

**MILWAUKEE COUNTY LAND INFORMATION COUNCIL**  
December 2018 Council Meeting

**AGENDA**

Date: December 4<sup>th</sup> 2018  
Time: 9:00 a.m.  
Place: Milwaukee Metropolitan Sewerage District  
**MMSD, OJ Noer Conference Room**  
260 W Seeboth St.  
Milwaukee, WI. 53204

- I. Roll Call
- II. Minutes from the Council meeting held June 5th, 2018
- III. Announcement of ICC Rep to Land Information Council
- IV. 2018 Land Information Office Budget
- V. 2019 Land Information Office Budget
- VI. Land Information Council Charter and Bylaws
- VII. 2018 LIO Workplan Project Updates
- VIII. 2019 LIO Workplan
- IX. **Reports\Activities**
  - 1. 2019 WLIP Grant Request
  - 2. 2019-2021 Land Information Plan
  - 3. USGS Grant Funds from 2015 Lidar
- X. **New Business**
- XI. **Date, time, and place of next meeting**
- XII. **Adjournment**

**MILWAUKEE COUNTY LAND INFORMATION COUNCIL**

June 2018 Council Meeting

**MINUTES**

Date: June 5<sup>th</sup> 2018  
Time: 9:00 a.m.  
Place: Milwaukee Metropolitan Sewerage District  
**MMSD, OJ Noer Conference Room**  
260 W Seeboth St.  
Milwaukee, WI. 53204

**Members Present**

Greg High	Director, Architecture, Engineering and Environmental Services Division
Rob Merry	Milwaukee County Surveyor
Emily Champagne	GIS Supervisor, Milwaukee Metropolitan Sewerage District
Dana Kahle	GIS Supervisor, WE Energies, on behalf of Dawn Neuy
Christine Westrich	Director, Office of Emergency Management
Kevin Bruhn	Manager - LIO, Milwaukee County DAS/ECD-LIO
Kathy Bach	GIS Analyst, Milwaukee County Register of Deeds, on behalf of John LaFave
Cathleen Hollers	Accountant Supervisor, Treasury Accounting Supervisor of Milwaukee County, DAS on behalf of David Cullen
Nancy Olson	Chief Information Officer, City of Milwaukee, Information and Technology Management Division

**Guest and Staff Present**

Emily Berth	GIS Technician, Milwaukee County LIO
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**I. Roll Call**

Chairwoman Olson called the fourth meeting of the Land Information Council (LIC) to order at 9:00 a.m. Roll Call was taken by circulating an attendance signature sheet.

**II. Minutes from the Council meeting held December 6th, 2017**

Bruhn noted one amendment to be made to the minutes from the 3rd Council meeting held December 5<sup>th</sup>, 2017. Typos from the original were corrected and will be updated and posted on the **website**. The original will then be archived off. The motion was moved and then seconded.

Kahle noted that the date on the agenda for the current Council meeting (June 2018) should be June and not December.

**III. Appointments to Land Information Council**

Bruhn notes that every two years, per resolution, the appointments of Chair and Vice Chair must be made.

Bruhn also prompted that since Doug Seymour will be stepping down, a new Intergovernmental Cooperation Council (ICC) representative should be solicited by MCLIC and appointed by the ICC. Bruhn will work with Westrich to find this new representative.

Bruhn opened the discussion on the whether the roles of Chair and Vice Chair should be maintained and asked if roles are still useful. Chairwoman Olson asked for comments from the committee. Westrich noted the council should lean on the formal side since the council is a governing body even though it is considered an advisory council. Because of this, Westrich reminded, the MCLIC meetings are subject to open meeting law, and therefore the precedent should be concurrent with Robert's Rules and the positions of Chair and Vice Chair should remain.

Westrich also recommend that a charter be created by the council and suggests that Consolidated Facilities Planning has one that it could be modeled after. Vice Chairman High noted that Peter Nilles would be a good point of contact to support this project.

Chairwoman Olson asked if the council had a representative from property listing. Bruhn replied that they do not but can solicit one via recommendations from the Council or from the Relators Association.

Champagne motions for Bruhn to become Chairman and High to remain Vice Chairman. Kahle seconds the motion and the motion is carried.

#### IV. 2018 LIO Workplan Project Updates

Bruhn reported out briefly on minor projects currently in progress.

Cityworks - Enterprise Asset Management – MCLIO is trying to put into place a support role for FMD since most of the build-out is already complete. Capital is ending as of this year.

Emergency Management - NG911 – A budget request is being put together by Chris Dillard from the Dept. of Military and must be completed within the next few months.

Champagne said there is a WLIA task force put together to support this. Andrew Faust from NCWRPC is the head of the subcommittee; they are currently involved with creating guidelines for schema and metadata. Westrich will be replacing Nicole Grams on this subcommittee.

Westrich stated that ESInet construction will begin early spring 2019, built out, and then made available 2020. Depending on how construction goes this could be sooner.

Local Update Census Address (LUCA) – Champagne asked what is the status of Milwaukee County address data. Bruhn replies they've used automated queries with LUCA data and currently have an intern working on scrubbing the results. Will be released back this week.

Milwaukee County Zoning Data Compilation / Non-Map GIS – N/A

Sanborn Fire Map (1894) Georectification – Sanborn Atlases have been used as an introduction for new hires to become familiar with the software and better acclimated to GIS projects.

##### 1. New Website Implementation

The website is planned to go live in July. Bruhn stated that the MCLIO has been found the fourth most active section of the entire county, and as such have been given high profile upon the release. Also, there is a new effort being made on more focused, less data burdened apps; seven will be released with new website.

Hollers remarked that there is progress being made to connect Treasurer Office records with GIS data for the website. They are currently working with Titan developer.

## **2. Migration to IaaS – Cloud Based Infrastructure**

Bruhn explained that the MCLIO took the opportunity to update and re-design during the data migration, and they have put in place load balancer for increased GIS traffic. They have also increased processing and storage capacity. Olson asks why it was launched before its planned date in May. Bruhn replies that there was a need to implement quickly because of a network infrastructure change.

## **3. Cadastral Improvements**

Bruhn described the development of the project in this period which included set-up of an editing environment, creation of procedural documentation, training of staff in Cadastral, and actual editing. All line work changes are validated from recorded deeds documents, and those documents used are being recorded to the changes for historical reference.

Bruhn informed the council that as of right now 25 quarter sections have gone through an initial edit, or Phase I editing. A Phase II will entail in-depth editing of meticulous, in-depth issues at a later date. There is currently a three to five foot tolerance for acceptable errors in editing.

Kahle asked if this is still on schedule. Bruhn replies that they are still on schedule, currently gearing up temporary staff to do this work, and will have a better assessment of the project status in following months.

## **4. Census – LUCA**

Bruhn explained the LIO submitted a total of 7,927 address corrections to the Census Bureau, and Code 13 prevents Milwaukee County from using this data for production. Milwaukee County validated the addresses for the following communities: Brown Deer, Cudahy, Fox Point, Franklin, Glendale, Hales Corners, South Milwaukee, West Milwaukee, and Whitefish Bay.

Bruhn asked Olson if the City participated in the 2010 Census Participant Statistical Areas Program (PSAP), as the County had not. Olson confirmed that they did, and had made a few changes to some lots and blocks, particularly along the eastern side of the county along the coast. Bruhn asked if these were reported to the county and that going forward these are submitted to the county by all municipalities in a timely manner. Olson reaffirmed this and will communicate with the county of changes made to the City of Milwaukee.

## **5. Data Transformation to New Datum**

Bruhn explained the LIO has migrated most of its vector and raster datum to NAD83 HARN and, for ease of use, are supporting data in both 27 and 83 for users. Bruhn stressed necessity to put together a message of what are the GIS (datum) needs of the municipalities within Milwaukee County are since the Vertical Datum Migration is set to be completed by the end of the year.

Bach stated that currently there are no state requirements. Merry noted that there are local land ordinances that may be more restrictive. Bach confirms that the majority (but not all) of those surveyed documents that come in to the Register of Deed currently are still referenced in NAD27.

Bruhn asked if it is known what specific areas have had changes made to land ordinance requirements. Merry knows that many are revising to give more latitude as to how land ordinances can be referenced. Wording has been revised to be more encompassing. This has been occurring over the past several years.

Bruhn remarked the council needs to further review surveying and utilities ordinances to support this process. Will be working on this next, and follow up later. Also noted that Kenosha and Washington have already updated to and fully moved on to NAD 83 and haven't seen any noticeable change.

## **6. 2018 Orthophoto\Oblique Capture**

Bruhn confirmed that the 2018 photography has been captured by Eagleview and explained that this series will include obliques again. A re-fly was conducted for select areas at the end of April due to smoke, clouds and late snowfall. The mosaic should be available by Q4. At that time, it will also be made will be available as individual tiles (Connect Explorer and Pictometry window of GIS site), Seamless Sid, Tiff, and through dropbox.

Kahle stated that ortho imagery used to be delivered by hard drive, and asks who the request can be made out to. Bruhn replied requests can be made to him, and reminded that it may take some time to put together.

## **V. 2018 Land Information Office Budget**

Bruhn made a correction that operation expenses were double accounted from encumbrances from 2017. This will be corrected and updated online. Bruhn reports that recording fees are in line with previous years and there was the Carryover of three contracts.

## **VI. Reports\Activities**

### **1. 2017 Surveyor Activities**

Merry reported that twenty-eight new corners were established and re-established. Twenty-six are in progress that are being held over from last year. They are working with construction companies to figure out how they can be effectively re-established. Currently, SEWRPC's annual surveyor contract includes 19% DBE participation for Milwaukee County.

### **2. 2017 Retained Fees\Grant Report**

Bruhn stated that every year by June 30<sup>th</sup> retained fees must be reported out and categorized. This year they came out just shy of the target and noted that legacy pension and healthcare costs made up a substantial portion of broken out costs. This will also be included in the budget for next year.

### **3. 2019-2021 Land Info Plan**

Bruhn asked if there are any comments regarding the 2019-2021 plan, and if comments could be submitted by end of August/ early September of this year so they can be accepted by the next meeting in December. Bruhn also suggested submissions pertaining to guidance for the next three years be send in. Plans are already made to update the planimetric data after orthos have been completed for 2018. Asked if the council should revisit parcel fabric. Asked for feedback and other projects that might want to be put on the table.

Olson requested that the revised LIC packet be sent out with a reminder to submit feedback before the requested due date. Bruhn confirmed that he will do this.

### **4. Statewide Parcel Submission V4**

Bruhn explained that as a requirement of accepting grant money Milwaukee County must submit copies of the parcel data to the state twice a year. While actively aggregating municipalities' data with the county there are still reoccurring discrepancies that are submitted from the municipal assessors.

Hollers stated that hopefully that in the next two to three years all municipalities will be linked into the county so that errors can be corrected more effectively. Bruhn replies that for now the LIO is addressing/re-addressing these issues as they come along.

## **VII. New Business**

### **1. Vertical Datum Migration Contract**

Bruhn stated that the expectation is that the vertical datum migration is completed by the end of the year at which time both the horizontal and vertical migration will be complete.

Olson asks if this is reflected in the budget. Bruhn replies that the strategic initiative grant for 2017 and was not part of the encumbrance for 2018.

### **2. 2020 Imagery and LiDAR Capture**

Bruhn asked for feedback on the needs for the 2020 capture as a region and county. Currently the given acceptable/desired resolution is three inches. If the council continue to also invest in ortho obliques from Eagleview, the cost is approximately double of what it is for just the ortho. Bruhn asked for opinion from the council.

Champagne suggested that every other year the council switch between using Eagleview ortho obliques and the next cycle go thru another vendor for three-inch resolution ortho imagery.

Bruhn stated that given county stakeholder needs/demands flights should be updated in a two-year cycle. The three-year cycle has proven too long for users of this data. Currently the plan is to include oblique for 2020 and then see if it is still needed. Bruhn asked the council to consider if LiDAR should be included for 2020.

## **VIII. Date, time, and place of next meeting**

Bruhn proposed next meeting to take place on Tuesday, December 4th. There were no objections. MMSD will again host.

## **IX. Adjournment**

**2018 LIO YTD**

		YTD	YE Projected	
<b>REVENUES - 2018 YTD</b>				
2018 Record & Filing Fees		\$666,177	\$840,000.00	3237
2017 Encumbrances Carried Over		\$207,810	\$207,810	
2018 Grants		\$38,875	\$51,000	2299
2018 Misc Revenue		\$1,500	\$1,500	4999
	<b>TOTAL</b>	<b><u>\$914,362</u></b>	<b><u>\$1,100,310</u></b>	
<b>OPERATING EXPENSES - 2018 YTD</b>				
2018 Actual Expenditures		\$637,593	\$891,000.00	
2018 Encumbrances		\$94,407	\$94,407	
2018 ROD GIS Analyst		\$67,379	\$67,826	
	<b>TOTAL</b>	<b><u>\$799,379</u></b>	<b><u>\$1,053,233</u></b>	
<b>2018 Est. Net Income (Loss)</b>		<b><u>\$114,983</u></b>	<b><u>\$47,077</u></b>	

<b>Fund Balance:</b>		YTD	YE Projected
<b>2017 Year-End Fund Balance*</b>		<b>\$1,604,412</b>	<b>\$1,604,412</b>
2018 Operating Revenues (Shown Above)	+	\$914,362	\$1,100,310
2018 Exp + Enc for \$8 Fee Projects	-	\$799,379	\$1,053,233
<b>2018 Est Fund Balance**</b>		<b>= \$1,719,395</b>	<b>\$1,651,489</b>
2017 Reserve Revenue @ 10%		\$0	\$0
2018 Est Fund Balance YTD - Unrestricted		\$1,692,146	\$1,624,240
2018 Est Fund Balance YTD - Restricted		\$27,249	\$27,249

\*2017 YE Fund Balance represents the current amount in reserve as of 2017 YE close.

\*\*2018 Est YTD Fund Balance represents the 2017 YE reserve netted against the actual 2017 expenditures and revenues. This figure will change throughout the year as additional 2018 expenditures and revenues are realized.

**NOTE:** 2018 expenditures, revenues, and resulting fund balance are year-to-date ONLY. The figures represented in this report are not intended to project a year-end balance for the LIO budget. The purpose of the report is to provide committee members a "financial snapshot" of LIO activities within a specific point in time.

**2018 YTD Fiscal Report - LIO (\$8) - as of 10/31/18**

Vendor Name	Description	Amount Authorized	Amount Paid - Prior Years	Amount Encumbered	Amount Paid 2018 YTD	Canceled Encumbrance	Total Amount Paid (Encumbrances + Actual)	Remaining Unpaid Balance
SOUTHEASTERN WI REGIONAL	County Surveyor	82,916.00	-	-	82,916.00	-	82,916.00	-
SOUTHEASTERN WI REGIONAL	Vertical Datum Migration	27,249.00	-	27,249.00	-	-	27,249.00	27,249.00
PICTOMETRY INTERNATIONAL	Imagery Acquisition	137,286.00	-	-	137,286.00	-	137,286.00	-
	<b><u>2017 Authorized Projects</u></b>						-	-
SEWRPC	Datum Modernization	33,396.00	-	33,396.00	-	-	33,396.00	-
	<b>TOTAL</b>	<b>\$ 280,847.00</b>	<b>\$ -</b>	<b>\$ 60,645.00</b>	<b>\$ 220,202.00</b>	<b>\$ -</b>	<b>\$ 280,847.00</b>	<b>\$ 27,249.00</b>

Milwaukee County - Land Information Office Budget							
	2014	2015	2016	2017	2018	2019	2018-2019
	ADOPTED	ADOPTED	ADOPTED	ADOPTED	ADOPTED	ADOPTED	
	ACTUAL	ACTUAL	ACTUAL	ACTUAL	BUDGET	BUDGET	VARIANCE
<b>REVENUES</b>							
Retained fees-\$8 Portion	744,858	840,531	864,219	833,488	840,000	840,000	-
Other Misc Revenue	2,449	130	2,300		-	-	-
State grants	-	-	26,000	51,000	51,000	51,000	-
<b>Total Revenues</b>	<b>747,307</b>	<b>840,661</b>	<b>892,519</b>	<b>884,488</b>	<b>891,000</b>	<b>891,000</b>	<b>-</b>
<b>EXPENSES</b>							
<b>Personal Services</b>							
Direct Labor Charged	159,376	138,946	165,057	-	-	-	-
Offtime Charged	30,823	26,872	31,922	-	-	-	-
Fringe Benefits Charged	176,382	153,772	182,668	-	-	-	-
Indirect Overhead Charged	-	60	-	-	-	-	-
Direct Labor Applied	(159,376)	(137,848)	(165,057)	-	-	-	-
Offtime Applied	(30,823)	(26,660)	(31,922)	-	-	-	-
Fringe Benefits Applied	(176,382)	(152,557)	(182,668)	-	-	-	-
Potential Sal Adj-Budget	-	-	-	-	-	1,284	<b>1,284</b>
Salaries-Wages Budget	188,622	165,476	192,364	192,946	256,612	333,760	<b>77,148</b>
Overtime	100	154	-	-	-	-	-
Social Security Taxes	13,694	12,074	14,003	14,748	19,628	25,512	<b>5,884</b>
Adjustment -Social Security Taxes	-	-	-	-	-	-	-
Unemployment Compensation	-	-	-	-	-	-	-
Employee Merit Awards	-	-	-	-	-	-	-
Tool Allowance	29	-	-	-	-	-	-
Employee Health Care	42,497	29,642	28,443	35,059	71,335	75,535	<b>4,200</b>
Employee Pension	18,850	21,534	17,281	28,061	33,446	46,135	<b>12,689</b>
Legacy Healthcare	29,641	41,174	38,199	36,140	41,938	54,672	<b>12,734</b>
Legacy Pension	25,300	41,471	54,516	53,669	52,652	64,823	<b>12,171</b>
Adjustment - Legacy Healthcare							-
<b>Personal Services</b>	<b>318,733</b>	<b>314,110</b>	<b>344,806</b>	<b>360,623</b>	<b>475,611</b>	<b>601,721</b>	<b>126,110</b>
<b>Commodities/Services</b>							
Membership Dues	-	52	350	200	200	-	<b>(200)</b>
Contract Pers Serv-Short	28,222	4,050	-	5,000	5,000	70,000	<b>65,000</b>
Postage	16	38	9	100	100	-	<b>(100)</b>
Prof. Serv-Recurring Oper	147,554	512,341	174,696	176,000	82,916	82,916	-
Prof. Serv.-Nonrecur Oper	87,348	134,547	167,908	160,301	260,476	66,292	<b>(194,184)</b>
Tel and Tel Outside Ven	-	-	-	-	-	1,000	<b>1,000</b>
Internet Expenses	374	99	-	1,000	1,000	-	<b>(1,000)</b>
Printing and Stationery	288	373	765	1,000	1,000	-	<b>(1,000)</b>
R/M Computer Equip	46,669	-	-	-	-	-	-
Auto Allowance	-	-	355	500	500	500	-
Meetings Other Auth Travl	6,236	7,549	4,347	6,000	6,000	6,000	-
Sundry Services	194	851	480	-	-	-	-
Office Supplies	-	1,289	97	1,130	1,130	500	<b>(630)</b>
Computer Software	3,180	-	-	-	-	-	-
DP Supplies	152	-	-	-	-	-	-
Computer Equip-New- (cap)	-	-	(862)	-	-	-	-
<b>Commodities/Services</b>	<b>320,233</b>	<b>661,189</b>	<b>348,145</b>	<b>351,231</b>	<b>358,322</b>	<b>227,208</b>	<b>(131,114)</b>
<b>Crosscharges - Service Charges</b>							
Technical Support & Infrastructure	2,571	2,938	3,913	3,426	3,642	4,416	<b>774</b>
Prof Serv Div Services	-	-	96,851	87,523	-	-	-
IT Security	-	-	-	-	1,063	1,659	<b>596</b>
Risk Management Services	314	209	560	422	337	443	<b>106</b>
Prof. Serv. -Data Process Charges	-	22,942	-	20,000	-	-	-
DP Software Lease/Lcn Charges	-	-	49,224	45,700	-	-	-
DAS Services	8,472	-	-	-	-	-	-
R/M Computer Equip Charges	-	14,425	-	-	-	-	-

<b>Milwaukee County - Land Information Office Budget</b>							
	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2018-2019</b>
	<b>ADOPTED</b>	<b>ADOPTED</b>	<b>ADOPTED</b>	<b>ADOPTED</b>	<b>ADOPTED</b>	<b>ADOPTED</b>	
	<b>ACTUAL</b>	<b>ACTUAL</b>	<b>ACTUAL</b>	<b>ACTUAL</b>	<b>BUDGET</b>	<b>BUDGET</b>	<b>VARIANCE</b>
HOC Graphics	-	75	-	75	-	-	-
Administrative Services #6	-	-	-	-	5,025	5,443	<b>418</b>
Application Chgs - Network	1,903	2,491	3,914	7,754	9,792	10,547	<b>755</b>
HRIS Allocation	1,481	1,813	1,436	1,484	-	-	-
Worker Comp Med and WC Pay	1,042	1,028	825	1,071	1,876	1,274	<b>(602)</b>
Bldg Space Rental Alloc	-	-	-	-	19,242	19,780	<b>538</b>
Telephone Allocation						1,615	<b>1,615</b>
Insurance Services	264	404	111	377	389	618	<b>229</b>
Worker's Compensation Adm	125	135	-	-	-	-	-
Central Service Allocation	2,064	8,865	8,735	8,441	13,089	13,378	<b>289</b>
CH Complex Space Rental	50,647	-	-	-	-	-	-
IMSD Central Purchases	-	-	4,921	2,000	-	-	-
PC Charges	1,698	1,248	2,620	1,873	2,612	2,898	<b>286</b>
<b>Crosscharges - Service Charges</b>	<b>70,581</b>	<b>56,573</b>	<b>173,110</b>	<b>180,146</b>	<b>57,067</b>	<b>62,071</b>	<b>5,004</b>
							-
<b>Total Expenditures</b>	<b>709,547</b>	<b>1,031,872</b>	<b>866,060</b>	<b>892,000</b>	<b>891,000</b>	<b>891,000</b>	-
<b>Reserve Contribution</b>	<b>(37,760)</b>	<b>191,211</b>	<b>(26,459)</b>	<b>(140,175)</b>	-	-	-

## Charter of the Milwaukee County Land Information Council

### **Summary:**

The Milwaukee County Land Information Council (LIC) was created by the Milwaukee County Board of Supervisors on March 17<sup>th</sup>, 2016, pursuant to adopted Resolution File No. 16-104. The Council serves in an advisory role to the Milwaukee County Land Information Office (LIO) on matters relating to the Land Information Program for Milwaukee County.

The Council currently consists of 11 member organizations appointed by the Milwaukee County Board. Membership on the Council consists of representatives from Milwaukee County departments and from various outside sectors that develop or utilize land information records. The members have been authorized to make their own appointments, serving terms of two years each. The LIO serves as the Secretary of the Council. The Milwaukee County Land Information Office will provide staff support for council meetings.

### **Land Information Council:**

- (a) *Creation.* The Land Information Council was created by Wisconsin § [59.72\(3m\)](#). In May 2010, Wisconsin enacted SB-507 (2009 Wisconsin Act 214) which requires that counties with a Land Information Office also establish a Land Information Council.
- (b) *Appointment Process.* Appointments to the council will be solicited by the current membership and then brought forward to the MCLIC. The Chairman will bring the candidates forward to the MCLIC for approval.
- (c) *Membership.* The Council shall consist of the following members:

[59.72\(3m\)](#) (a) If the board has established a land information office under sub. (3), the board shall have a land information council consisting of not less than 8 members. The council shall consist of the register of deeds, the treasurer, and, if one has been appointed, the real property lister or their designees and the following members appointed by the board for terms prescribed by the board:

1. A member of the board.
  2. A representative of the land information office.
  3. A realtor or a member of the Realtors Association employed within the county.
  4. A public safety or emergency communications representative employed within the county.
  - 4m. The county surveyor or a professional land surveyor employed within the county.
  5. Any other members of the board or public that the board designates. (am) Notwithstanding par. (a), if no person is willing to serve under par. (a) 3., 4., or 4m., the board may create or maintain the council without the member designated under par. (a) 3., 4., or 4m.
- (b) The land information council shall review the priorities, needs, policies, and expenditures of a land information office established by the board under sub. (3) and advise the county on matters affecting the land information office.”

<b>ORGANIZATION</b>	<b>AGENCY</b>	<b>APPOINTEE</b>
Milwaukee County	Board of Supervisors	Supervisor Jason Haas
Milwaukee County	Land Information Office	Kevin Bruhn
Milwaukee County	Treasurer	Cathleen Hollers for David Cullen
Milwaukee County	Register of Deeds	Kathleen Bach for John LaFave
Milwaukee County	Office of Emergency Management	Christine Westrich
Milwaukee County	Department of Administrative Services	Greg High
SEWRPC for Milwaukee County	Surveyor	Robert Merry
City of Milwaukee	Chief Information Officer	Nancy Olson
Milwaukee Metropolitan Sewerage District	Geographic Information Systems	Emily Champagne
Intergovernmental Coordinating Council	Village President - Shorewood	Allison Rozek
We Energies	Manager, EDAM Support	Dawn Neuy

(d) *Duties.* The Council shall do all the following:

1. Per § [59.72\(3\)\(b\)](#) and [16.967 \(3\) \(e\)](#), The MCLIC must review and approve a countywide plan for land records modernization by January 1<sup>st</sup> every 3 years.
2. Advise the Milwaukee County Land Information Office, such as the allocation of grant funds.
3. Recommend project objectives for strategic initiative grants.
4. Annually evaluate the efficacy of projects funded with Milwaukee County Register of Deeds recording fees.
5. Assist the MCLIO in identifying and obtaining funding to implement Milwaukee County land records modernization initiatives.
6. Recommend guidelines to coordinate the modernization of land records.
7. Periodically review and recommend statutory updates to improve land records modernization.

Authorized Date XX, 20XX

## **Bylaws of the Milwaukee County Land Information Council**

### **Preamble**

The Milwaukee County Land Information Council (MCLIC), exists by virtue of legislative action by the Milwaukee County Board of Supervisors in adopting Resolution File No. 16-104 on March 17<sup>th</sup>, 2016. The provisions, rules of construction, and definitions of the charter shall govern the Council, in addition to the following bylaws.

### **Officers and Duties**

MCLIC will have a Chair elected by the membership. The Chair will serve two-year terms, and may serve consecutive terms. Officer responsibilities are described below.

- (a) *Chair*. Run MCLIC meetings and moderate meeting discussions; represent MCLIC externally (e.g., communications with stakeholder entities); produce meeting agendas.
- (b) *Secretary (MCLIO staff)*. Coordinate meeting logistics; take and distribute draft MCLIC meeting minutes; post final minutes to webpage; facilitate MCLIC voting; distribute final MCLIC agendas to email list and post to webpage; conduct MCLIC webpage updates; add agendas and materials to County Legislative Information Center (CLIC) meeting and document resource website and other duties as requested by the Council.

### **Terms and Vacancies**

When a member's two-year term concludes, MCLIC will accept applications for a new member. Any member shall be eligible for re-appointment for any number of two-year terms.

When a vacancy on the council exists mid-term, MCLIC will accept nominations for a new member. The new member appointed by MCLIC will serve immediately upon appointment for the remainder of the calendar year, plus a term of two complete calendar years, to begin on January 1st and conclude on December 31st of the third year.

### **Resignation, Termination, and Absences**

Resignation from the Council must be in writing and received by the Chair. A Council member shall be terminated from the Council due to excess absences without naming a proxy, defined as more than two absences from Council meetings in a year. A Council member may be removed for other reasons by a simple majority vote of the remaining members in attendance at a Council meeting.

### **Distribution Lists**

MCLIC utilizes one primary email distribution list:

- (a) *MCLIC Email List*. This list includes MCLIC membership and MCLIO staff and is maintained by MCLIO.

### **Meeting of Members.**

Currently the LIO meets twice a year, once mid-year to cover revenue projections and budget expenditures and once at the end of the year to cover incoming revenue budget projection and to develop the next year workplan.

- (a) *Notice of Meetings*. Agendas will be established and distributed a minimum of five full business days before each MCLIC meeting. Meeting agendas will be made publicly available

online via the Milwaukee County Legislative Information Center (CLIC) webpage a minimum of five full business days before each MCLIC meeting. Solicitation for agenda topics will be made and items will be added as new items in the agenda.

(b) *Meeting Minutes.* Minutes will be taken by the MCLIC secretary. Draft minutes will be prepared and distributed 10 business days after each MCLIC meeting for review prior to, and approval during, the next MCLIC meeting.

(c) *Open Meetings.* MCLIC meetings shall be open to the public and follow Robert's Rule of Order.

### **Quorum**

MCLIC will have sufficient representation of its membership if at least half of its membership is in attendance.

### **Decision Making and Voting**

Consensus decision making, where all Council members support a specific direction, will be the preferred model. If consensus is not reached, a decision will be made using a vote of the attending membership. A vote resulting in a tie will be considered a failure or no vote. Any minority or dissenting opinions will be noted in the meeting minutes.

### **Rules of Order**

Roberts Rules of Order, where applicable and except as modified in the bylaws, shall serve as a guide for MCLIC meetings.

### **Bylaws Revisions**

Any future revisions to these bylaws must be approved by a simple majority vote of attending membership.

### **Certification**

These bylaws were approved at a meeting of the Council by a majority vote of attending Council members on XX, 2018.

# LIO 2018 Workplan

TASK	STATUS	COMMENTS	PREVIOUS % COMPLETE	CURRENT % COMPLETE	LAST UPDATE	ASSIGNED TO	START DATE	END DATE	BUDGET	SPENT TO DATE	REMAINING FUNDS	SOURCE
1.) New website Implementation - Titan	Complete	Complete	0	100	6/5/18	LIO/IMSD	1/1/2018	6/30/2018	\$ -		\$ -	
2.) Migration to Cloud Based GIS - One Neck	Complete	Migration is complete	50	100	6/5/18	LIO/IMSD	3/1/2017	6/30/2018	\$ 40,000	\$ -	\$ 40,000	Cross Charge with IMSD
3.) Cityworks - Enterprise Asset Management	Complete	Capital funding will run out Q4 of 2018	95	100	6/5/18	LIO/IMSD/FMD	1/1/2017	11/30/2018	\$ 45,500	\$ 24,489	\$ 21,011	County Capital
4.) Emergency Management - NG911	In Progress	Waiting for program requirements.	10	0	12/5/17	LIO/EOM	1/1/2017	12/31/2018	\$ -		\$ -	
5.) Cadastral Improvements	In Progress	Workflow and procedures are complete. Started technical tasks.	5	37	6/5/18	LIO	1/1/2018	12/31/2019	\$ 150,000	\$ 25,423	\$ 124,577	Recording Fees
6.) Local Update Census Address (LUCA)	Complete	No Cummunication after submittal	100	100	12/4/18	LIO	2/1/2018	5/31/2018	\$ -		\$ -	
7.) Milwaukee County Zoning Data Compilation	Not Started	Behind on Project Workplan	0	0		LIO	3/1/2018	12/31/2018			\$ -	
8.) Non-Map GIS	Not Started	Behind on Project Workplan	0	0		LIO	6/1/2018	12/31/2018	\$ -	\$ -	\$ -	
9.) Data Transformation to New Datum - Vectors	Complete	621 vector layers are in NAD83 HARN	0	100	6/5/18	LIO	1/1/2018	12/31/2018	\$ -	\$ -	\$ -	
10.) Datum Modernization - Vertical	In Progress	Technical Processing is underway	0	75		LIO/SEWRPC	6/1/2018	6/30/2019	\$ 50,000	\$ 27,249	\$ 22,751	2017 SI Grant
11.) 2018 Orthophotography Processing	Complete	Complete and Published	0	100	12/4/18	LIO	1/1/2018	6/30/2019	\$ 150,000	\$ 137,286	\$ 12,714	2018 SI Grant Recording Fees
12.) Sanbron Fire Map (1894) Georectification	Complete	Complete and Published	50	100	12/4/18	LIO	10/1/2017	3/31/2019	\$ 5,000	\$ 492	\$ 4,508	Recording Fees
13.) Update Land Information Plan 2018 - 2021	Complete	Draft submitted, approval for Dec. LIC	50	100	12/4/18	LIO	10/1/2018	12/31/2018	\$ -	\$ -	\$ -	Recording Fees



**DEPARTMENT OF ADMINISTRATIVE SERVICES  
DIVISION OF ECONOMIC DEVELOPMENT  
MILWAUKEE COUNTY LAND INFORMATION OFFICE**

633 West Wisconsin Avenue, Suite 903, Milwaukee, WI 53203 (414) 278-3927

**MEMORANDUM**

**TO:** Land Information Council  
**FROM:** Kevin Bruhn, Land Information Officer  
**DATE:** November 21, 2018

**SUBJECT:** Enterprise Asset Management

**BACKGROUND**

Cityworks was selected as the enterprise work order and asset management system for Milwaukee County. The goal is to replace existing work order systems with an enterprise wide solution. This will allow Milwaukee County the ability to manage capital assets by minimizing the total cost of owning, operating, and maintaining those assets at acceptable levels of service. It will also provide greater clarity, ease of management and the ability to perform intelligent and cost effective inspections, condition assessments, and reporting which may greatly assist in the capital planning process. As we are implementing this solution across the county, it will provide us with the opportunity to review current asset management and work order tracking processes and compare to industry best practices with the goal of simplifying and aligning with best practices where possible.

Cityworks has been installed within the Airport Division of the Milwaukee County Department of Transportation (MCDOT) since 2011 and is currently being implemented for the MCDOT Highway Maintenance Division. The hardware and software installation for MCDOT will provide the starting technical foundation for the Enterprise Program. The Enterprise Cityworks Project launched in August 2015 and has been implemented for Zoo, Parks, House of Correction, Facilities, Fleet, Transit, and Economic Development.

**ACTIVITIES THIS PERIOD: 6/18 - 12/18**

- Capital funding will sunset - 12/31/2018
- 1 GIS Analyst to support maintenance and growth - 1/1/2019
- 107 Asset layers have been inventoried (security points, HVAC equipment, trees, etc.)
- 248,534 Assets in system so far.
- 170 Tablets have been deployed, 230 users, 600 service requesters

Attached:

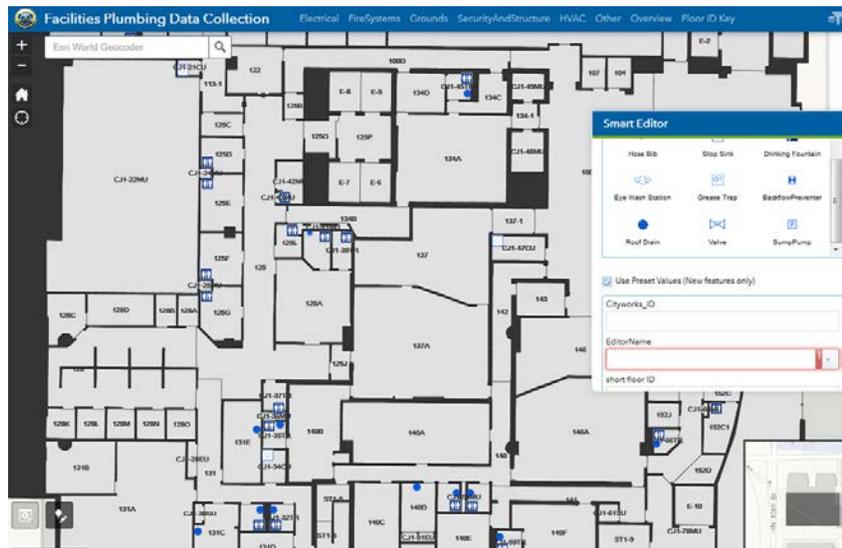
Examples of service request site, ArcGIS collector and Courthouse in 3D

# Create New Request - Location

On the **Request – Location** screen:

1. Select **Site**
2. Select **Building**
3. Select **Floor**
4. Select **Room**
5. Enter **Additional Site Details**, if needed
6. Once all information is entered in form, click **Next**

\*Note: Blue dot location on map will move as you choose Site, Building, etc.



# City of Milwaukee Cadastral Update Status

as of November 15, 2018

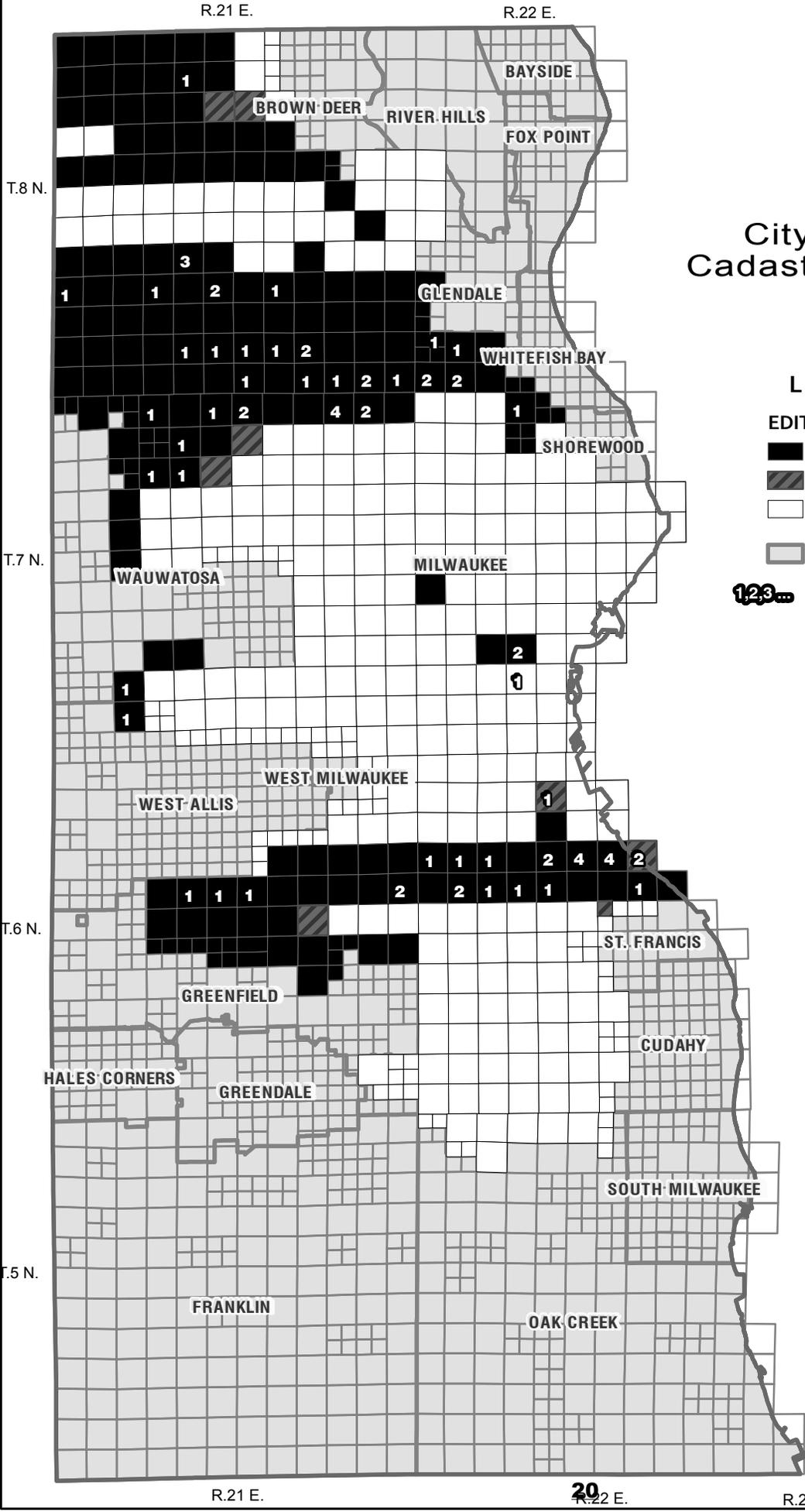
## Legend

### EDIT\_STATUS

- Phase I Complete (206) 37.2%
- In Progress (8) 1.4%
- Unedited (333) 60.9%

Municipal Boundaries

123 Errors to Resolve in Phase II





**DEPARTMENT OF ADMINISTRATIVE SERVICES  
DIVISION OF FACILITIES MANAGEMENT  
MILWAUKEE COUNTY LAND INFORMATION OFFICE**

633 West Wisconsin Avenue, Suite 903, Milwaukee, WI 53203 (414) 278-3927

**MEMORANDUM**

**TO:** Land Information Council  
**FROM:** Kevin Bruhn, Land Information Officer  
**DATE:** November 26, 2018

**SUBJECT:** Data Migration for new Datum

**BACKGROUND**

The Land Information Office currently has 600+ vector datasets. The LIO will host the transformed datasets in the new datum and reproject the services in the old and new datums until municipalities and other vendors have time to migrate to the new datasets.

**ACTIVITIES THIS PERIOD: 6/18 - 12/18**

- A GIS users group was held on November 8<sup>th</sup> to notify and cover the steps needed to transform local municipality data into the new datum.

<https://county.milwaukee.gov/EN/Administrative-Services/Land-Information-Office/Announcements/MMGUG-November-2018-Meeting>

- A date of 12/31/2018 has been set to officially sunset the old datum and only maintain the new one.
- The LIO will promote the new datum with other Counties in the SEWRPC region.
- The LIO has been messaging these changes on the LIO website announcement page.

\*\*\*\*\*



**DEPARTMENT OF ADMINISTRATIVE SERVICES**  
**DIVISION OF ECONOMIC DEVELOPMENT**  
**MILWAUKEE COUNTY LAND INFORMATION OFFICE**

633 West Wisconsin Avenue, Suite 903, Milwaukee, WI 53203 (414) 278-3927

**MEMORANDUM**

**TO:** Land Information Council  
**FROM:** Kevin Bruhn, Land Information Officer  
**DATE:** November 21, 2018  
**SUBJECT:** 2018 Ortho and Oblique Capture

**BACKGROUND**

Beginning with the 2005 Regional Orthophotography Project, Milwaukee County has acquired digital orthophotography every two or three years e.g., 2005, 2007, 2010, 2013.... This scheduled orthophotography capture covering Milwaukee County was completed in April of 2018. As part of the flight, training and custom configuration for the Pictometry Explorer product is included. A number of municipalities and internal county departments have taken advantage of this opportunity to configure the application to fit organizational business needs.

**ACTIVITIES THIS PERIOD – 6/18 – 12/18**

- 3 inch ortho & 3 inch obliques processed
- Created seamless coverage for County extent
- Services available on GIS website.
- Compressed (.sid) ½ townships available for public download

**NEXT**

- Develop contract for 2020 imagery capture
- Gain feedback on update cycle and resolution needs.

\*\*\*\*\*

# LIO 2019 Workplan

TASK	STATUS	COMMENTS	PREVIOUS % COMPLETE	CURRENT % COMPLETE	LAST UPDATE	ASSIGNED TO	START DATE	END DATE	BUDGET	SPENT TO DATE	REMAINING FUNDS	SOURCE
1.) Planimetric Data Update	Not Started	Create change detection product - same process from 2013 and 2015	0	0	12/4/18	LIO	3/1/2019	12/31/2019	\$ 50,000		\$ 50,000	Recording Fees
2.) 2020 Imagery Contract	Not Started	Create contract for 2020 capture	0	0	12/4/18	LIO	6/1/2019	12/31/2019	\$ 150,000	\$ -	\$ 150,000	Recording Fees - SI Grant - SEWRPC
3.) 2020 LiDAR Contract	Not Started	Create contract for 2020 capture	0	0	12/4/18	LIO	6/1/2019	12/31/2019	\$ 75,000		\$ 75,000	Recording Fees - SI Grant
4.) Emergency Management - NG911	In Progress	Requirements coming from State	10	0	12/5/17	LIO/EOM	1/1/2017	12/31/2018	\$ -		\$ -	
5.) Cadastral Improvements	In Progress	Working on multiple areas. Divided into 2 Phases. Cleanup and deep dive errors.	5	37	6/5/18	LIO	1/1/2018	12/31/2019	\$ 150,000	\$ 25,423	\$ 124,577	Recording fees - operating budget
6.) Cadastral Improvements - Phase 2	Not Started	Deep dive phase for complex errors - new map products	0	0	12/4/18	LIO	12/1/2019	12/31/2020	\$ -		\$ -	Current Staffing
7.) Milwaukee County Zoning Data Compilation	Not Started	Behind on Project Workplan	0	0	12/5/17	LIO	3/1/2018	12/31/2018			\$ -	
8.) Non-Map GIS	Not Started	Behind on Project Workplan	0	0	12/5/17	LIO	6/1/2018	12/31/2018	\$ -	\$ -	\$ -	
9.) Datum Modernization - Vertical	In Progress	Technical Processing is underway	0	75	12/4/18	LIO/SEWRPC	6/1/2018	6/30/2019	\$ 50,000	\$ 27,249	\$ 22,751	2017 SI Grant

## 2019 Workplan Narratives

### 1. Planimetric Data Update

The Planimetric data, (pavement edges, building footprints, pervious\impervious surfaces, waterline, utilities, etc.) has historically been updated after each capture of aerial imagery. This project is to refresh the Milwaukee County data that was last updated in 2015. The average update area has been about 7% or 17 square miles of the county.

### 2. 2020 Imagery Contract

The 7 Counties of the SEWRPC region will be completing a regional flight for 2020. Milwaukee County will complete a flight with the minimum resolution of 3". There are opportunities to greatly increase the resolution for the next flight. The LIO will gather input from the municipalities and land information partners to assist with collecting the correct imagery that is needed to support the projects in Milwaukee County.

### 3. 2020 LiDAR Contract

Milwaukee County has collected high resolution elevation data (LiDAR, Light Detection and Ranging) every 5 years. The last collection of this data was from 2015. The LIO will work with SEWRPC staff to create the contract for collection in spring of 2020.

### 4. Emergency Management – Next Generation 911 (NG911)

The need for a reliable NG911 GIS dataset is a growing necessity that will support the public-safety answering points, PSAP, and other emergency services. The project is still in the development and scoping phase but, the impact on local GIS organizations is slowly being uncovered. Centerline and address data may have to be redesigned to support the new NG911 program. The LIO will stay engaged with any new developments.

### 5. Cadastral Improvements Phase 1

In 2017, the LIO started to perform the cadastral updates for the entire County, including the City of Milwaukee. The LIO took this time to gauge the amount of additional work that is needed to maintain the cadastral dataset. For 2018, the LIO started to make improvements to this data. The goal for this project is to make the data consistent throughout the County. The improvements include adding documents to the CSM's, Subdivisions, and Condos that are missing; verifying line work and attributes; cleaning annotation; adding original plat and cartographic data to generalized lands; research errors in platted lands and producing a Countywide plat\tax book for publication.

A pilot was conducted to gauge the time and resources that are needed to complete the needed improvements. Five quarter sections were completed for the following cleanup: annotation, line work and platted polygons.

- Annotation: Identify problems with annotation, missing data and layout
- Line work: identify problems with parcel lines, cartographic lines, platted lines etc.
- Platted Polygons: identify problems with polygon features

Based on the pilot, we found that general edits and cleanup would take about 8 hours per quarter section. There are approximately 480 quarter sections for a total of almost 4,000 hours to complete. This will be the first phase of a 2 phase project. The second phase will be to complete the identified errors and discrepancies from the first phase of cleanup. This is estimated to take about the same amount of time to complete. This cleanup will be part of the duties for the newly created GIS technician in the Land Information Office.

The final product will include a consistent cadastral map product for the entirety of Milwaukee County. A printable and downloadable plat index map book will be developed for the City of Milwaukee. This will be consistent with the product for the suburban municipalities.

## **6. Cadastral Improvements Phase 2**

The LIO will fix the complex errors that were uncovered in the first phase of the cadaster project. Each error will be fully researched and investigated so that a proper redraw can be performed. Due to the complexity, it is expected that an individual error can take multiple days to complete. This work will be completed by experienced LIO staff.

## **7. Milwaukee County Zoning Data**

The Land Information Office will consolidate the parcel zoning data from the municipalities within Milwaukee County. The zoning codes and descriptions vary from municipality and will need to be accounted for to bring this information together. An initial inventory will be done to evaluate the level of effort that it will take to aggregate and normalize the various datasets.

## **8. Non-Map GIS**

The need for a light weight application to retrieve property information is apparent. The LIO will develop a simple search page that will retrieve all information about a property without using a map. This text based search will deliver a report with property information and links to property documents.

## 9. Datum Modernization – Vertical

This project to convert the vertical survey control network from a National Geodetic Vertical Datum (NGVD 29) to the North American Vertical Datum of 1988 (NAVD 88). The survey monuments are the positions that all property (parcel) changes are controlled from. The vertical control will be completed as a 7 County, (SEWRPC area), after the horizontal is completed. SEWRPC will be performing the work in house and will supply Milwaukee County with updated data and documentation of the work performed.

A datum is the position on the earth that measurements are taken from in surveying. It is important that these measurements are highly accurate to limit the amount of error that surveyors experience when they record these measurements that affect property ownership.



## Wisconsin Land Information Program 2019 Base Budget, Training & Education, and Strategic Initiative Grant Application

Complete this application form in order to receive 2019 Wisconsin Land Information Program (WLIP) grants, pursuant to Wisconsin Statute Section 16.967(7) and Wisconsin Administrative Code, Chapter Adm. 47.

**Training & Education Grants** may be used for the training and education of county employees for the design, development, and implementation of a land information system. Each county is eligible for a \$1,000 grant.

**Strategic Initiative Grants** are for the purposes of addressing statutory directives to create a statewide digital parcel map and to post certain parcel information online in the standard Searchable Format. Strategic Initiative grant funding is to be prioritized to achieve “benchmarks” for parcel quality and completeness. Each county is eligible for \$50,000 in 2019 Strategic Initiative grant funding.

There are four benchmarks for parcel data:

- Benchmark 1 – Parcel and Zoning Data Submission
- Benchmark 2 – Extended Parcel Attribute Set Submission
- Benchmark 3 – Completion of County Parcel Fabric
- Benchmark 4 – Completion and Integration of PLSS

Counties must prioritize their Strategic Initiative grant activities toward achieving the benchmarks in numerical order. The benchmarks are designed to complement and dovetail with the county land information plan. A county may amend a plan with updates or revisions as appropriate. If amended, a copy of the amended plan and record of land information council approval should be sent to the WLIP.

**Base Budget Grants** enable a county to develop, maintain, and operate a basic land information system and may be used for the implementation of the county’s land information plan. Base Budget grants are only available to those counties with retained register of deeds document recording fees of less than \$100,000 in State FY 2018 (July 1, 2017–June 30, 2018). See the grant eligibility table on page 8 to confirm your county’s eligibility.

**Applications should be submitted by December 31, 2018** or earlier. Please submit the application by emailing a digital PDF form that has been electronically filled-out (*not* a scanned image) to [WLIP@wisconsin.gov](mailto:WLIP@wisconsin.gov). For questions, please contact the WLIP grant administrator at [peter.herreid@wisconsin.gov](mailto:peter.herreid@wisconsin.gov) or (608) 267-3369.

Grant application released	September 17, 2018
Grant application deadline	December 31, 2018
Grant activities eligible for reimbursement	Beginning January 1, 2019
Training & Education grants distributed	By February 28, 2019
Base Budget funds distributed	By April 30, 2019
First 50% of Strategic Initiative grant distributed (upon successful data submittal for V5)	By June 30, 2019
Second 50% of Strategic Initiative grant distributed	Upon grant project completion

### How to Fill Out and Submit This Form:

- **DOWNLOAD THIS DOCUMENT & "FILE ► SAVE AS"** to save a local copy.  
When saving, add your county name to the end, e.g.,  
**2019\_WLIP\_Grant\_Application\_StCroix.pdf**
- **FILL OUT THE APPLICATION** – use Adobe Reader or Acrobat to fill in the application form electronically, by typing data into it. Do *not* fill out the form by hand. The instructions are numbered according to the question numbers on the application form and hyperlink to each corresponding question.
- **"FILE ► SAVE"** – to save as you go
- **ATTACH PAGES** – Attach addendum pages if applicable, or email as separate files
- **SUBMIT VIA EMAIL (WITH COUNTY NAME)** – Email a completed digital PDF form that has been electronically filled-out (*not* a scanned image) to [WLIP@wisconsin.gov](mailto:WLIP@wisconsin.gov) by December 31, 2018. Email subject line should include the name of your county, e.g.,  
**Subject: 2019 WLIP Grant Application - Forest**

## Training & Education Grant Application Instructions

- TE\_#1** County submitted a draft 2018 land information plan to DOA? All counties updated their county land information plan in 2018 to meet s. 59.72(3)(b). Wisconsin Administrative Code, Chapter Adm. 47.06(3) requires that projects must be consistent with an approved county land information plan (also referred to as a county-wide land records modernization plan).
- TE\_#2** Enter date of last county land information council meeting. According to s. 59.72(3m)(b), the county land information council shall review the priorities, needs, policies, and expenditures of a land information office and advise the county on matters affecting the land information office. The land information council must have met within the last 12 months for the county to be eligible for a WLIP grant.
- TE\_#3** LIO subscribed to the Land Information Officer's listserv? Applicants must subscribe to the WLIP's e-mail listserv, [doa-landinfo@lists.wi.gov](mailto:doa-landinfo@lists.wi.gov).
- TE\_#4** County's Retained Fee/Grant Report for 2017 submitted? According to s. 59.72(2)(b), a county must submit an annual report to DOA on WLIP retained fee and grant spending. All counties submitted a *Retained Fee/Grant Report* for 2017.
- TE\_#5** Training & Education Award Eligible. The amount of \$1,000 is available to each county for 2019 Training & Education grants.
- TE\_#6** Training & Education Award Amount Requested. Enter the amount requested (up to \$1,000).
- TE\_#7** Brief Description of Intended Expenditures for Training & Education Grant. Provide information on plans to utilize the Training & Education grant funding. Aim for less than 1,800 characters. The font size will shrink as you type, becoming smaller to accommodate more text.
- TE\_#8** Statement and Authorization of Land Information Officer. Land information officer name (typed) and date are required. Do not sign and scan the form. Handwritten signatures are *not* required. Submit the application by emailing a digital PDF form that has been electronically filled-out (*not* a scanned image) to [WLIP@wisconsin.gov](mailto:WLIP@wisconsin.gov).

## Strategic Initiative Grant Application Instructions

- SI\_#1** Strategic Initiative Award Eligible. The amount of \$50,000 is available to each county for 2019 Strategic Initiative grants.
- SI\_#2** Strategic Initiative Award Amount Requested. Enter the amount requested (up to \$50,000).
- SI\_#3** Will the county use 2019 Strategic Initiative Funding to work toward Benchmark 1 and 2 in the Searchable Format in the first quarter of 2019? Indicate whether the county will use grant funding to work toward Benchmark 1 and Benchmark 2 in the Searchable Format. The county must meet the Searchable Format standard for the Version 5 Statewide Parcel Map Database Project (V5) data submittal, using grant funds to do so if necessary. V5 data submittals will be due March 31, 2019.

Figure 1 on the following page summarizes the benchmarks. For Benchmark 1 and 2 specifications, see the Submission Documentation. Note that the Submission Documentation may be tweaked for V5, with an effort to clarify and be consistent with previous versions of the Submission Documentation.

**Searchable Format.** In the Searchable Format, the county data submittal is ready for immediate aggregation into the statewide parcel layer. The county performs all data standardization and clean-up before submitting data. Data exactly matches the Searchable Format standard. The Searchable Format is defined in detail in the Submission Documentation. Note that the Submission Documentation may be tweaked for V5, with an effort to clarify and be consistent with the Submission Documentation for V4.



Figure 1. Summary of 2019 benchmarks. The Searchable Format for Benchmarks 1 & 2 and other data submission requirements are detailed in the Submission Documentation.

## Strategic Initiative Grant Application Instructions (Continued)

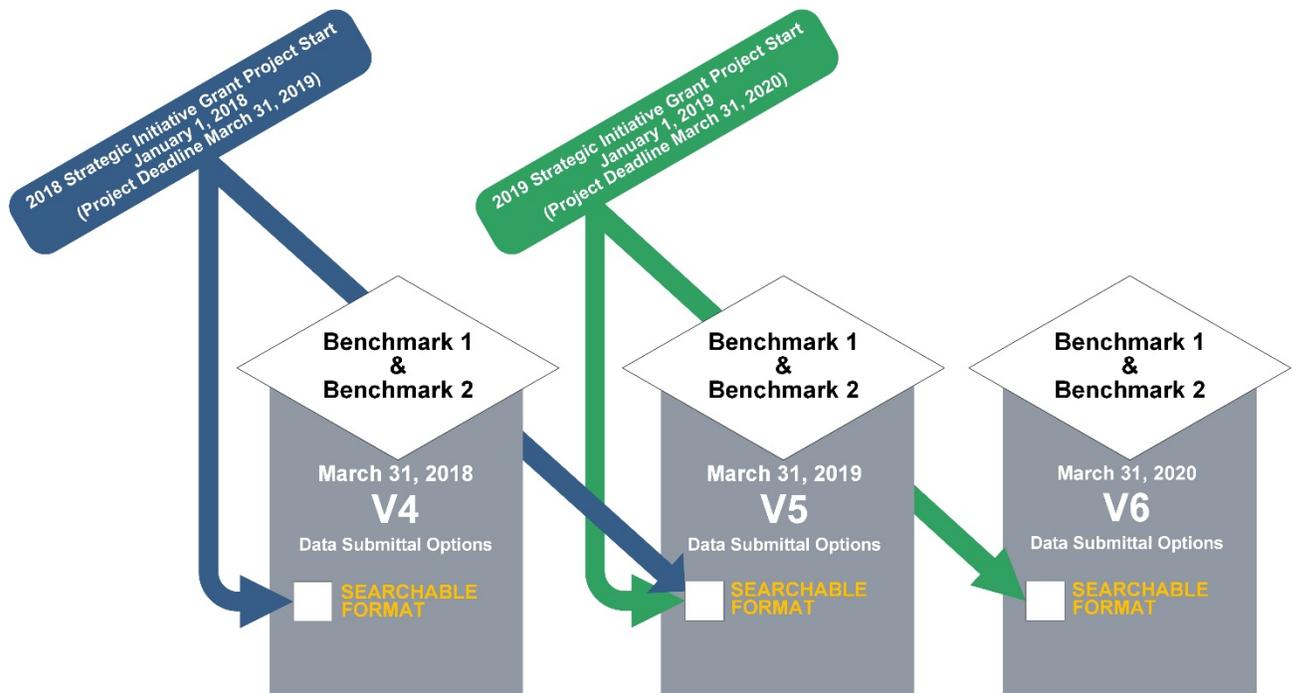


Figure 2. Strategic Initiative grant project timeline, where projects can span a calendar year plus one quarter

**SI\_#4** Will the county use 2019 Strategic Initiative Funding to work toward and/or maintain the Searchable Format for V6 in the first quarter of 2020? Figure 2 illustrates the timeline for Strategic Initiative projects. 2019 projects have a completion deadline of March 31, 2020—the projected V6 data submission deadline. For V6, the Searchable Format will be the required format for data submittal. Indicate whether the county will use 2019 Strategic Initiative grant funding to work toward and/or maintain the Searchable Format by March 31, 2020.

**SI\_#5** **Benchmark 1 and 2 Land Information Plan Citations.** Provide only if you answered “Yes” to SI\_#3 and/or SI\_#4 above. List the corresponding citation (section and page numbers) from the county’s land information plan for the *Project Plan to Achieve the Searchable Format for Benchmarks 1 & 2*.

**LIO certification upon data submission.** Land information officers will be required to certify that data meets the standards for Benchmark 1 and 2 upon submission of data for V5. Counties will certify their own level of attribute completeness relative to an *element occurrence standard*. This means that if an element (such as a property address, a total assessed value, total property tax value, etc.) actually occurs for a given parcel, then this element should be included in the submitted dataset. This also means that there may be justifiable omissions from the submitted dataset. Examples might be missing tax data for tax exempt properties, no address when no structure is present on a property, etc. Data elements must be included only if they actually occur.

**SI\_#6** **Benchmark 1 and 2 Project Activities and Costs.** For Benchmark 1 and 2, provide costs for the project to be paid with WLIP Strategic Initiative grant funds. Itemize costs where possible. Costs may be estimates determined through quotes received from vendors for specific activities. However, please do **not** include vendor estimates as attachments with the completed application you submit. Type a concise description for each itemized cost, beginning with row1, column1. Enter dollar amount in column2 of row1. Then proceed to row2. The font size will shrink as you type, becoming smaller to accommodate more text. Aim for less than 40 characters per line.

**Note on staff funding.** The county may either utilize the expertise of existing county staff or hire contractors from the private sector as part of Strategic Initiative grant expenses. As long as county staff activities funded by the Strategic Initiative grant are for the purposes specified in the grant application, it is acceptable to use grant funds to reimburse county or municipal staff. However, **staff time must be broken down** into specific project activities under one or more Strategic Initiative benchmarks.

**SI\_#7** **Benchmark 1 and 2 Total Costs.** Maximum value is \$50,000. The “Total Costs” boxes are self-adding, which means they calculate the total automatically from the Itemized Costs boxes. Include *only* Strategic Initiative funds in total costs, which may **not** exceed \$50,000 on this application form.

- SI\_#8** Will the county perform all of the data cleanup and standardization tasks described in the *V4 Observation Report* in order to meet the Searchable Format standard before submitting data for the **V5** call for data by March 31, 2019? Indicate whether the county will perform the tasks described in the *V4 Observation Report* (which describes the steps that must be taken in order to meet the Searchable Format standard) before submitting data for V5 by March 31, 2019. Counties must meet the Searchable Format standard for the V5 data submittal and into the foreseeable future, using grant funds to do so if necessary. This also entails submitting data that exactly matches the schema specifications for the Searchable Format, as detailed in the Submission Documentation. See SI\_#3 above.
- SI\_#9** If you answered “No” to SI\_#8 above, briefly describe how you will address the deficiencies identified in the *V4 Observation Report* in order to meet the Searchable Format standard, explain why the deficiencies cannot be rectified by the V5 call for data, and how they will be addressed. Aim for less than 1,800 characters. The font size will shrink as you type more text.
- SI\_#10** Is your county’s digital parcel fabric complete (including incorporated areas)? Give estimated year of completion (YYYY) if applicable. Note that there may exist within some county certain areas that do not require detailed parcel mapping, such as state forests. These areas can be treated as a single large parcel as long as they are designated as such in the submitted dataset (however, this exception does *not* apply to municipalities).
- SI\_#11** Will county use 2019 Strategic Initiative funding to work toward Benchmark 3? If the county’s digital parcel fabric is incomplete, indicate whether county will use Strategic Initiative grant funds to work toward completion.
- SI\_#12** **Benchmark 3 Land Information Plan Citations.** If a county has an incomplete digital parcel fabric, list the corresponding citation (section and page numbers) from the county’s land information plan for the *Project Plan for Parcel Completion*.
- PLSS first approach. Some counties have a plan in place to complete PLSS remonumentation before completing the parcel fabric in a given area. Counties have the option of adopting a “PLSS first approach,” in which PLSS should be prioritized for areas not covered by the parcel fabric. If selecting a PLSS first approach, note this in the *Project Plan for PLSS*, described in SI\_#18 below.
- SI\_#13** **Benchmark 3 Project Activities and Costs.** For Benchmark 3, provide costs for the project to be paid with WLIP Strategic Initiative grant funds. Itemize costs where possible. Costs may be estimates determined through quotes received from vendors for specific activities. However, please do *not* include vendor estimates as attachments with the completed application you submit.
- SI\_#14** **Benchmark 3 Total Costs.** Maximum value is \$50,000. The “Total Costs” boxes are self-adding, which means they calculate the total automatically from the Itemized Costs boxes. Include only Strategic Initiative funds in total costs, which may not exceed \$50,000 on this application form.
- SI\_#15** Is your county’s PLSS network complete and integrated into digital parcel layer? This includes: rediscovery of PLSS corner monuments and physical remonumentation of corners without existing monuments; establishing accurate coordinates on these corners based on a modern datum; posting tie sheets online for these corners; and integrating all county PLSS corners into the county parcel fabric. Give estimated year of completion (YYYY) if applicable.
- SI\_#16** **Benchmark 4 waiver request to acquire lidar and/or aerial imagery.** Strategic Initiative funds for 2019 are intended to be used for the purposes of parcel dataset development. However, it may be possible to use Strategic Initiative funds for LiDAR and/or aerial imagery, subject to the following conditions: First, a county would need to use the funds to meet parcel Benchmarks 1-3. Then, if a county has remaining Strategic Initiative grant funding, it may expend it on LiDAR and/or aerial imagery *before* Benchmark 4 (Completion and Integration of PLSS).
- SI\_#17** Will county use 2019 Strategic Initiative funding to work toward Benchmark 4 (Completion and Integration of PLSS)? Indicate whether Strategic Initiative grant funds will be used to make progress toward Benchmark 4.
- PLSS data submission.** All counties may be required to submit a digital copy of all county PLSS corner coordinates values for inclusion in the State Cartographer’s Office online SurveyControlFinder, and any other DOA-sanctioned statewide effort to collect PLSS datasets. At a minimum, all PLSS corner coordinate values established using Strategic Initiative funds should be tagged with their appropriate accuracy class (survey grade, sub-meter, or approximate).
- SI\_#18** **Benchmark 4 Land Information Plan Citations.** If a county has not achieved satisfactory completion and integration of its PLSS framework, list the corresponding citation (section and page numbers) from the county’s land information plan for the *Project Plan for PLSS*.

**Project Plan for PLSS.** If the county has not achieved a complete and integrated PLSS framework, the county must have a project *within the county land information plan* that outlines:

1. Planned approach for remonumenting, rediscovering, and establishing survey grade coordinates for PLSS corners, and integrating corners into the parcel fabric. Due to cost, accessibility, or land ownership, lower-quality coordinates may be substituted. However, lower grade coordinates should be the exception, rather than the rule. In addition, counties may, but are not required to, use Strategic Initiative grant funds to upgrade their PLSS from a NAD27 coordinate system to a more current datum.
2. Current status of PLSS data in the county including a tally of the total number of corners, their remonumentation status, and their coordinate status (accuracy class) if known. Accuracy classes include survey grade, sub-meter, and approximate.
  - **Survey grade** – Coordinates collected under the direction of a professional land surveyor, in a coordinate system allowed by s. 236.18(2), and obtained by means, methods and equipment capable of repeatable 2 centimeter or better precision.
  - **Sub-meter** – Accuracies of 1 meter or better
  - **Approximate** – Accuracies of within 5 meters or to coordinates derived from public records and other relevant information.
3. Goals for the funding period, including the number of corners to be remonumented and/or rediscovered, the number to have new coordinates established, the accuracy class for these new coordinates, and the way in which these points will be integrated into the parcel fabric.
4. Documentation for any missing corner data as discussed below.
5. Efforts to collaborate with neighboring counties.

**SI\_#19** **Benchmark 4 Project Activities and Costs.** For Benchmark 4, provide costs for the project to be paid with WLIP Strategic Initiative grant funds. Itemize costs where possible. Costs may be estimates determined through quotes received from vendors for specific activities. However, please do *not* include vendor estimates as attachments with the completed application you submit.

**SI\_#20** **Benchmark 4 Total Costs.** Maximum value is \$50,000. The “Total Costs” boxes are self-adding, which means they calculate the total automatically from the Itemized Costs boxes. Include only Strategic Initiative funds in total costs, which may not exceed \$50,000 on this application form.

**SI\_#21** **Other County-Level Strategic Initiative Projects.** Applies only to situations in which a county has already met Benchmarks 1, 2, 3, and 4 (or 1-3 with LiDAR/aerial imagery waiver). Specifically, this entails:

- Benchmarks 1 and 2 – Parcel and zoning data with extended parcel attributes will be submitted by March 31, 2019 for the V5 call for data exactly matching the Searchable Format standard
- Benchmark 3 – The county’s digital parcel fabric is complete
- Benchmark 4 – PLSS framework has reached a level of satisfactory completion and integration, which is documented in the “PLSS” Foundational Element layer status section of the county land information plan (with the exception of LiDAR/aerial imagery waiver counties described in SI\_#16)

**County-Level Strategic Initiative project(s).** If a county has already met Benchmarks 1, 2, 3, and 4 (or 1-3 with LiDAR/aerial imagery waiver), it will still remain eligible for \$50k in 2019 Strategic Initiative grant funding. Such a county may use the Strategic Initiative funding for a project as listed *within the county land information plan*. For example, another Strategic Initiative project might be to complete or comprehensively update another Foundational Element layer—such as LiDAR, orthoimagery, address points, street centerlines, land use, zoning, or administrative boundaries. For the expanded list of Foundational Elements, see the *2018 Uniform Instructions for Preparing County Land Information Plans*.

**Strategic Initiative funding exclusions.** Strategic Initiative grant funding may *not* be used for renewing annual software vendor contracts, ongoing operational costs, or maintenance of existing layers. (However, WLIP Base Budget grant funds may be used for these expenses, as well as retained fees.)

**SI\_#22** Estimated amount of \$50,000 to be left after applying any costs to achieve Benchmarks 1-4 (or 1-3 for LiDAR/aerial imagery waiver counties). Enter zero or “More than zero” and dollar amount.

**Addendum.** If “More than zero” is selected, use the *2019 WLIP Grant Application Addendum* to document the projects the county will use the Strategic Initiative funding for. You may attach as many grant application addendum pages as necessary. Addendum pages are available at [doa.wi.gov/WLIP](http://doa.wi.gov/WLIP). LiDAR/aerial imagery waiver counties should also use the addendum to document the LiDAR/aerial imagery project you will use the Strategic Initiative funding for. Others should leave blank if not applicable.

**SI\_#23** **TOTAL ALL STRATEGIC INITIATIVE GRANT PROJECTS.** Total should *not* exceed \$50,000—the Strategic Initiative Award Eligible amount. Include costs for addendum projects in Strategic Initiative total if applicable. If the county anticipates spending more than \$50,000 of Strategic Initiative funds on a project, this can be noted elsewhere, such as the county land information plan.

**SI\_#24** **Statement and Authorization of Land Information Officer.** LIO name (typed) and date are required. Do *not* sign and scan the form. Handwritten signatures are *not* required. Submit the application by emailing a digital PDF form that has been electronically filled-out (*not* a scanned image) to [WLIP@wisconsin.gov](mailto:WLIP@wisconsin.gov).

## Base Budget Grant Application Instructions

- BB\_#1** **Base Budget Award Eligible.** The amount your county is eligible for 2019 Base Budget grant. Refer to the grant eligibility table on page 8 for amount. If your county is not eligible, *leave blank* the Base Budget application pages.
- BB\_#2** **Base Budget Award Amount Requested.** Enter the amount requested. The amount of funds requested/dispensed may not exceed your county's eligible amount from the grant eligibility table on page 8.
- BB\_#3** **Base Budget Grant Project Title.** Provide a title for the Base Budget project your county plans to undertake that accurately but concisely describes the project.
- BB\_#4** **Land Information Spending Category.** Select the project activity area (spending category) covered by the Base Budget project title. Refer to Chapter Adm. 47.03 for eligible projects and activities.

Projects must fall under one of the following categories:

- Digital parcel mapping
- PLSS
- Other parcel work (e.g., ROD indexing)
- LiDAR
- Orthoimagery
- Address Points
- Street Centerlines
- Software
- Hardware
- Website Development/Hosting Services
- Administrative Activities and Management
- Training and Education
- Other (specify) – *\*Do not select "Other" as a Base Budget spending category unless the project genuinely does not fit into one of the categories above*

**Note on staff funding.** If the county intends to fund either in-house staff or third-party contractors with Base Budget grant funds, the work of these staff persons must be broken down into one or more of the categories above. In other words, while staff expenses or salary are eligible expenses, *it is not correct to list "staff expenses" or "salary" as a project activity area.* Instead, break down the staff expenses into one or more of the categories above.

Also note that state statute 59.72(2)(b) requires counties to report on grant expenditures (as well as retained fee expenditures) in each of the land information spending categories above in a *Retained Fee/Grant Report* by June 30<sup>th</sup> of each year.

- BB\_#5** **Land Information Plan Citations.** For each project, list the corresponding citation (section and page numbers) from the county's plan. All proposed grant activities must reflect goals and objectives contained in the county's land information plan.
- BB\_#6** **Project Activities and Costs.** For each project, provide costs for the project to be paid with WLIP grant funds. Itemize costs where possible. Costs may be estimates determined through quotes received from vendors for specific activities. However, please do *not* include vendor estimates as attachments with the completed application you submit. Type a concise description for each itemized cost, beginning with row1, column1. Enter dollar amount in column2 of row1. Then proceed to row2. The font size will shrink as you type, becoming smaller to accommodate more text. Aim for less than 40 characters per line.
- BB\_#7** **Base Budget Project Total.** The "Base Budget Project Total" boxes are self-adding, which means they calculate the total automatically from the Itemized Costs boxes.
- BB\_#8-#22** Fill out questions 8-12, 13-17, and 18-22 only if your county has *multiple* Base Budget projects. Counties with more than four Base Budget projects should attach additional pages of the *WLIP 2019 Grant Application Addendum*. You may attach as many addendum pages as necessary or email them as separate files. Addendum pages are available at [doa.wi.gov/WLIP](http://doa.wi.gov/WLIP).
- BB\_#23** **TOTAL ALL BASE BUDGET PROJECT COSTS.** Total should not exceed Base Budget Award Eligible amount shown in BB\_#1. Include costs for Base Budget addendum projects in Base Budget total if applicable.
- BB\_#24** **Statement and Authorization of Land Information Officer.** Land information officer name (typed) and date are required. Do not sign and scan the form. Handwritten signatures are *not* required. Submit the application by emailing a digital PDF form that has been electronically filled-out (*not* a scanned image) to [WLIP@wisconsin.gov](mailto:WLIP@wisconsin.gov).

## 2019 Grant Eligibility Table

	State FY18 Retained Fees (July 2017-June 2018)	BB Grant Eligibility (\$100k – FY18 Retained Fees)	Strategic Initiative Grant Eligibility	Training & Education Grant Eligibility	Total Grant Eligibility Amount
Adams	53,264	46,736	50,000	1,000	97,736
Ashland	22,824	77,176	50,000	1,000	128,176
Barron	69,856	30,144	50,000	1,000	81,144
Bayfield	36,296	63,704	50,000	1,000	114,704
Brown	301,048	NA	50,000	1,000	51,000
Buffalo	21,552	78,448	50,000	1,000	129,448
Burnett	42,768	57,232	50,000	1,000	108,232
Calumet	69,440	30,560	50,000	1,000	81,560
Chippewa	84,072	15,928	50,000	1,000	66,928
Clark	46,312	53,688	50,000	1,000	104,688
Columbia	89,736	10,264	50,000	1,000	61,264
Crawford	22,424	77,576	50,000	1,000	128,576
Dane	669,712	NA	50,000	1,000	51,000
Dodge	103,224	NA	50,000	1,000	51,000
Door	68,984	31,016	50,000	1,000	82,016
Douglas	56,352	43,648	50,000	1,000	94,648
Dunn	52,528	47,472	50,000	1,000	98,472
Eau Claire	117,544	NA	50,000	1,000	51,000
Florence	9,552	90,448	50,000	1,000	141,448
Fond du Lac	116,904	NA	50,000	1,000	51,000
Forest	21,608	78,392	50,000	1,000	129,392
Grant	62,408	37,592	50,000	1,000	88,592
Green	53,784	46,216	50,000	1,000	97,216
Green Lake	31,320	68,680	50,000	1,000	119,680
Iowa	37,712	62,288	50,000	1,000	113,288
Iron	13,736	86,264	50,000	1,000	137,264
Jackson	33,352	66,648	50,000	1,000	117,648
Jefferson	112,272	NA	50,000	1,000	51,000
Juneau	44,360	55,640	50,000	1,000	106,640
Kenosha	189,248	NA	50,000	1,000	51,000
Kewaunee	27,184	72,816	50,000	1,000	123,816
La Crosse	134,080	NA	50,000	1,000	51,000
Lafayette	26,952	73,048	50,000	1,000	124,048
Langlade	35,456	64,544	50,000	1,000	115,544
Lincoln	49,992	50,008	50,000	1,000	101,008
Manitowoc	100,392	NA	50,000	1,000	51,000
Marathon	175,904	NA	50,000	1,000	51,000
Marinette	74,296	25,704	50,000	1,000	76,704
Marquette	30,272	69,728	50,000	1,000	120,728
Menominee	4,312	95,688	50,000	1,000	146,688
Milwaukee	813,464	NA	50,000	1,000	51,000
Monroe	60,984	39,016	50,000	1,000	90,016
Oconto	69,304	30,696	50,000	1,000	81,696
Oneida	85,560	14,440	50,000	1,000	65,440
Outagamie	231,464	NA	50,000	1,000	51,000
Ozaukee	114,400	NA	50,000	1,000	51,000
Pepin	12,256	87,744	50,000	1,000	138,744
Pierce	54,088	45,912	50,000	1,000	96,912
Polk	80,312	19,688	50,000	1,000	70,688
Portage	84,624	15,376	50,000	1,000	66,376
Price	27,160	72,840	50,000	1,000	123,840
Racine	230,472	NA	50,000	1,000	51,000
Richland	24,704	75,296	50,000	1,000	126,296
Rock	198,896	NA	50,000	1,000	51,000
Rusk	28,264	71,736	50,000	1,000	122,736
Sauk	131,768	NA	50,000	1,000	51,000
Sawyer	44,760	55,240	50,000	1,000	106,240
Shawano	62,024	37,976	50,000	1,000	88,976
Sheboygan	140,672	NA	50,000	1,000	51,000
St. Croix	138,024	NA	50,000	1,000	51,000
Taylor	29,032	70,968	50,000	1,000	121,968
Trempealeau	37,200	62,800	50,000	1,000	113,800
Vernon	42,368	57,632	50,000	1,000	108,632
Vilas	62,416	37,584	50,000	1,000	88,584
Walworth	168,312	NA	50,000	1,000	51,000
Washburn	36,400	63,600	50,000	1,000	114,600
Washington	172,504	NA	50,000	1,000	51,000
Waukesha	492,376	NA	50,000	1,000	51,000
Waupaca	82,144	17,856	50,000	1,000	68,856
Waushara	43,048	56,952	50,000	1,000	107,952
Winnebago	210,440	NA	50,000	1,000	51,000
Wood	88,736	11,264	50,000	1,000	62,264
<b>Total</b>	<b>7,411,208</b>	<b>2,651,912</b>	<b>34</b> <b>3,600,000</b>	<b>72,000</b>	<b>6,323,912</b>



### 2019 WLIP Training & Education Grant Application

County:

- 1. County submitted a draft 2018 land information plan to DOA  Yes  No
- 2. Enter date of last county land information council meeting (dd/mm/yyyy) ►
- 3. LIO subscribed to the Land Information Officer's listserv  Yes  No
- 4. County's *Retained Fee/Grant Report* for 2017 submitted  Yes  No
- 5. Training & Education Award Eligible **\$ 1,000.00**
- 6. Training & Education Award Amount Requested **\$**
- 7. Brief Description of Intended Expenditures for Training & Education Grant

**8. Statement and Authorization of Land Information Officer**  
*As the Land Information Officer for the above county, I am authorized to submit this application, as an eligible applicant, on the authority of the county board. I understand that application authority shall be obtained by specific action of the county board, and that the WLIP may request evidence of such authority. Project work shall meet all standards and conditions as set forth by the relevant Wisconsin State Statutes, Wisconsin Administrative Code, and policy adopted by the Wisconsin Land Information Program or the Wisconsin Department of Administration. To the best of my knowledge, the information contained in this application is accurate and complete. I understand that Training & Education grant projects must be completed by December 31, 2020.*

LIO Name (typed)

Date (dd/mm/yyyy)



## 2019 WLIP Strategic Initiative Grant Application

County:

- |  |   |
|--|---|
| 1. Strategic Initiative Award Eligible         | <b>\$ 50,000.00</b>   |
| 2. Strategic Initiative Award Amount Requested | \$ <input style="width: 150px; height: 25px;" type="text"/> |

**BENCHMARK 1 & BENCHMARK 2**

3. The county must meet Benchmark 1 and Benchmark 2 for the **V5** call for data by March 31, 2019 in the Searchable Format. Will the county use 2019 Strategic Initiative Funding to work toward the Searchable Format for V5 Benchmark 1 and 2 in the first quarter of 2019?
- Yes  
 No
4. Will the county use 2019 Strategic Initiative Funding to work toward and/or maintain the Searchable Format for **V6** in the first quarter of 2020?
- Yes  
 No
5. Benchmark 1 and 2 Land Information Plan Citations for *Project Plan to Achieve Searchable Format for Benchmarks 1 & 2* – Section and page numbers (If answered “No” to #3-4 above, skip down to #8 below.)
- 

6. Benchmark 1 and 2 Project Activities ▼     Costs ▼

7. Benchmark 1 and 2 Total Costs ▶			

8. Will county perform all of the data cleanup and standardization tasks described in the *V4 Observation Report* in order to meet the Searchable Format standard before submitting data for the **V5** call for data by March 31, 2019?
- Yes ▶ Skip down to #10 below  
 No

9. If you answered “No” to SI\_#8 above, briefly describe how you will address the deficiencies identified in the *V4 Observation Report* in order to meet the Searchable Format standard, explain why the deficiencies cannot be rectified by the V5 call for data, and how they will be addressed:

**BENCHMARK 3**

10. Is your county's digital parcel fabric complete (including incorporated areas)?

Yes, parcel fabric complete

No, county needs to work toward Benchmark 3 ▶ Estimated year of completion ▶

11. Will county use 2019 Strategic Initiative funding to work toward Benchmark 3 (Completion of County Parcel Fabric)?

Yes

No ▶ Skip down to #15 below

12. Benchmark 3 Land Information Plan Citations for *Project Plan for Parcel Completion* – Section and page numbers

--

13. Benchmark 3 Project Activities ▼

Costs ▼

14. Benchmark 3 Total Costs ▶			

**BENCHMARK 4**

15. Is your county's PLSS framework complete and integrated into digital parcel layer?

Yes, PLSS network complete and integrated

No, county needs to work toward Benchmark 4 ▶ Estimated year of completion ▶

16. Benchmark 4 waiver request – Check the waiver box below if you wish to request a waiver from Benchmark 4 in favor of LiDAR and/or Aerial Imagery costs

No / Not Applicable

Yes, waiver requested in favor of **LiDAR** project ▶ Fill out *2019 WLIP Grant Application Addendum*

Yes, waiver requested in favor of **Imagery** project ▶ Fill out *2019 WLIP Grant Application Addendum*

17. Will county use 2019 Strategic Initiative funding to work toward Benchmark 4 (Completion and Integration of PLSS)?

Yes

No ▶ Skip down to #21 below

18. Benchmark 4 Land Information Plan Citations for *Project Plan for PLSS* – Section and page numbers

--

19. Benchmark 4 Project Activities ▼

Costs ▼

20. Benchmark 4 Total Costs ▶			

**OTHER COUNTY-LEVEL STRATEGIC INITIATIVE PROJECTS**

21. County anticipates meeting Benchmarks 1-4 (or 1-3 with LiDAR/aerial imagery waiver) **and** foresees having some of the 50k Strategic Initiative funding “leftover”?

- Yes
- No

22. Estimated amount of 50k to be left after applying any costs to achieve Benchmarks 1-4 (or 1-3 for LiDAR/aerial imagery waiver counties)

- Zero
- More than zero ▶ Specify amount ▶ \$

If “More than zero” is selected, use the *2019 WLIP Grant Application Addendum* to describe the projects you will use the Strategic Initiative funding for.

23. TOTAL ALL STRATEGIC INITIATIVE PROJECTS (should equal ≤ \$50,000.00) ▶ \$

**24. Statement and Authorization of Land Information Officer**

*As the Land Information Officer for the above county, I am authorized to submit this application, as an eligible applicant, on the authority of the county board. I understand that application authority shall be obtained by specific action of the county board, and that the WLIP may request evidence of such authority. Project work shall meet all standards and conditions as set forth by the relevant Wisconsin State Statutes, Wisconsin Administrative Code, and policy adopted by the Wisconsin Land Information Program or the Wisconsin Department of Administration. To the best of my knowledge, the information contained in this application is accurate and complete. I understand that Strategic Initiative grant projects must be completed by March 31, 2020.*

LIO Name (typed)

Date (dd/mm/yyyy)



## 2019 WLIP Base Budget Grant Application

County:

1. Base Budget Award Eligible (from grant eligibility table on page 8) \$

2. Base Budget Award Amount Requested \$

3. **Base Budget Grant Project Title 1**

4. Land Information Spending Category:

5. Land Information Plan Citations – Section and page numbers

6. <u>Project Activities</u> ▼	<u>Costs</u> ▼		
7. Base Budget Project 1 Total ▶			<input style="width: 80px; height: 25px;" type="text"/>

8. **Base Budget Grant Project Title 2**

9. Land Information Spending Category:

10. Land Information Plan Citations – Section and page numbers

11. <u>Project Activities</u> ▼	<u>Costs</u> ▼		
12. Base Budget Project 2 Total ▶			<input style="width: 80px; height: 25px;" type="text"/>

**13. Base Budget Grant Project Title 3**

14. Land Information Spending Category:

15. Land Information Plan Citations – Section and page numbers

16. Project Activities ▼

Costs ▼

		17. Base Budget Project 3 Total ▶	

**18. Base Budget Grant Project Title 4**

19. Land Information Spending Category:

20. Land Information Plan Citations – Section and page numbers

21. Project Activities ▼

Costs ▼

		22. Base Budget Project 4 Total ▶	

23. TOTAL ALL BASE BUDGET PROJECT COSTS (not to exceed BB\_#1) ▶

\$

**24. Statement and Authorization of Land Information Officer**

*As the Land Information Officer for the above county, I am authorized to submit this application, as an eligible applicant, on the authority of the county board. I understand that application authority shall be obtained by specific action of the county board, and that the WLIP may request evidence of such authority. Project work shall meet all standards and conditions as set forth by the relevant Wisconsin State Statutes, Wisconsin Administrative Code, and policy adopted by the Wisconsin Land Information Program or the Wisconsin Department of Administration. To the best of my knowledge, the information contained in this application is accurate and complete. I understand that Base Budget grant projects must be completed by December 31, 2020.*

LIO Name (typed)

40

Date(dd/mm/yyyy)

## 2019 WLIP Grant Application Addendum

County:

Select Addendum Type:

- Base Budget Project(s)
- Other county Strategic Initiative Project(s)
- LiDAR project – enabled by waiver from Benchmark 4
- Aerial Imagery project – enabled by waiver from Benchmark 4

**1. Project Title 1**

2. Land Information Spending Category:

3. Land Information Plan Citations – Section and page numbers

4. Addendum Project 1 Activities Costs

		5. Addendum Project 1 Total ▶	

**6. Project Title 2**

7. Land Information Spending Category:

8. Land Information Plan Citations – Section and page numbers

9. Addendum Project 2 Activities Costs

		10. Addendum Project 2 Total ▶	

TOTAL ALL PROJECTS – Please include total, including addendum project costs, on application itself

## 2019 WLIP Grant Application Addendum II

County:

Select Addendum Type:

- Base Budget Project(s)
- Other county Strategic Initiative Project(s)
- LiDAR project – enabled by waiver from Benchmark 4
- Aerial Imagery project – enabled by waiver from Benchmark 4

**1. Project Title 1**

2. Land Information Spending Category:

3. Land Information Plan Citations – Section and page numbers

**4. Addendum Project 1 Activities ▼ Costs ▼**

<b>5. Addendum Project 1 Total ▶</b>			

**6. Project Title 2**

7. Land Information Spending Category:

8. Land Information Plan Citations – Section and page numbers

**9. Addendum Project 2 Activities ▼ Costs ▼**

<b>10. Addendum Project 2 Total ▶</b>			

**TOTAL ALL PROJECTS – Please include total, including addendum project costs, on application itself**

## 2019 WLIP Grant Application Addendum III

County:

Select Addendum Type:

- Base Budget Project(s)
- Other county Strategic Initiative Project(s)
- LiDAR project – enabled by waiver from Benchmark 4
- Aerial Imagery project – enabled by waiver from Benchmark 4

**1. Project Title 1**

2. Land Information Spending Category:

3. Land Information Plan Citations – Section and page numbers

4. Addendum Project 1 Activities ▼                      Costs ▼

5. Addendum Project 1 Total ▶			

**6. Project Title 2**

7. Land Information Spending Category:

8. Land Information Plan Citations – Section and page numbers

9. Addendum Project 2 Activities ▼                      Costs ▼

10. Addendum Project 2 Total ▶			

TOTAL ALL PROJECTS – Please include total, including addendum project costs, on application itself

# Milwaukee County Land Information Plan 2019-2021

Wisconsin Land Information Program  
Wisconsin Department of Administration  
101 East Wilson Street, 9th Floor  
Madison, WI 53703  
(608) 267-3369  
[www.doa.wi.gov/WLIP](http://www.doa.wi.gov/WLIP)

Version: 2018-10-29

Approved/Adopted by Land Information Council on ~~10~~18-\*\*-\*\*

# CONTENTS

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- EXECUTIVE SUMMARY ..... 3
- 1 INTRODUCTION ..... 4
- 2 FOUNDATIONAL ELEMENTS ..... 7
  - PLSS..... 8
  - Parcel Mapping..... 10
  - LiDAR and Other Elevation Data ..... 12
  - Orthoimagery..... 13
  - Address Points and Street Centerlines..... 14
  - Land Use ..... 16
  - Zoning..... 17
  - Administrative Boundaries..... 17
  - Other Layers..... 19
- 3 LAND INFORMATION SYSTEM..... 19
  - Public Access and Website Information ..... 25
- 4 CURRENT & FUTURE PROJECTS ..... 26
  - Project #1: Planimetric Data Maintenance - 2018..... 27
  - Project #2: Support New Datum Requirements ..... 27
  - Project #3: Plat of Survey Index Maintenance..... 28
  - Project #4: Enterprise Address System Maintenance..... 28
  - Project #5: Street Centerline Maintenance ..... 29
  - Project #6: Cadastral Improvements..... 30
  - Project #7: 2020 Imagery Capture – Ortho\Oblique ..... 30
  - Project #8: 2020 Lidar Capture ..... 31
  - Project #9: 2021 Planimetric Update ..... 32
  - Project #10: Implement esri Parcel Fabric Model..... 32
  - Project #11: Exempt Property Validation ..... 33

# EXECUTIVE SUMMARY

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**About this Document.** This document is a land information plan for Milwaukee County prepared by the land information officer (LIO) and the Milwaukee County land information council. Under state statute 59.72(3)(b), a “countywide plan for land records modernization” is required for participation in the Wisconsin Land Information Program (WLIP). The purpose of this document is twofold: 1) to meet WLIP funding eligibility requirements necessary for receiving grants and retaining fees for land information, and 2) to plan for county land records modernization in order to improve the efficiency of government and provide improved government services to businesses and county residents.

**WLIP Background.** The WLIP, administered by the Wisconsin Department of Administration, is funded by document recording fees collected by register of deeds at the county-level. In 2017, Milwaukee County was awarded \$51,000 in WLIP grants and retained a total of \$833,488 in local register of deeds document recording fees for land information.

**Land Information in Milwaukee County.** Land information is central to county operations, as many essential services rely on accurate and up-to-date geospatial data and land records. A countywide land information system supports economic development, emergency planning and response, and a host of other citizen services. The Milwaukee County land information system integrates and enables efficient access to information that describes the physical characteristics of land, as well as the property boundaries and rights attributable to landowners.

## **Mission of the Land Information Office.**

The Milwaukee County Land Information Office provides leadership, expertise, communication, coordination, and relevant services to support the core business functions of the County in an effort to increase operational effectiveness, ensure GIS data integrity, and to oversee the distribution and alignment of reliable, accurate, high-quality, and accessible GIS data and products with the needs of our constituents.

**Land Information Office Projects.** To realize this mission, in the next three years, the county land information office will focus on the following projects:

<b>Milwaukee County Land Information Projects: 2019-2021</b>	
Project #1	Planimetric Data Update
Project #2	Support New Datum Requirements
Project #3	Plat of Survey Maintenance
Project #4	Enterprise Address System Maintenance
Project #5	Street Centerline Maintenance
Project #6	Cadastral Improvements
Project #7	2020 Imagery Capture
Project #8	2020 Lidar Capture
Project #9	2021 Planimetric Update
Project #10	Implement esri Parcel Fabric Model
Project #11	Exempt Property Validation

The remainder of this document provides more details on Milwaukee County and the WLIP, summarizes current and future land information projects, and reviews the county’s status in completion and maintenance of the map data layers known as Foundational Elements.

# 1 INTRODUCTION

In 1989, a public funding mechanism was created whereby a portion of county register of deeds document recording fees collected from real estate transactions would be devoted to land information through a new program called the Wisconsin Land Information Program (WLIP). The purpose of the land information plan is to meet WLIP requirements and aid in county planning for land records modernization.

## The WLIP and the Land Information Plan Requirement

In order to participate in the WLIP, counties must meet certain requirements:

- Update the county's land information plan at least every three years
- Meet with the county land information council to review expenditures, policies, and priorities of the land information office at least once per year
- Report on expenditure activities each year
- Submit detailed applications for WLIP grants
- Complete the annual WLIP survey
- Subscribe to DOA's land information listserv
- Coordinate the sharing of parcel/tax roll data with the Department of Administration in a searchable format determined by DOA under s. 59.72(2)(a)

## LAND INFORMATION

Any physical, legal, economic or environmental information or characteristics concerning land, water, groundwater, subsurface resources or air in this state.

'Land information' includes information relating to topography, soil, soil erosion, geology, minerals, vegetation, land cover, wildlife, associated natural resources, land ownership, land use, land use controls and restrictions, jurisdictional boundaries, tax assessment, land value, land survey records and references, geodetic control networks, aerial photographs, maps, planimetric data, remote sensing data, historic and prehistoric sites and economic projections.

– Wis. Stats. section 59.72(1)(a)

Any grants received and fees retained for land information through the WLIP must be spent consistent with the county land information plan.

## Act 20 and the Statewide Parcel Map Initiative

A major development for the WLIP occurred in 2013 through the state budget bill, known as Act 20. It directed the Department of Administration (DOA) to create a statewide digital parcel map in coordination with counties.

Act 20 also provided more revenue for WLIP grants, specifically for the improvement of local parcel datasets. The WLIP is dedicated to helping counties meet the goals of Act 20 and has made funding available to counties in the form of Strategic Initiative grants to be prioritized for the purposes of parcel/tax roll dataset improvement.

For Strategic Initiative grant eligibility, counties are required to apply WLIP funding toward achieving certain statewide objectives, specified in the form of "benchmarks." Benchmarks for parcel data—standards or achievement levels on data quality or completeness—were determined through a participatory planning process. Current benchmarks are detailed in the WLIP grant application, as will be future benchmarks.

## WLIP Benchmarks (For 2016-2018 Grant Years)

- Benchmark 1 & 2 – Parcel and Zoning Data Submission/Extended Parcel Attribute Set Submission

- Benchmark 3 – Completion of County Parcel Fabric
- Benchmark 4 – Completion and Integration of PLSS

More information on how Milwaukee County is meeting these benchmarks appears in the Foundational Elements section of this plan document.

## County Land Information System History and Context

On February 15, 1990, the Milwaukee County Board of Supervisors adopted the Southeastern Wisconsin Regional Planning Commission’s (SEWRPC) Community Assistance Planning Report No. 177, Feasibility Study for a Milwaukee County Automated Mapping and Land Information System (hereinafter referred to as the “plan”). A 2010 plan update expanded and extended the original plan; this 2018 plan update builds upon the foundation which was put in place over 25 years ago.

The Milwaukee County plan, as originally adopted by the County Board, is believed to be unique within Wisconsin in that it created a public-private partnership that would jointly fund and develop the automated mapping system. Accordingly, a cooperative agreement was executed in November 1990, establishing the Milwaukee County Automated Mapping and Land Information System, known by the acronym MCAMLIS. Milwaukee County, the Milwaukee Metropolitan Sewerage District, Wisconsin Bell Telephone Company, the Wisconsin Electric Power Company, and the Wisconsin Gas Company all executed the agreement. The agreement provided for the creation of a Steering Committee with representatives from the County and City of Milwaukee, the suburban cities and villages within Milwaukee County, the Milwaukee Metropolitan Sewerage District, and the private utilities operating within the County.

The Milwaukee County Land Information Office (MCLIO) was created in 2005 as a result of Milwaukee County Resolution 90-707(a) mandating the Milwaukee County Automated Mapping and Land Information System (MCAMLIS) Program in Milwaukee County. The MCLIO has become the de-facto county entity to manage countywide geospatial data and services, and to coordinate these activities with other organizations to provide efficient and effective means to access and administer the county’s geospatial data and services.

MCLIO is organized within the County’s Department of Administrative Services – Division of Facilities Management. The MCLIO provides several key services to state, federal, county and municipal government, citizens, and the geospatial professional community.

## County Land Information Plan Process

County land information plans were initially updated every five years. However, as a result of Act 20, counties must update and submit their plans to DOA for approval every three years. The 2019-2021 plan, completed at the end of 2018, is the second post-Act 20 required update.

### Plan Participants and Contact Information

Another requirement for participation in the WLIP is the county land information council, established by legislation in 2010. The council is tasked with reviewing the priorities, needs, policies, and expenditures of a land information office and advising the county on matters affecting that office.

According to s. 59.72(3m), Wis. Stats., the county land information council is to include:

- Register of Deeds
- Treasurer
- Real Property Lister or designee
- Member of the county board
- Representative of the land information office

- A realtor or member of the Realtors Association employed within the county
- A public safety or emergency communications representative employed within the county
- County surveyor or a registered professional land surveyor employed within the county
- Other members of the board or public that the board designates

The land information council must have a role in the development of the county land information plan, and DOA requires county land information councils to approve final plans.

This plan was prepared by the county LIO, the Milwaukee County Land Information Council, and others as listed below.

<b>Milwaukee County Land Information Council and Plan Workgroup</b>				
<b>Name</b>	<b>Title</b>	<b>Affiliation</b>	<b>Email</b>	<b>Phone</b>
+ <b>Kathy Bach for John LaFave – Register of Deeds</b>	GIS Analyst	Milwaukee County Register of Deeds	Kathleen.Bach@milwaukeecountywi.gov	414-278-3027
+ <b>Kathleen Hollers for David Cullen - Treasurer</b>	Accounting Supervisor	Milwaukee County Treasurer's Office	Cathleen.Hollers@milwaukeecountywi.gov	414-278-4036
+ <b>Jason Haas</b>	County Board Supervisor	Milwaukee County County Board	Jason.Haas@milwaukeecountywi.gov	414-278-4252
+ <b>Kevin Bruhn</b>	Land Information Officer	Milwaukee County Land Information Office	Kevin.Bruhn@milwaukeecountywi.gov	414-278-3927
+ <b>Christine Westrich</b>	Director of Emergency Management	Milwaukee County Office of Emergency Management	Christine.Westrich@milwaukeecountywi.gov	414-226-7303
+ <b>Robert Merry</b>	County Surveyor	Southeastern Wisconsin Regional Planning Commission	rmerry@SEWRPC.org	262-953-4292
+ <b>Nancy Olson</b>	Chief Information Officer	City of Milwaukee Department of Administration	Nancy.Olson@milwaukee.gov	414-286-8710
+ <b>Greg High</b>	Director of Architecture and Engineering	Milwaukee County Administrative Services	Gregory.High@milwaukeecountywi.gov	414-278-4943
+ <b>Emily Champagne</b>	GIS Supervisor	Milwaukee Metropolitan Sewerage District	EChampagne@mmsd.com	414-225-2180
+ <b>Dawn Neuy</b>	Manager of Real Estate Services	We Energies	Dawn.Neuy@wecenergygroup.com	414-221-4783
+ <b>Allison Rozek</b>	Village of Shorewood President	Intergovernmental Cooperation Council	PresidentRozek@villageofshorewood.org	414-469-6388

+ Land Information Council Members designated by the plus symbol

# 2 FOUNDATIONAL ELEMENTS

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Counties must have a land information plan that addresses development of specific datasets or map layer groupings historically referred to as the WLIP Foundational Elements. Foundational Elements incorporate nationally-recognized “Framework Data” elements, the major map data themes that serve as the backbone required to conduct most mapping and geospatial analysis.

In the past, Foundational Elements were selected by the former Wisconsin Land Information Board under the guiding idea that program success is dependent upon a focus for program activities. Thus, this plan places priority on certain elements, which must be addressed in order for a county land information plan to be approved. Beyond the county’s use for planning purposes, Foundational Element information is of value to state agencies and the WLIP to understand progress in completion and maintenance of these key map data layers.

## FOUNDATIONAL ELEMENTS

- PLSS
- Parcel Mapping
- LIDAR and Other Elevation Data
- Orthoimagery
- Address Points and Street Centerlines
- Land Use
- Zoning
- Administrative Boundaries
- Other Layers

# PLSS

## Public Land Survey System Monuments

### Layer Status

PLSS Layer Status	
	Status/Comments
Number of PLSS corners (selection, ¼, meander) <b>set in original government survey</b> that can be remonumented in your county	<ul style="list-style-type: none"> <li>801 (1,065 if one would include center of section, closing corners on quarter- section lines, extension corner, and meander corners on quarter-section lines which are not part of the original government survey)</li> </ul>
Number and percent of PLSS corners capable of being remonumented in your county that <b>have been remonumented</b>	<ul style="list-style-type: none"> <li>801, 100%</li> </ul>
Number and percent of remonumented PLSS corners with survey grade coordinates (see below for definition) <ul style="list-style-type: none"> <li><b>SURVEY GRADE</b> – coordinates collected under the direction of a Professional Land Surveyor, in a coordinate system allowed by 236.18(2), and obtained by means, methods and equipment capable of repeatable 2 centimeter or better precision</li> <li><b>SUB-METER</b> – point precision of 1 meter or better</li> <li><b>APPROXIMATE</b> – point precision within 5 meters or coordinates derived from public records or other relevant information</li> </ul>	<ul style="list-style-type: none"> <li>801, 100%</li> <li>1,065, 100% of all monumented corners original or not have established survey grade coordinates.</li> </ul>
Number and percent of survey grade PLSS corners integrated into county digital parcel layer	<ul style="list-style-type: none"> <li>1,065, 100%</li> </ul>
Number and percent of non-survey grade PLSS corners integrated into county digital parcel layer	<ul style="list-style-type: none"> <li>0, 0%</li> </ul>
Tie sheets available online?	<ul style="list-style-type: none"> <li>Yes, NAD83/2011 and NAD27 - <a href="https://maps.sco.wisc.edu/surveycontrolfinder/#7/44.730/-90.143/NGS,county,USGS,CORS/terrain">https://maps.sco.wisc.edu/surveycontrolfinder/#7/44.730/-90.143/NGS,county,USGS,CORS/terrain</a></li> <li>Yes, NAD27 only - <a href="http://maps.sewrpc.org/regionallandinfo/survey.shtm">http://maps.sewrpc.org/regionallandinfo/survey.shtm</a></li> </ul>
Percentage of remonumented PLSS corners that have <b>tie sheets available online</b> (whether or not they have corresponding coordinate values)	<ul style="list-style-type: none"> <li>100%</li> </ul>
Percentage of remonumented PLSS corners that have tie sheets available online (whether or not they have corresponding coordinate values) <b>and a corresponding URL path/hyperlink value</b> in the PLSS geodatabase	<ul style="list-style-type: none"> <li>100%</li> </ul>
PLSS corners believed to be remonumented based on filed tie-sheets or surveys, but do not have coordinate values	<ul style="list-style-type: none"> <li>0</li> </ul>
Approximate number of PLSS corners believed to be lost or obliterated	<ul style="list-style-type: none"> <li>0</li> </ul>
Which system(s) for <b>corner point identification/ numbering</b> does the county employ (e.g., the Romportl point numbering system known as Wisconsin Corner Point Identification System, the BLM Point ID Standard, or other corner point ID system)?	<ul style="list-style-type: none"> <li>Corner identification is as follows:               <ul style="list-style-type: none"> <li>XXYYZZZ0</li> <li>XX – Township</li> <li>YY – Range</li> <li>ZZZ0 – There are a possible 169 corners within a given township with the Northeast corner of Section 1 being 0010 with the SW of 31 which could be again be 0010 (NE of Section 1) or if outside of the Region the number be 1690. The forth digit “0” would allocate if there are witness/meander corners. If there are witness/meader corners the value of 1 would be for the witness/meander corner that is to the north of the actual corner location, 2 would be to the east, 3 would to the south, and 4 to the west.</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• USPLSS corners from adjacent range lines would number from the east line of the western Township. If common corners from the adjacent town lines would number the North line of the southern Township.</li> <li>• Attached is an index for the number of specific corners.</li> </ul>
Does the county contain any <b>non-PLSS areas</b> (e.g., river frontage long lots, French land claims, private claims, farm lots, French long lots, etc.) or any special situations regarding PLSS data for tribal lands?	<ul style="list-style-type: none"> <li>• No</li> </ul>
Total number of PLSS corners along each bordering county	<ul style="list-style-type: none"> <li>• Racine – 26; Waukesha – 49; Ozaukee – 19</li> </ul>
Number and percent of PLSS corners remonumented along each county boundary	<ul style="list-style-type: none"> <li>• Racine – 26, 100%; Waukesha – 49, 100%; Ozaukee – 19, 100%</li> </ul>
Number and percent of remonumented PLSS corners along each county boundary with survey grade coordinates	<ul style="list-style-type: none"> <li>• Racine – 26, 100%; Waukesha – 49, 100%; Ozaukee – 19, 100%</li> </ul>
In what ways does your county collaborate with or plan to collaborate with neighboring counties for PLSS updates on shared county borders?	<ul style="list-style-type: none"> <li>• All USPLSS corners in the SE Region are shared and supported from one site</li> </ul>

### Custodian

Southeastern Wisconsin Regional Planning Commission (SEWRPC)

### Maintenance

The MCLIO will continue to work with the Commission and the County Surveyor, to perpetuate the U. S. Public Land Survey system within the County and maintain the attendant control survey network. The designation of areas to be remapped will be determined by the Milwaukee County Land Information Steering Committee.

### Standards

- Statutory Standards for PLSS Corner Remonumentation
  - s. 59.74, Wis. Stats. Perpetuation of section corners, landmarks.
  - s. 60.84, Wis. Stats. Monuments.
  - ch. A-E 7.08, Wis. Admin. Code, U.S. public land survey monument record.
  - ch. A-E 7.06, Wis. Admin. Code, Measurements.
  - s. 236.15, Wis. Stats. Surveying requirement.
- SURVEY GRADE standard from Wisconsin County Surveyor’s Association:
  - **SURVEY GRADE** – coordinates collected under the direction of a Professional Land Surveyor, in a coordinate system allowed by 236.18(2), and obtained by means, methods and equipment capable of repeatable 2 centimeter or better precision
  - **SUB-METER** – point precision of 1 meter or better
  - **APPROXIMATE** – point precision within 5 meters or coordinates derived from public records or other relevant information

The horizontal control surveys meet or exceed the specifications for Third-Order, Class I, accuracy standards as established by the National Geodetic Survey. Elevations were established for all of the monumented U. S. Public Land Survey system corners and for ancillary reference benchmarks. The vertical control survey network so created was based upon the National Geodetic Vertical Datum, 1929 adjustment. All level surveys conducted met or exceeded the specifications for Second-Order, Class II, accuracy standards as established by the National Geodetic Survey.

### Other Geodetic Control and Control Networks

e.g., HARN, Height Mod., etc.

#### Layer Status

- NA

#### Custodian

- NA

## Maintenance

- NA

## Standards

- NA

# Parcel Mapping

## Parcel Geometries

### Layer Status

- Milwaukee County has completed parcel mapping of all the municipalities and villages in Milwaukee County and continues to take high priority in maintaining all of the Cadastral Layers.
- The county's parcels are available in a downloadable Esri geodatabase and are viewable on our Interactive Map Site that is published quarterly.
- All Milwaukee County data is referenced to the Wisconsin South State Plane coordinate system, datum of 1983 (NAD83).
- We reference all parcels to the public land survey system (PLSS) and maintain Tax Parcel Maps. The tax parcels are derived from information obtained in the Tax Listing Section of the Milwaukee County Register of Deeds Office and the City of Milwaukee Assessor's Office. All parcels are developed using legal information including recorded deeds, Certified Survey Maps, and Subdivision Plats and non-recorded data such as right-of way plats. In some cases, recorded information is not always available and erroneous data may be recorded. For this reason, tax parcels are intended to accurately represent the land but it is not a substitute for a legal land survey or guarantee of title. Updates and Corrections are part of daily protocol and historical parcel information is maintained and archived.
- **Projection and coordinate system:** WKID 6609
- **Integration of tax data with parcel polygons:** The County does have a parcel polygon model that directly integrates tax/assessment data as parcel attributes.
- **Esri Parcel Fabric/LGIM Data Model:** The County does not use but plans to explore implementing the Esri Parcel Fabric Data Model, and/or Esri's Local Government Information Model.
- **Online Parcel Viewer Software/App and Vendor name:** In-house built Geocortex Essentials and Esri Web AppBuilder for ArcGIS
- **Unique URL path for each parcel record:**  
<https://lio.milwaukeecountywi.gov/Html5Viewer/index.html?viewer=MCLIO-Map&TaxKey=3450291000>

### Custodian

- Milwaukee County Land Information Office

### Maintenance

- **Update Frequency/Cycle.** Parcel polygons are updated quarterly.
- The cadastral are updated daily and are published on quarterly basis to the MCLIO website. Parcel changes are based on recorded documents and tax listing changes in the ROD office & City of Milwaukee Assessor's Office.

### Standards

- A data dictionary in human-readable form, with thorough definitions for each element/attribute name, and explanations of any county-specific notations, particularly for parcel attributes listed by s. 59.72(2)(a), is in progress.
- The digital cadastral data sets were compiled to a digital framework meeting National Map Accuracy Standards (NMAS) for one-inch-equals-100-feet-scale mapping. The cadastral features (subject to possible errors and omissions) can be considered to be positionally

accurate to within 3.3 feet of their true position on the ground for all features included as part of the cadastral basemap fabric.

## Assessment/Tax Roll Data

### Layer Status

- **Progress toward completion/maintenance phase:** NA
- **Tax Roll Software/App and Vendor name:** Property Assessment & Tax Billing Module – GCS Software
- **Municipal Notes:** City of Milwaukee has separate tax listing. All 19 municipalities of Milwaukee County maintain and submit separate tax rolls.

### Custodian

- Regarding assessment information in Milwaukee County, each community is responsible for storage and retrieval of their tax roll information through their own Assessors Office; the procedure may vary per office.

### Maintenance

- Each community in Milwaukee County is responsible for editing and maintaining their own tax assessment information through their own Assessors Office; the procedure may vary per office. In the suburbs, the Milwaukee County Register of Deeds Tax Listing section assists the Assessor's Offices in preparing tax roll descriptions and maintaining ownership records.
- Milwaukee County maintains parcel/tax roll data in the Searchable Format or close enough to the Searchable Format that **little to no human labor is required** for the annual submission of parcel/tax roll data to DOA

### Standards

- Wisconsin Department of Revenue [Property Assessment Manual](#) and attendant DOR standards
- DOR XML format standard requested by DOR for assessment/tax roll data

## ROD Real Estate Document Indexing and Imaging

### Layer Status

- **Grantor/Grantee Index:** Milwaukee County Register of Deeds Office started a Grantor/Grantee index in 1839. The names were first written in a ledger that tracked the names of the parties transferring the property and recording information such as Volume & Page and date of the document. The manual process was maintained until February 1, 1988 when it was replaced by a Land Records Management computer system.
- **Tract Index:** Milwaukee County Register of Deeds Office created a Tract Index system January 1, 1876. The tract index is based on the Public Land Survey system, which indexes documents by Quarter Section, Section, Town and Range. In addition, they maintain a tract index for Subdivisions. The Subdivision index includes the Subdivision name, blocks, and lots. Examples of documents that are being tract include Warranty Deeds, Quit Claim Deeds, Mortgagees, Plats, Certified Survey Map, Government Liens, Easements, etc.
- **Imaging:** Milwaukee County Register of Deeds office started imaging recorded documents January 1, 2000 in their Land Records Management computer system. On March 1, 2010, Subdivision Plats, ¼ Section maps, Milwaukee Block maps, Indexes, were also scanned and entered into the computer system. The ROD continues to add historical document back to 1910.
- **ROD Software/App and Vendor Name:** GCS Web Portal from GCS and Laredo/Tapestry from Fidar

### Custodian

- Milwaukee County Register of Deeds

## Maintenance

- The Milwaukee County Register of deeds continues to maintain the Grantor/Grantee Index and the Tract Index in a Land Records Management computer system and the currency of the indexes usually runs about 2 week behind the recording date. As well, the Register of Deeds Office continues to make great strides in improving the efficiency of the computer-based system by adding scanned historical documents which are back-indexed and verified.

## Standards

- s. 59.43, Wis. Stats. Register of deeds; duties, fees, deputies.
- ch. 706, Wis. Stats. Conveyances of real property; Recording; Titles.

# LiDAR and Other Elevation Data

## LiDAR

### Layer Status

- **Most recent acquisition year:** 2015
- **Accuracy:** The RMSEz was computed to be 0.041 meters (0.135 feet) and AccuracyZ to be 0.080 meters (0.264 feet). RMSEz has been tested to 0.5 feet or better per the task order specifications. AccuracyZ has been tested to meet 18.13 cm Fundamental Vertical Accuracy at 95 Percent confidence level using  $RMSE(z) \times 1.9600$  as defined by the National Standards for Spatial Data Accuracy (NSSDA); assessed and reported using National Digital Elevation Program (NDEP)/ASRPS Guidelines.
- **Post spacing:** USGS QL2 Specifications – 0.71 meter and greater than or equal to 2 points per meter square.
- **Contractor's standard, etc.:** United State Geological Survey (USGS) – LiDAR Base Specifications, Version 1.2.
- **Next planned acquisition year:** 2020

### Custodian

- Milwaukee County

### Maintenance

- In general, the MCLIO plans to acquire updated LiDAR data every 5 years.

### Standards

- U.S. Geological Survey Quality Level 2 (QL2) specifications.

## LiDAR Derivatives

e.g., **Bare-Earth Digital Terrain Model (DTM), Bare-Earth Elevation Contours, Bare-Earth Digital Elevation Model (DEM), Digital Surface Model (DSM), etc.**

### Layer Status

- Horizontal Datum: NAD83/2011, Wisconsin State Plane Coordinates, South Zone, US Survey Feet; Vertical Datum: NAVD88, US Survey Feet
- Classified LAS Tiles: 10,000ft x 10,000ft tiles - See USGS LiDAR Base Specifications for technical approach for LAS version, file headers, and classification schema.
- Breaklines: One geodatabase containing all breaklines supporting USGS LiDAR Base Specifications (100ft or wider for river/streams and 2acres or greater for lakes and ponds)
- Digital Terrain Model DTM and hydro-enforced breaklines were used to generate contour lines of vertical interval of one-foot. Every fifth contour is noted as an index contour. DTM and contour vector files were delivered using an ESRI File Geodatabase format.
- Bare-Earth Surface (Raster Digital Elevation Model): 2ft hydro-flattened DEM using the same tiling scheme as above.
- FGDC Compliant metadata files for each of the derivative services.

- County staff also generated following models:
  - Digital Elevation Model (DEM) - Smoothed DEM and Hillshaded DEM
  - Digital Surface Model (DSM) - Hillshaded DSM and Height Above Ground DSM, and Shaded LiDAR DSM
  - Slope Model in Percent Rise and Slope Model in Degrees
  - LiDAR Return Intensity

#### Custodian

- Milwaukee County

#### Maintenance

- When needed

#### Standards

- United State Geological Survey (USGS) – LiDAR Base Specifications, Version1.2.

## Orthoimagery

### Orthoimagery

#### Layer Status

- **Most recent acquisition year:** 2018
- **Resolution:** 3"
- **Contractor's standard:**
  - 3-inch GSD AccuPlus ortho mosaic tiles (GeoTIFF format), 3-inch GSD oblique frame images (4-way), 3-inch GSD orthogonal frame images, 3-inch GSD area-wide ortho mosaic (ECW format), 1-meter GSD ortho mosaic sector tiles and one area-wide 1-meter GSD mosaic (ECW format). Orthogonal GSD: 0.25 feet/pixel; Nominal Oblique GSD (all values +/-10%): Front Line: 0.24 feet/pixel, Middle Line: 0.28 feet/pixel, Back Line: 0.34 feet/pixel. Ortho-mosaic accuracy: 0.75 ft. RMSE (X or Y); 1.84 ft NSSDA 95%; meets or exceeds ASPRS Class 1 (1990) at 1"=100'; NMAS Class 1 at 1"=50'.
- **Next planned acquisition year:** 2020
- **WROC participation in 2020:** No

#### Custodian

- Milwaukee County

#### Maintenance

- In general, the MCLIO has acquired new orthophotography every 5 years beginning in 1995, but has begun increasing the update frequency to every 2 to 3 years.

#### Standards

- Standards are coordinated by SEWRPC and the LIO of adjoining counties.

### Historic Orthoimagery

#### Layer Status

- MCLIO staff had obtained variously dated un-rectified or poorly rectified digital datasets from UW Milwaukee AGS Library and UW Madison, Arthur Robinson Library. When necessary, these data were geo-rectified, mosaicked, and published as map and image services, with the final

imagery completed in October 2015. Imagery from the following years is now available with full or partial-county coverage: 1928, 1937, 1951, 1956, 1958, 1961, 1963, 1966, 1967, 1970, 1975, 1976, 1980, 1985, 1995, 2000, 2004, 2005, 2007, 2008, 2009, 2010, 2013, 2015

#### **Custodian**

- Milwaukee County

#### **Maintenance**

- The MCLIO will rectify and mosaic historical imagery on an as-needed basis.

#### **Standards**

- Standards vary with respect to the time the imagery was acquired and the technology available at that time

### **Other Types of Imagery**

**e.g., Oblique Imagery, Satellite Imagery, Infra-red, etc.**

#### **Layer Status**

- 2008, 2010, 2013, 2015, 2018 - 3 inch obliques

#### **Custodian**

- Pictometry\Eagle View

#### **Maintenance**

- Collected with Orthoimagery

#### **Standards**

- 3-inch GSD AccuPlus ortho mosaic tiles (GeoTIFF format), 3-inch GSD oblique frame images (4-way), 3-inch GSD orthogonal frame images, 3-inch GSD area-wide ortho mosaic (ECW format), 1-meter GSD ortho mosaic sector tiles and one area-wide 1-meter GSD mosaic (ECW format). Orthogonal GSD: 0.25 feet/pixel; Nominal Oblique GSD (all values +/-10%): Front Line: 0.24 feet/pixel, Middle Line: 0.28 feet/pixel, Back Line: 0.34 feet/pixel. Ortho-mosaic accuracy: 0.75 ft. RMSE (X or Y); 1.84 ft NSSDA 95%; meets or exceeds ASPRS Class 1 (1990) at 1"=100'; NMAS Class 1 at 1"=50'.

## **Address Points and Street Centerlines**

### **Address Point Data**

#### **Layer Status**

- The MCLIO Address Database program work effort is maintained as the Enterprise Address System whereby street, parcel, building and unit addresses are fully integrated across the entire county. This project is currently in a maintenance cycle and published quarterly in concert with the cadaster update.

#### **Custodian**

- Milwaukee County

#### **Maintenance**

- All cadastral data is updated as changes occur, and released on a quarterly schedule. The address are updated based on information from the municipalities or recorded information in the Register of Deeds Office.

## Standards

- Table views that pick out QC errors.

## Building Footprints

### Layer Status

- Building footprint data is available as part of the MCLIO Planimetric datasets, as a stand-alone feature layer, or as part of the MCLIO Interactive Map.

### Custodian

- Milwaukee County

### Maintenance

- The exception to quarterly cadastral updates, building footprints are updated annually or when the planimetric datasets have been updated/replaced.

### Standards

- The MCLIO Planimetric datasets were compiled to a digital framework meeting National Map Accuracy Standards (NMAS) for one-inch-equals-100-feet-scale mapping.

## Other Types of Address Information

### e.g., Address Ranges

#### Layer Status

- Address ranges are part of the attributes in the centerlines

#### Custodian

- Milwaukee County

#### Maintenance

- When Needed

#### Standards

- Table views that pick out QC errors.

## Street Centerlines

### Layer Status

- Street Centerlines are maintained as part of the MCLIO Cadastral and Topographic datasets.

### Custodian

- Milwaukee County

### Maintenance

- The street centerlines are updated based on information from the municipalities or recorded information in the Register of Deeds Office.

### Standards

- The MCLIO Topographic datasets were compiled to a digital framework meeting National Map Accuracy Standards (NMAS) for one-inch-equals-100-feet-scale mapping.

## Rights of Way

### Layer Status

- Street Centerlines are maintained as part of the MCLIO Cadastral and Topographic datasets.

### Custodian

- Milwaukee County

### **Maintenance**

- The street centerlines are updated based on information from the municipalities or recorded information in the Register of Deeds Office.

### **Standards**

- The MCLIO Topographic datasets were compiled to a digital framework meeting National Map Accuracy Standards (NMAS) for one-inch-equals-100-feet-scale mapping.

## **Trails**

**e.g., Recreational Trails**

### **Layer Status**

- The Milwaukee County trails are updated to 2017.

### **Custodian**

- Milwaukee County Parks

### **Maintenance**

- Updates are done when needed

### **Standards**

- Trails are digitized from aerial photography.

## **Land Use**

### **Current Land Use**

#### **Layer Status**

- The MCLIO utilizes polygonal land use data as provided by the Southeastern Wisconsin Regional Planning Commission (SEWRPC). The polygons are digitized from aerial photography according to SEWRPC's land use classification system. The polygon features are current for the year 2010.

#### **Custodian**

- Southeastern Wisconsin Regional Planning Commission, Land Use Division and GIS Division

#### **Maintenance**

- The land use polygon features are digitized from aerial photography and are expected to be updated every 5 years.

#### **Standards**

- SEWRPC, designated as the official area-wide regional planning agency, abides by s. 66.1001, Wis. Stats. Static Land Use Plan maps are available from SEWRPC's website.

### **Future Land Use**

#### **Layer Status**

- Milwaukee County does not maintain in-house data or reports for future land-use; rather, SEWRPC has the responsibility of developing and maintaining land use plans. Currently, SEWRPC is working on production of the 2050 Regional Land Use and Transportation Plan, which will update the current 2035 plan.

#### **Custodian**

- SEWRPC

#### **Maintenance**

- SEWRPC uses decadal census data to prepare population and economic forecasts, which are used to update, reevaluate, and extend the current land use and transportation plan. The 2000

census data was used to prepare and adopt the 2035 plan in 2006. The 2010 census data is now being used to prepare the updated 2050 plan. Thus, maintenance to the plan is likely to occur every 10 years.

#### **Standards**

- s. 66.1001, Wis. Stats. Comprehensive planning.
- SEWRPC, designated as the official area-wide regional planning agency, abides by s. 66.1001, Wis. Stats. Static Land Use Plan maps are available from SEWRPC's website.

## **Zoning**

### **County General Zoning**

#### **Layer Status**

- N/A - Milwaukee County does not maintain zoning data.

### **Shoreland Zoning**

#### **Layer Status**

- N/A - Milwaukee County does not maintain zoning data.

### **Farmland Preservation Zoning**

#### **Layer Status**

- N/A - Milwaukee County does not maintain farmland preservation data.

### **Airport Protection**

#### **Layer Status**

- Milwaukee County has protection zoning boundaries for each runway at GMIA and Timmerman airports. There are also height restrictive boundaries to a height of 300ft.
- Airport protection zoning map depicts: Both protection zoning and height.

#### **Custodian**

- Milwaukee County Airport

#### **Maintenance**

- As needed

#### **Standards**

- FAA

## **Administrative Boundaries**

### **Civil Division Boundaries**

*e.g., Towns, City, Villages, etc.*

#### **Layer Status**

- The MCLIO cadastral data captures county and minor civil division boundaries.

#### **Custodian**

- Milwaukee County LIO

#### **Maintenance**

- Very few changes occur to Administrative Boundaries in Milwaukee County but they are all based on recorded documents in the Register of Deeds Office and/or filed in the Office of the Secretary of State.

### Standards

- The MCAMLIS Cadastral datasets were compiled to a digital framework meeting National Map Accuracy Standards (NMAS) for one-inch-equals-100-feet-scale mapping

## School Districts

### Layer Status

- Progress toward completion/maintenance phase: 100
- Relation to parcels: YES
  - Attributes linked to parcels: SCHOOL\_DIST, SCHOOL\_ID

### Custodian

- Milwaukee County LIO

### Maintenance

- School district boundaries are updated on an as-needed basis.

### Standards

- School district boundaries are compiled via taxroll attribute from municipal assessors

## Election Boundaries

**e.g., Voting Districts, Precincts, Wards, Polling Places, etc.**

### Layer Status

- Milwaukee County voting districts (VTD) are available as polygon boundaries with the ward/district name and ID.

### Custodian

- Milwaukee County LIO on behalf of Milwaukee County Clerk

### Maintenance

- Individual municipalities must inform the County Clerk of ward boundary changes twice a year, and Milwaukee County/MCAMLIS supports the integration of this data. Changes to the Ward maps are based on information provided from the municipality, and in the future, the Clerk's Office.

### Standards

- Stand-alone layers that are not part of the MCLIO Topographic, Planimetric, or Cadastral datasets strive to meet National Map Accuracy Standards (NMAS) for one-inch-equals-100-foot-scale mapping.

## Public Safety

**e.g., Fire/Police Districts, Emergency Service Districts, 911 Call Center Service Areas, Public Safety Answering Points, Healthcare Facilities**

### Layer Status

- Milwaukee County has police districts, PSAP locations, fire districts, 911 service areas and healthcare facilities

### Custodian

- Milwaukee County Office of Emergency Management

### Maintenance

- When needed

### Standards

- NMAS

## Other Layers

### Cell Phone Towers

#### Layer Status

- Milwaukee County has cell tower locations.

#### Custodian

- Cell Tower Provider

#### Maintenance

- N/A

#### Standards

- N/A

### Bridges and Culverts

#### Layer Status

- Bridges are represented as points, lines, and polygons (as well as text annotation) in the MCLIO Facilities Planimetric dataset. Culverts are available as lines representing the underground location or as points representing the ends within the MCLIO Hydrography Topographic dataset.

#### Custodian

- Milwaukee County LIO

#### Maintenance

- Updates are done with the planimetric dataset changes and published at that time.

#### Standards

- The MCLIO Planimetric datasets were compiled to a digital framework meeting National Map Accuracy Standards (NMAS) for one-inch-equals-100-feet-scale mapping.

## 3 LAND INFORMATION SYSTEM

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The WLIP seeks to enable land information systems that are both modernized and integrated. Integration entails the coordination of land records to ensure that land information can be shared, distributed, and used within and between government at all levels, the private sector, and citizens.

One integration requirement is listed under s. 16.967(7)(a)(1), Wis. Stats., which states that counties may apply for grants for:

- The design, development, and implementation of a land information system that contains and integrates, at a minimum, property and ownership records with boundary information, including a parcel identifier referenced to the U.S. public land survey; tax and assessment information; soil surveys, if available; wetlands identified by the department of natural resources; a modern geodetic reference system; current zoning restrictions; and restrictive covenants.

This chapter describes the design of the county land information system, with focus on how data related to land features and data describing land rights are integrated and made publicly available.

### Current Land Information System

## County Parcel Data Workflow Diagram

The Milwaukee County Register of Deeds uses the software from Fidlar Technologies called AVID to process all recorded Real Estate Documents. AVID is a Land Records Management Software used to record, enter data, verify, and search information for all recorded documents.

Milwaukee County also uses Laredo and Tapestry from Fidlar Technologies for Land Records search engines for the public use to search real estate documents.

**Fig 1. Milwaukee County Register of Deeds Real Estate Documents Process**

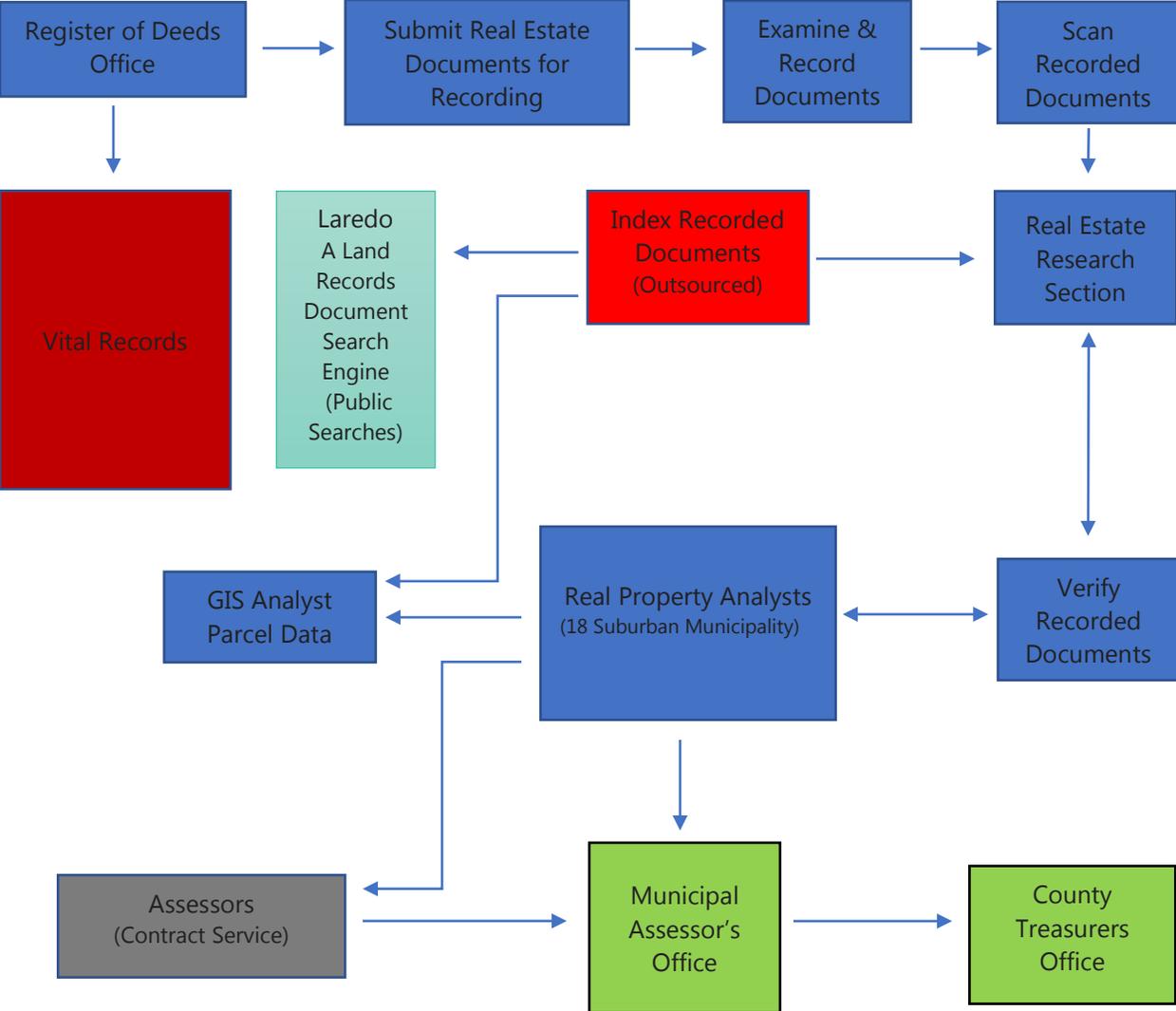
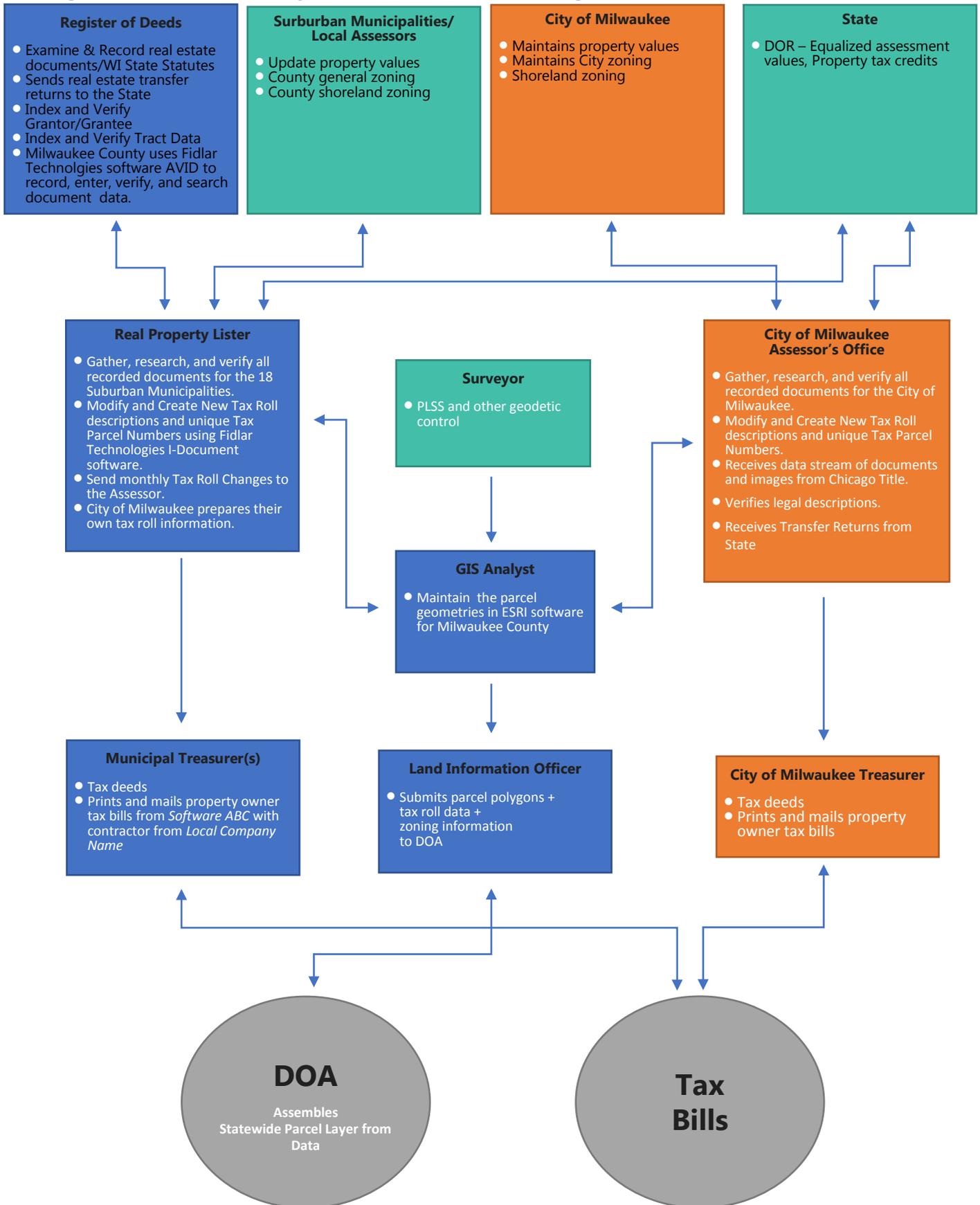


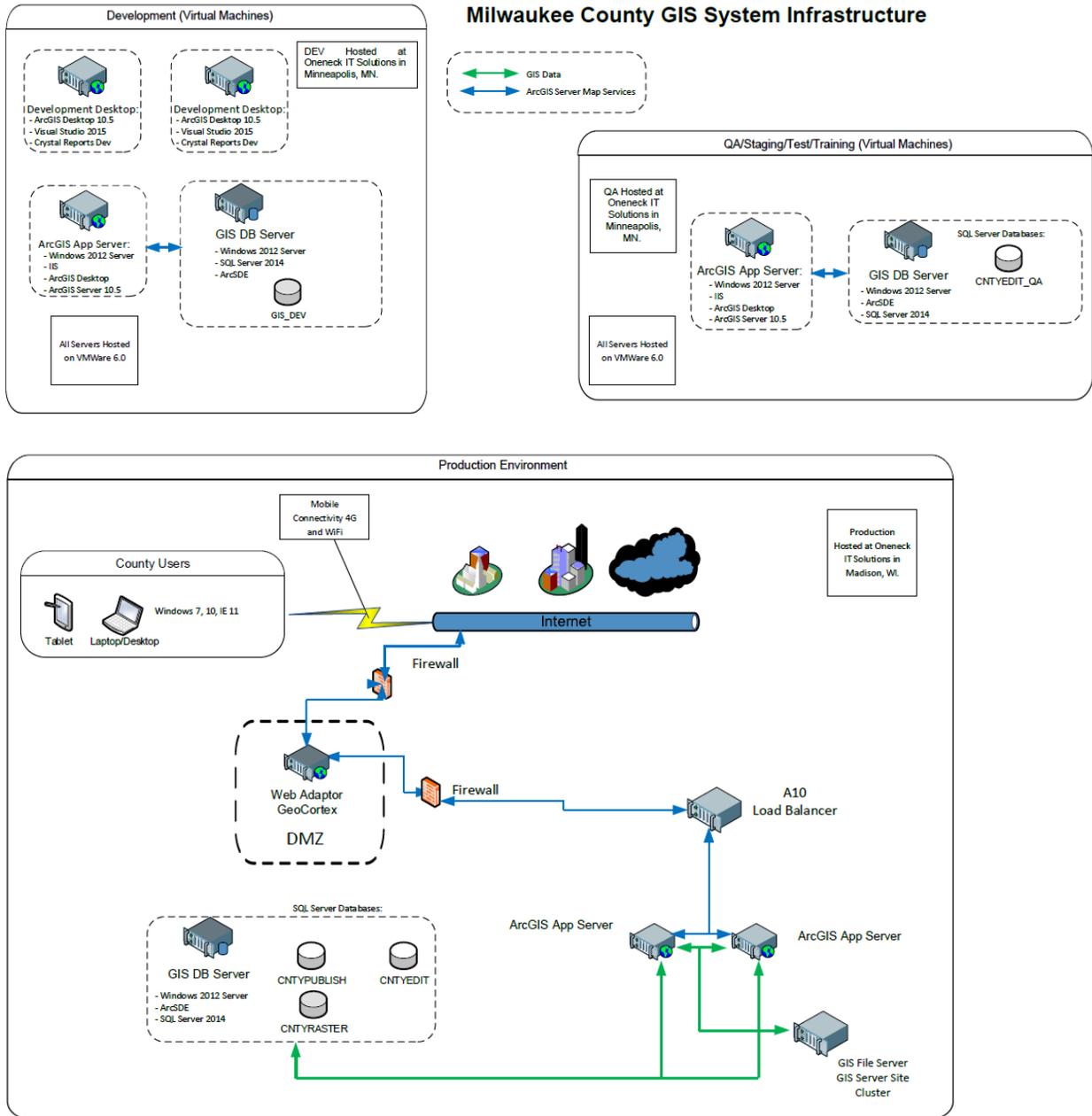
Fig 2. Milwaukee County Parcel + Tax Roll + Zoning Workflow



# Technology Architecture and Database Design

This section refers to the hardware, software, and systems that the county uses to develop and operate computer systems and communication networks for the transmission of land information data.

## Hardware



## Software

- esri
- acad
- Blue Marble
- LP360

## Website Development/Hosting

- Drop Box
- One Neck

## Metadata and Data Dictionary Practices

### Metadata Creation

- **Metadata creation and maintenance process:** Metadata is created or attached when data is published

### Metadata Software

- **Metadata software:** esri
  - The software does generate metadata consistent with the FGDC Content Standard for Digital Geospatial Metadata, and ISO geographic metadata standard 19115.
- **Metadata fields manually populated:** Summary, Description, Credits

### Metadata Policy

- **Metadata Policy:** Metadata is created or attached when data is published

## Municipal Data Integration Process

- NA

## Public Access and Website Information

### Public Access and Website Information (URLs)

#### Public Access and Website Information

##### GIS Webmapping Application(s)

Link - URL	GIS Download Link - URL	Real Property Lister Link - URL	Register of Deeds Link - URL
<a href="http://county.milwaukee.gov/mclio">http://county.milwaukee.gov/mclio</a>	<a href="http://gis-mclio.opendata.arcgis.com/">http://gis-mclio.opendata.arcgis.com/</a>	<a href="http://gcswebportal.milwaukeecounty.org/GCSWebPortal/Search.aspx">http://gcswebportal.milwaukeecounty.org/GCSWebPortal/Search.aspx</a>	<a href="http://county.milwaukee.gov/RealEstateRecrdsInte9846.htm">http://county.milwaukee.gov/RealEstateRecrdsInte9846.htm</a>

#### Single Landing Page/Portal for All Land Records Data

##### URL

<http://county.milwaukee.gov/mclio/geodata/imagery/Data-Download-Form.htm>

#### Municipal Website Information

##### Municipal Website

##### Municipal Website URL

Open Data <http://gis-mclio.opendata.arcgis.com/>

## Data Sharing

### Data Availability to Public

#### Data Sharing Policy

- The Milwaukee County Land Information Office posts all publishable GIS data on the LIO website and open data page

#### Open Records Compliance

- Milwaukee County Complies with open records law

### Data Sharing Restrictions and Government-to-Government Data Sharing

#### Data Sharing Restrictions

- NA

#### Government-to-Government Data Sharing

- NA

### Training and Education

- Milwaukee County LIO provides training and educational opportunities

# 4 CURRENT & FUTURE PROJECTS

This chapter lists the current and future land information projects the county is currently undertaking or intends to pursue over its planning horizon. A project is defined as a temporary effort that is carefully planned to achieve a particular aim. Projects can be thought of as the *means* to achieving the county's mission for its land information system.

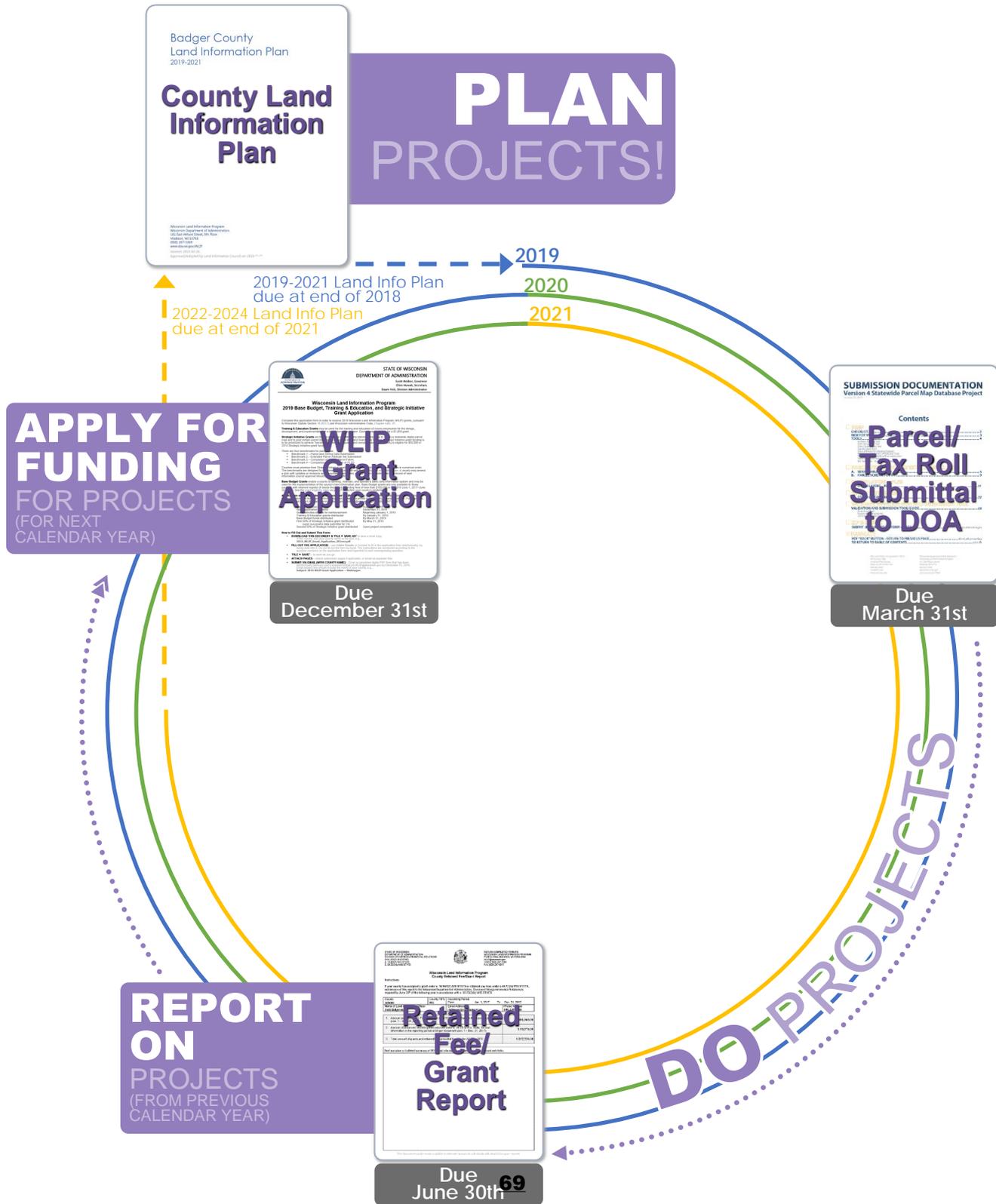


Figure 1. The WLIP Land Information Plan/Grant Project Cycle

## Project #1: Planimetric Data Maintenance - 2018

### Project Description/Goal

- This task will update the current topographic dataset. The topographic dataset has been fully polygonalized since 2010, with updates current up to 2015. This project will bring the currency of the dataset to 2018. The project will use the 2018 aerial photography as the mechanism to show change. An update area will be produced based on differences observed from comparing the 2015 and 2018 with the current planimetric data.
- **Land Info Spending Category:** Other Parcel Work

### Business Drivers

- Update base mapping
- Keep core dataset up to date
- Maintain planimetric integrity

### Objectives/Measure of Success

- Update the 2018 Topographic and Planimetric Polygonalized Dataset
- Incorporate the updated data to the current datasets, services, and caches

### Project Timeframes

Timeline – Planimetric Data Update		
Milestone	Duration	Date
Project #2 start	–	January 1, 2019
Project data Updates	9 months	Jan 1–Sept 30 2019
Project complete	–	Oct 1, 2019

### Responsible Parties

- GIS Technician (100%)

### Estimated Budget Information

- See table at the end of this chapter.

## Project #2: Support New Datum Requirements

### Project Description/Goal

- The migration of the Horizontal Datum NAD 83 and Vertical NAVD 88 will be complete by June of 2019. This project is to support and integrate remaining data, services, and outstanding processes for internal and external organizations.
- **Land Info Spending Category:** PLSS

### Business Drivers

- Keep data and services consistent
- Support local and regional organizations

### Objectives/Measure of Success

- Document processes and procedures for migrated data and services
- Support client and partner needs and requests

### Project Timeframes

Timeline – Support New Datum Requirements		
Milestone	Duration	Date
Project #3 start	–	January 1, 2019

Project data Updates	12 months	Jan 1–Dec 31 2019
Project complete	–	Jan, 2020

### Responsible Parties

- GIS Analyst (10%), GIS Manager (10%)

### Estimated Budget Information

- See table at the end of this chapter.

## Project #3: Plat of Survey Index Maintenance

### Project Description/Goal

- Every survey completed by a registered surveyor must be submitted to the County Surveyor. The County Surveyor then collects these recorded plats. Milwaukee County acquires these hard copy submissions and has them scanned into digital format. After the scanning has been completed, the plats are geocoded and placed into an application that is published to the internet. Milwaukee County indexes the published plats to be retrieved from the Milwaukee County GIS interactive mapping site. A viewer is able to search for plats of survey that have been completed within Milwaukee County and retrieve a digital copy for display and printing.
- **Land Info Spending Category:** Other Parcel Work

### Business Drivers

- Make the plat of surveys available to public

### Objectives/Measure of Success

- Scan Plats of Survey acquired from the County Surveyor which in Milwaukee County is SEWRPC
- Index and geocode the Plats of Survey
- Update the Interactive Mapping Site for publication

### Project Timeframes

Timeline – Plat of Survey Index Maintenance		
Milestone	Duration	Date
Project #4 start	–	January 1, 2019
Project data Updates	36 months	Jan 1–Dec 31 2021
Project complete	–	Jan 1, 2022

### Responsible Parties

- GIS Analyst (5%), Contractor Services

### Estimated Budget Information

- See table at the end of this chapter.

## Project #4: Enterprise Address System Maintenance

### Project Description/Goal

- The enterprise address system program effort has continued to the present and is now maintained as the MCLIO Enterprise Address System whereby street, parcel, building and unit addresses are fully integrated across the entire county. Maintenance automation tools are utilized to manage the database as address component updates are required and maintenance is performed.

- **Land Info Spending Category:** Address

### Business Drivers

- Keep accurate list of addresses

### Objectives/Measure of Success

- Maintain integrity between address components
- Alter automation tools and procedures to adapt to additional information
- Continue Quality Control on individual address records

### Project Timeframes

Timeline – Enterprise Address System Maintenance		
Milestone	Duration	Date
Project #5 start	–	Jan 1, 2019
Maintain Data views for QC processes	2 weeks per year	
Control Integrity between Datasets	2 months per year	
Quality Control of Data	2 months per year	
Project complete	–	Dec 31, 2021

### Responsible Parties

- GIS Technician (10%), SR GIS Analyst (5%)

### Estimated Budget Information

- See table at the end of this chapter.

## Project #5: Street Centerline Maintenance

### Project Description/Goal

- A maintenance cycle is on place for the enterprise street centerline dataset. The centerlines are maintained for routing purposes as well as mapping purposes. The data is consumed by the Milwaukee County Sherriff’s Office as well other municipalities located within Milwaukee County. A quarterly update of the discrete address range and spatial representation is completed.

- **Land Info Spending Category:** Street Centerlines

### Business Drivers

- Keep accurate centerline dataset

### Objectives/Measure of Success

- Update Street centerlines
- Update data views and data schema

### Project Timeframes

Timeline – Enterprise Address System Maintenance		
Milestone	Duration	Date
Project #5 start	–	Jan 1, 2019

Maintain Data views for QC processes	2 weeks per year	
Control Integrity between Datasets	2 months per year	
Quality Control of Data	2 months per year	
Project complete	–	Dec 31, 2021

### Responsible Parties

- GIS Technician (10%), SR GIS Analyst (5%)

### Estimated Budget Information

- See table at the end of this chapter.

## Project #6: Cadastral Improvements

### Project Description/Goal

- In 2017, the LIO started to perform the cadastral updates for the entire County, including the City of Milwaukee. The LIO took this time to gauge the amount of additional work that is needed to maintain the cadastral dataset. For 2018, the LIO will make improvements to this data. The goal for this project is to make the data consistent throughout the County. The improvements include adding documents to the CSM's, Subdivisions, and Condos that are missing; verifying line work and attributes; cleaning annotation; adding original plat and cartographic data to generalized lands; research errors in platted lands and producing a Countywide plat\tax book for publication.
- **Land Info Spending Category:** Digital Parcel Mapping

### Business Drivers

- Consistent cadastral dataset

### Objectives/Measure of Success

- Consistent look for tax map
- Validation of plats and documents

### Project Timeframes

Timeline – Enterprise Address System Maintenance		
Milestone	Duration	Date
Project #7 start	–	March 1, 2018
Cleanup of annotation	21 Months	Mar 1, 2018- Dec 31,2019
Data Integrity – linework	21 Months	Mar 1, 2018- Dec 31,2019
Quality Control of Data	3 months	Jan 1, 2020-Mar 31, 2020
Project complete	–	April 1, 2020

### Responsible Parties

- GIS Technician (100%) GIS Technician LTE (100%)

### Estimated Budget Information

- See table at the end of this chapter.

## Project #7: 2020 Imagery Capture – Ortho\Oblique

### Project Description/Goal

- 2020 imagery flight

- **Land Info Spending Category:** Ortho Imagery

### Business Drivers

- Public and government agencies

### Objectives/Measure of Success

- New imagery

### Project Timeframes

Timeline – Plat of Survey Index Maintenance		
Milestone	Duration	Date
Project #8 start	–	January 1, 2020
Imagery Capture and Processing	7 months	Mar 31–Oct 31 2020
Project complete	–	Dec 31, 2020

### Responsible Parties

- GIS Manager (5%) Contractor (95%)

### Estimated Budget Information

- See table at the end of this chapter.

## Project #8: 2020 Lidar Capture

### Project Description/Goal

- Capture of Lidar for Milwaukee County (QL2)
- **Land Info Spending Category:** LiDAR

### Business Drivers

- Keep LiDAR and LiDAR derived products up to date

### Objectives/Measure of Success

- Capture LiDAR and produce raster derived products

### Project Timeframes

Timeline – Plat of Survey Index Maintenance		
Milestone	Duration	Date
Project #8 start	–	January 1, 2021
LiDAR Capture and derived raster Processing	7 months	Mar 31–Dec 31 2021
Project complete	–	Dec 31, 2021

### Responsible Parties

- GIS Manager (5%) GIS Analyst (10%) Contractor (85%)

### Estimated Budget Information

- See table at the end of this chapter.

## Project #9: 2021 Planimetric Update

### Project Description/Goal

- This task will update the current topographic dataset. The topographic dataset has been fully polygonalized since 2010, with updates current up to 2018. This project will bring the currency of the dataset to 2020. The project will use the 2020 aerial photography as the mechanism to show change. An update area will be produced based on differences observed from comparing the 2018 and 2020 with the current planimetric data.
- **Land Info Spending Category:** Other Parcel Work

### Business Drivers

- Update base mapping
- Keep core dataset up to date
- Maintain planimetric integrity

### Objectives/Measure of Success

- Update the 2018 Topographic and Planimetric polygonalized dataset
- Incorporate the updated data to the current datasets, services, and caches

### Project Timeframes

Timeline – Planimetric Data Update		
Milestone	Duration	Date
Project #10 start	–	January 1, 2021
Project data Updates	9 months	Jan 1–Sept 30 2021
Project complete	–	Oct 1, 2021

### Responsible Parties

- GIS Technician (100%)

### Estimated Budget Information

- See table at the end of this chapter.

## Project #10: Implement esri Parcel Fabric Model

### Project Description/Goal

- After the Cadastral Improvement project in 2018-2020, the MCLIO will re-evaluate implementing esri's parcel fabric model. The Cadastral data will be consistent throughout the County and the MCLIO will have the ability to adopt the new model at this time. The MCLIO will evaluate if this migration is needed before the project would commence. A pilot will need to be completed as well as a thorough understanding of benefits would need to be realized before the full project would start.
- **Land Info Spending Category:** Digital Parcel Mapping

### Business Drivers

- MCLIO
- Publishing for Municipalities and public
- Efficiency to maintain cadastral data

### Objectives/Measure of Success

- Produce parcel fabric pilot
- Evaluate work effort and benefits realized
- Migrate the Milwaukee County cadaster into the esri parcel fabric model

### Project Timeframes

Timeline – Implement esri Parcel Data Fabric Model		
Milestone	Duration	Date
Project #10 start	–	April 1, 2020
Esri Parcel Fabric Pilot	3 months	April 1- July 1,2020
Evaluation of pilot	1 month	July 1 –August 1,2020
Parcel Fabric Migration	9 months	August 1– April 1,2021
Update Cadastral Data Services and Applications	1 month	April 1-May 1,2021
Project complete	–	June 1, 2021

### Responsible Parties

- Sr. GIS Analyst (50%), GIS Analyst (50%), GIS Technician (50%)

### Estimated Budget Information

- See table at the end of this chapter.

## Project #11: Exempt Property Validation

### Project Description/Goal

- This project is to validate the property boundaries for park and exempt properties. Original platting of some park and exempt properties can be vague and not as precise at current surveying methods and techniques. In many situations, property changes were performed through resolutions and did not follow the proper method of recording these documents with the Register of Deeds. The LIO will investigate exempt property conflicts to validate the correct boundaries.
- **Land Info Spending Category:** Digital Parcel Mapping

### Business Drivers

- MCLIO
- Municipalities and public

### Objectives/Measure of Success

- Validation of properties
- Record corrected documents
- Integrate updated recorded documents into cadaster

### Project Timeframes

Timeline – Exempt Property Validation		
Milestone	Duration	Date
Project #11 start	–	January 1, 2020
Exempt Property Pilot	2 months	January 1- March 1,2020
Property Research Project	10 months	March 1 – December 31,2020
Project complete	–	January 1, 2021

### Responsible Parties

- GIS Analyst (75%), GIS Technician (25%)

### Estimated Budget Information

- See table at the end of this chapter.

## Estimated Budget Information (All Projects)

### Estimated Budget Information

Project Title	Item	Unit Cost/Cost	Land Info Plan	Project Total
			Citations Page # or section ref.	
<b>1) Planimetric Data Maintenance</b>	GIS Technician position	100% for 9 months = \$60,000	Page 27	-
				<b>60,000</b>
<b>2) Support New Datum Requirements</b>	GIS Analyst position	10% of \$110,000 = 11,000	Page 27	-
	GIS Manager position	10% of \$148,000 = 14,800		-
				<b>25,800</b>
<b>3) Plat of Survey Index Maintenance</b>	GIS Analyst position	5% of \$110,000 = 5,500 per year	Page 28	
	Contractor Services	\$500 per year		<b>18,000</b>
<b>4) Enterprise Address System Maintenance</b>	GIS Technician position	10% of \$80,000 = 8,000	Page 28	
	GIS Sr Analyst position	5% of \$136,000 = 6,800		<b>14,800</b>
<b>5) Street Centerline Maintenance</b>	GIS Technician position	10% of \$80,000 = 8,000	Page 29	
	GIS Sr Analyst position	5% of \$136,000 = 6,800		<b>14,800</b>
<b>6) Cadastral Improvements</b>	GIS Technician position	100% of \$80,000 for 2 years = 160,000	Page 30	
	GIS Analyst	50% of \$110,000 for 2 years = 110,000		<b>270,000</b>
<b>7) 2020 Imagery Capture</b>	GIS Manager	5% of \$148,000 = 7,400	Page 30	
	Contractor Services	= 130,000		<b>137,400</b>
<b>8) 2020 LiDAR Capture</b>	GIS Manager	5% of \$148,000 = 7,400	Page 31	
	GIS Analyst	10% of \$110,000 = 11,000		
	Contractor Services	= 65,000		<b>83,400</b>
<b>9) 2021 Planimetric Update</b>	GIS Technician	100% for 9 months = \$60,000	Page 32	<b>60,000</b>
<b>10) Esri Parcel Fabric Model</b>	GIS Sr Analyst	50% of \$136,000 = 68,000	Page 32	
	GIS Analyst	50% of \$110,000 = 55,000		
	GIS Technician	50% of \$80,000 = 40,000		<b>231,000</b>
<b>11) Exempt Property Validation</b>	GIS Analyst	75% of \$110,000 = 82,500	Page 33	
	GIS Technician	25% of \$80,000 = 20,000		<b>102,500</b>
<b>GRAND TOTAL</b>				<b>1,017,700</b>

Note. These estimates are provided for planning purposes only. Budget is subject to change.

# SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

W239 N1812 ROCKWOOD DRIVE • PO BOX 1607 • WAUKESHA, WI 53187-1607 • TELEPHONE (262) 547-6721  
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Serving the Counties of:

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WAUKESHA



October 5, 2018

Mr. Kevin Bruhn  
GIS Manager-Land Information Officer  
Milwaukee County Land Information Office  
633 W. Wisconsin Ave., Suite 903  
Milwaukee, WI 53203

Dear Mr. Bruhn:

On April 5, 2017, the Commission sent notice to you concerning a request by the U.S. Geological Survey (USGS) and the Wisconsin Department of Administration (DOA) to reformat the county Light Detection and Ranging (LiDAR) elevation data to meet USGS specifications. To fund this reformat, the Commission received a grant from the USGS in the amount of \$125,040. The Commission expended \$15,000 of the grant funds for reformatting the data. Because the cost of obtaining the LiDAR data in 2015 was borne by the five counties concerned, the Commission stated that the remaining \$110,040 of the USGS grant would be returned proportionately to the five counties.

Enclosed please find SEWRPC Check No. 45332 in the amount of \$12,875, which represents the Milwaukee County share of obtaining the 2015 LiDAR data.

Should you have questions concerning this matter, please do not hesitate to write or call.

Sincerely,

Michael G. Hahn, P.E., P.H.  
Executive Director

MGH:EAL  
780-1101  
#244821