and complete the project most efficiently.

    Timeline-The county sets internal goals for implementing new projects based on need and benefit. This will vary based on the complexity and overall benefit of the project.

    Metadata policies- Metadata has been developed for the datasets utilized within the county's web based mapping. Additional Metadata will be developed as time and budgets permit.

    Security/privacy policies- The AS/400 and our Web servers have built-in security, which are managed by a system administrator. The Information Systems Department maintains a back-up/ security plan for all data. Juneau County adheres to the Wisconsin Open Records Law and complies with State statutes for access to restricted records. Juneau County has implemented a wide privacy policy and will continue to monitor the industry and public concerns related to privacy and distribution of data as the data becomes available and makes modifications as necessary.

    Implementation and maintenance strategy-Implementation and maintenance strategies are determined based on the need and the amount of change that may or may not occur with various data sets. This process is continuously reviewed and adjusted according the county's needs.

    Data quality management-Data that is developed and maintained is continuously under review and subject to quality control. This is determined by the county department heads and custodians of the data.

    Needs assessment-The land information office is continuously reviewing how

business is being conduct throughout the county. Department heads will be advised as to potential projects that might be able to be done to aid in making their jobs more efficient and stream lined. When potential projects are identified they are discussed with the department heads and elected officials to determine the overall benefit.

Data structure and format-Data structures are driven by the application that is being utilized to develop that data. Software and statutory guidelines often dictates the format of the data.

GIS data model- The county will be implementing a Geo-Database over the next couple of years. Topology rules within the ESRI environment will guide the development of this. Hard copy layouts will be created to assist in the transition

Data dictionary-The county has not implemented this at this time.

Coding schema-The county tries to use existing standardized developed schemes. We will add and subtract information based on internal and external needs.

Transaction management-The county currently does not track the electronic information other than what the computer label as last edited date. The Hard copy maps to have date stamps that can be generated on them prior to printing/plotting.

Organizational information flows-The organizational information flow within the county has developed over the years through trial and error. Being a smaller county there is not a documented flow just the institutional "this is the way it is done" process.

Data conversion ability to integrate with other databases and information systems (vertical and horizontal)-The county maintains parcel IDs in key fields in databases to enable them to integrate with other datasets. Spatial data set are developed on the Juneau County coordinate system to allow them to be geo-reference easily with other county GIS layers/datasets. Dataset distribution is completed using standard GIS formats using tools provided within the software.

F. Public Access

Use of technology to facilitate access-The county currently has several public access terminals located in the Register of Deeds Office. We also offer online access though our Home page to Documents, Tax Information and GIS Mapping using 3rd party applications..   All of this information is available 24/7. The county will continue to evaluate and upgrade as technology presents it self.

Use of 3rd party technology for access-see above.

Data sharing policies- Juneau County has developed a pricing (cost recovery policy for the data it has produced, acquired and is maintaining). Costs are reviewed annually for the web-based mapping application, other costs are established dictated by statute and county board policies. The county does share data at no cost for in-kind product but the data is to be redistributed. All data sold is distributed "as is" and the county does not maintain any copyright

or distribution restrictions once the data set is purchased

Open access to data in existing formats- Juneau County adheres to the Wisconsin Open Records Law for access to any land record as directed by our county corporation council and board policies.

Subscription-based or public-facing we services-The county does maintain two (2) subscription based services. These services were determined in order help maintain what the department head and county board determined privacy issues.

Optional production of customized data on cost-recover or other basis-. The production of customized data on cost-recovery or other basis. Data is distributed in industry standard formats as available through the software that is utilized to produce the custom product.

Internet accessibility (ADA compliance, security)-The county strives to ADA compliant to the extent possible. All internet security is handled by Information Systems Department and monitored daily and upgraded as needed.

If land records are not accessible on the Internet, a goal for providing access-The county is continuously looking to streamline work flow and provide easier access to information that we are custodians of. The county will evaluate and decide if providing access to certain information on the internet, that is not currently available, is in the best interest of the county and citizens it serves.

System security- All internet security is handled by Information Systems (IS) Department and monitored daily and upgraded as needed. The IS department is continuously monitoring current technology and upgrading as necessary in order to stay compliant with current with accepted industry standards.

Privacy policies- A privacy policy was developed and implemented the county department heads and approved by the county board. This was drafted and adopted prior the county providing any information over the internet.

Use of \$2 feet designated for land information and housing data- These funds have been utilized to purchase and maintain software enabling the county to distribute data via the internet. The funds have also been used help offset cost of several large projects that the county has under taken to prepare data for availability over the internet.

G. **Integration and Cooperation:**

Data sharing agreements-The county has informal sharing agreements among all the departments within the county. The county also has data sharing agreements with several of the local municipalities and state agencies. The county will continue with these arrangements and review other opportunities as they present themselves.

Formal or informal data maintenance agreements between departments/ agencies-The county has a formal agreement with the WDNR for the their rural addressing project. Within the county, we maintain and informal arrangement to ensure data accuracy and reduce the potential of data duplication and effort.

Cooperative arrangements-The county has pursued several cooperative arrangements over the years. Since we are primarily a rural county the majority of these arrangements have been with the WDNR. We have also worked some local firms to develop maps to promote Juneau County with the most recent being the ATV/Snowmobile trails throughout the county. The county will consider all potential arrangements as they present themselves.

Consortia-Due to financial constraints and that most consortia are a short term group for cost savings the county has not participated in many of these. The county did, however, just participate in the State-Wide orthophotography consortium. We will continue to monitor potential opportunities as they arise.

Collaborative arrangements-The county actively participates in collaborative arrangements for data creations particularly with other County departments. The county plans to continue their relationship with WLIA, WLIP, Technical Assistance List Server and others as opportunities presents themselves.

Statutory relationships among counties and state agencies- The County will comply with all statutory requirements relating to land records as we determine are required.

Integrative/cooperative relationship the would like- The county has actively encouraged and supported integration and cooperation with regards to activities related to land records (as noted throughout this plan). The county would like to foster future mutually beneficial arrangements with entities as the opportunities present themselves.

Potential partners and mutual project the county plans to pursue- The county is always open to discussing with potential partners for development, update and or maintenance of any land records data set. The county has partnered with or interested in developing relationships with entities for LIDAR analysis, census. We have talked with several towns and local government agencies about projects like sign inventory and culvert tracking. Some other potential partners would be the NRCS, DOT, Private Industry, National Forest Service, FEMA, etc.

Data to be shared and used with the two preceding items- The county has shared or is currently sharing our PLSS, Parcel Mapping, Hydrography, Centerline, and most recent orthophotography with the DNR for their current flood plain mapping in the county.

How the county allows for participation and coordinates funding allocations to all relevant departments, municipalities and other agencies. so all benefit from the WLIP- The county has regular council meetings to discuss current and future projects. The land information department maintain an excellent working relationship with all of the departments within the county and the local government entities that we serve. The county "spreads the wealth" based on needs and overall benefit to the county and the citizens we work for.

H. Communication, Education, Training and Facilitated Technical Assistance

Documentation of county data, models and processes-The county Land information department uses the built in functions of the ESRI software that we use to develop and maintain meta data. Data models will be developed more fully when the county migrates from shape file to geo-databases over the next couple of years.

Resources available-The county will continue to participate in conferences, workshops, seminars, user groups, etc., as budgets and time allows. We will continue to utilize the Tech-server to reach our peers and research issues and potential future projects.

Identification of customer needs- The county has an active Land Information Council § 59.72 (3m). This council is continuously evaluating the direction the program within the county. Decisions are made based on funding, overall county benefit and time needed to complete projects. The land information office has open dialog with the public when they are in the office seeking assistance and ideas are brought to the council for review and prioritization.

Coordination of education/training with agencies, association, and education institutions-The land information office staff regularly attends the WLIA annual conference and some of the regional meeting. We are active participants within the organization. The land information office also is a member of the Wisconsin Real Property Lister Association (WRPLA). The staff is always willing to share our experiences and seek guidance from out peers throughout the state.

Use of technology to facilitate education and training- As stated above we regularly attend the WLIA conference. The county also participates in the local GIS users group. The county has access to the internet and has participated in Web training in the past.

Use of or plan to participate in state clearinghouse/repository and LIO list server- The county does have access to the internet that allows for access to the clearinghouse and technical assistance list server. The county would review participating in the state clearinghouse as needed.

Use of LIO education and training funds- The county uses to these funds to attend the annual WLIA meeting and or regional meetings throughout the and directed by our Land Information Council.

I. Administrative Standards not Associated with framework Data Elements:

This agreement is intended to effectuate the objectives of the Wisconsin Land Information Program as embodied in the enabling legislation. The Juneau County Land Information Council consents as follows:

1. The county agrees to observe and follow the statutes relating to the Wisconsin Land Information Program and other relevant statutes, as described in written materials provided by the Department of Administration.

2. The county agrees to permit the Wisconsin Department of Administration (or its' successor) access to books, records and projects for inspection and audit.
3. The county agrees to provide an Annual Status Report of Plan progress requested herein and to keep the Plan up to date. The report will be administered electronically. The county also agrees to fully upgrade the plan on a 5 years cycle.
4. The Department of Administration agrees to facilitate technical assistance to the county including an on-line Technical Assistance Service.
5. The Department of Administration agrees to maintain and distribute an inventory of land information and land information systems for the state.
6. Development and implementation of an acceptable Land Records Modernization Plan confers certain benefits on local government within a county, including continued eligibility for Program funding. A self-approving peer review process will be used to assess Plan acceptability by the Land Information community.
7. The Department of Administration agrees to review funding requests and to provide guidance to local government with respect to the development of such requests.
8. The Department of Administration agrees to make available electronically on an annual basis, an Annual Report regarding the status of the Wisconsin Land Information Program and the activities of the Wisconsin Department of Administration.