DEPARTMENT OF TRANSPORTATION & PUBLIC WORKS
MILWAUKEE COUNTY LAND INFORMATION OFFICE

2711 West Wells Street, Rm 426, Milwaukee, WI 53208 (414) 278-2176

MEMORANDUM

TO: «prefix» «first_name» «middle_intial» «last_name» «LnameSuffix» «Suffix»
«title»
«organization»
«address1»
«address2»
«city», «state». «zipcode»

FROM: William C. Shaw, MCAMLIS Project Manager

DATE: September 11, 2009

SUBJECT: MCAMLIS 79th Steering Committee Meeting Materials

Enclosed please find a set of materials that the steering committee will take up at its scheduled September 22nd meeting.

I. Meeting Agenda

II. Meeting Minutes of the 78th Steering Committee meeting held July 21st, 2009

III. Reports

- A. Report materials related to the MCAMLIS Enterprise Address Project
- B. Report materials related to the MCAMLIS Milwaukee County Plats of Survey Project
- C. Report materials related to the 2009 Topograhic Mapping Update Project
- D. Report materials related to the MCAMLIS 2008 LiDAR pilot project
- E. Report materials related to the MCAMLIS Fiscal status (to be distributed at the meeting)

IV. Old Business

- A. Materials related to MCAMLIS participation in the 2010 Regional Orthophoto Imaging and Photogrammetric Program

V. New Business

- A. Materials related to a request to reauthorize funding for a portion of the Enterprise Address System (EAS) Project utilizing the $1 fee
- B. Materials related to a request to fund improvements to ROD Computerized System

VI. Correspondence

A. SEWRPC Staff letters to MCAMLIS Project Manager regarding Updated Floodplain and Floodway mapping

B. Copy of a letter from John M. Bennett, City of Franklin Engineer to ICC Representatives regarding individual contact information

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MILWAUKEE COUNTY AUTOMATED MAPPING AND LAND INFORMATION SYSTEM

Seventy-Ninth Steering Committee Meeting

AGENDA

Date: September 22nd, 2009
Time: 9:00 a.m.
Place: Milwaukee County
City Campus, Room 349
2711 W Wells St.
Milwaukee, WI. 53208

I. Roll Call

II. Meeting Minutes

Consideration of the minutes of the 78th Steering Committee meeting held July 21st, 2009.

III. Reports

A. Report by MCAMLIS staff on the status of the Enterprise Address Project.

B. Report by MCAMLIS staff on the status of the Milwaukee County Plats of Survey Project

C. Report by MCAMLIS Staff on the completion of the 2005 Topographic Mapping Project including the 2009 update of the Marquette Interchange

D. Report by MCAMLIS Staff on the completion of the 2008 LiDAR pilot project

E. Report by Milwaukee County DAS staff on MCAMLIS Fiscal and 2010 Milwaukee County Budget status

IV. Old Business

A. Status update by MCAMLIS Staff regarding MCAMLIS participation in the 2010 Regional Orthophoto Imaging and Photogrammetric Program

V. New Business

A. Consideration of a Register of Deeds request to reauthorize funding a portion of the Enterprise Address System (EAS) Project utilizing the $1 fee

B. Consideration of a Register of Deeds request to fund Improvements to Computerized System

VI. Correspondence

VII. Date, time, and place of next meeting

VIII. Adjournment

MINUTES OF THE 78th MEETING
Milwaukee County Automated Mapping and Land Information System
Steering Committee

Date: Tuesday, July 21, 2009
Time: 9:00a.m.
Place: Milwaukee County City Campus
2711 W. Wells Street
Room 349
Milwaukee, WI 53208

Members Present

Kurt W. Bauer, Chairman	Milwaukee County Surveyor
Donald R. Nehmer, Vice Chairman	Capital Program Business Manager, Milwaukee Metropolitan Sewerage District
Nancy A. Olson	Chief Information Officer, Information and Technology Management Division, City of Milwaukee
Alexandra Kotze	Fiscal Management Analyst, representing Cynthia Archer, Director, Milwaukee County Department of Administrative Services
John M. Bennett	City Engineer, City of Franklin, representing the Intergovernmental Coordinating Council of Milwaukee County
Karen Gross	representing John Place, Manager, Gas Engineering and Mapping, We Energies
Gary E. Drent,	Fiscal and Budget Manager, Milwaukee County, DTPW/AE&ES, representing Jack Takarian, Director, Milwaukee County Department of Transportation and Public Works

Members Absent

Donald L. Coe	Supervisor, Facilities Location, Customer Operations, We Energies
Kevin S. Anderson	Area Manager - Design, AT&T Milwaukee Metro South
John L. La Fave, LIO	Milwaukee County Register of Deeds

Guests and Staff Present

William C. Shaw	MCAMLIS Project Manager, Milwaukee County DTPW/AE&ES
Tammy Bronson	City of Milwaukee, Information and Technology Management Division
Kathleen Bach	Milwaukee County, Register of Deeds
Hardy Meihsner	GeoDecisions

Marcia Lindholm	DPW – Infrastructure, City of Milwaukee
Cynthia J. Pahl	Fiscal Mgt Analyst, Department Of Administrative Services
Kevin Bruhn	GIS Specialist, Milwaukee County DTPW/AE&ES
Lee Frederick	GIS Technician, Milwaukee County DTPW/AE&ES

I. ROLL CALL

The Seventy-Eighth meeting of the Milwaukee County Automated Mapping and Land Information System (MCAMLIS) Steering Committee was called to order by Chairman Bauer at 9:00a.m. Roll Call was taken by circulating an attendance signature sheet and a quorum was declared present.

II. MEETING MINUTES

II(a) CONSIDERATION OF THE MINUTES OF THE 77TH STEERING COMMITTEE MEETING HELD MARCH 24, 2009

Bauer: noted that a copy of the minutes was provided with the meeting materials and asked if there were any corrections required?

Motion: Bennett moved to accept minutes
Second: Nehmer motion carried unanimous

III. REPORTS

III(a) REPORT BY MILWAUKEE COUNTY REGISTER OF DEEDS STAFF ON MCAMLIS STREET ADDRESS AND CADASTRAL MAP MAINTENANCE OPERATIONS.

Bach: directed the committee to the staff report included with the meeting materials further stating that the address database maintenance is current through July 2009. The cadastral database is current as of June 1, 2009.

Bauer: stated for the minutes, that the report was accepted by consensus and is to be placed on file.

III(b) REPORT BY CITY OF MILWAUKEE STAFF ON MCAMLIS CADASTRAL MAP MAINTENANCE OPERATIONS.

Bronson: directed the committee to the staff report included with the meeting materials further stating that the cadastral geo-databases are current through July 2009.

Bauer: stated for the minutes, that the report was accepted by consensus and is to be placed on file.

III(c) <u>REPORT BY MCAMLIS STAFF ON THE STATUS OF THE ENTERPRISE ADDRESS PROJECT</u>

Shaw: directed the committee to the staff report included with the meeting materials noting successful completion of a number of data deliveries to the City of Cudahy, the Village of Bayside and the North Shore Fire Department.

Bennett: asked if there was a method in place to notify each community of EAS services availability?

Shaw: replied that there was no formal notification procedure in use. Adding that there were multiple delivery options and that each community needed to be engaged both administratively and technically. Further stating that this poses a number of hurdles that need to be overcome before a community can successfully make use of the EAS products.

Bennett: stated that he felt that integration of this system with 911 is key to advancing GIS within the communities and that he was concerned about getting this capability into their hands.

Bauer: noted that if there was concern regarding getting the word out that perhaps the ICC could be utilized to enhance the communication process.

Bennett: volunteered to compile a list of key individuals across the communities and agreed to present this as an agenda item at a future meeting

Bauer: stated for the minutes, that the report was accepted by consensus and is to be placed on file.

III(d) <u>REPORT BY MCAMLIS STAFF ON THE STATUS OF THE PICTOMETRY OBLIQUE IMAGERY PROJECT.</u>

Shaw: directed the committee to the staff report included with the meeting materials noting that this technology is now compatible with the MCLIO website and that within a short time will be released to individuals accessing the MCLIO SECURE web services.

Olson: requested that the staff notify the Committee via email when the new Pictometry web services were available.

Bauer: stated for the minutes, that the report was accepted by consensus and is to be placed on file.

III(e) <u>REPORT BY MCAMLIS STAFF ON THE STATUS OF THE MILWAUKEE COUNTY PLATS OF SURVEY PROJECT.</u>

Shaw: directed the committee to the staff report included with the meeting materials noting that project efforts thus far have been focused on arranging for access to the hardcopy documents and testing the scanning procedures used by the selected vendor. Further stating that staff would prepare a revised project time and cost estimate and present this at the Committees next meeting.

Bauer: stated for the minutes, that the report was accepted by consensus and is to be placed on file.

III(f) <u>REPORT BY MCAMLIS STAFF ON THE STATUS OF 2008 LiDAR PILOT PROJECT.</u>

Shaw: directed the committee to the staff report included with the meeting materials noting that the results of the Report No.1 concluded that planimetric feature changes could not be resolved solely through the use of LiDAR data. Further stating that an additional report would be forthcoming to determine the value of LiDAR for purposes of producing updated topographic mapping products.

Bauer: stated for the minutes, that the report was accepted by consensus and is to be placed on file.

III(g) <u>REPORT BY MCAMLIS STAFF ON THE STATUS OF ACTIONS TAKEN REGARDING MCAMLIS COPYRIGHT PROTECTIONS.</u>

Shaw: directed the committee to the staff report included with the meeting materials noting that the revised license agreement had been fully executed by the utility members and that he would begin drafting new policy and procedures to be presented at a future meeting for the Committee's approval .

Bauer: stated for the minutes, that the report was accepted by consensus and is to be placed on file.

III(h) <u>REPORT BY MILWAUKEE COUNTY SURVEYOR ON THE STATUS OF THE 2008 MILWAUKEE COUNTY SURVEYOR ACTIVITIES.</u>

Bauer: directed the committee to the staff report included with the meeting materials noting that multiple complete copies of PLSS Station dossier and Control Survey Summary Diagrams have been provided to Milwaukee County as part the Surveyor's 2008 efforts.

Bauer: stated for the minutes, that the report was accepted by consensus and is to be placed on file.

III(i) <u>REPORT BY SEWRPC STAFF ON THE STATUS OF MCAMLIS FLOODLAND MAPPING PROJECT.</u>

Bauer: directed the committee to the staff report included with the meeting materials noting that the project is scheduled to be completed through the end of 2010.

Bauer: stated for the minutes, that the report was accepted by consensus and is to be placed on file.

III(j) <u>REPORT BY SEWRPC STAFF ON THE STATUS OF THE REGIONAL WATER STUDY</u>

Bauer: directed the committee to the staff report included with the meeting materials noting that the preliminary plan has been completed, further stating that the final plan document is being prepared pending the completion of a socio-economic impact analysis that is now underway.

Bauer: stated for the minutes that the report was accepted by consensus and is to be placed on file.

III(k) <u>REPORT BY MILWAUKEE COUNTY DAS STAFF ON MCAMLIS FISCAL STATUS</u>

Kotze: directed the committee to a revised staff report delivered at the meeting noting that she would be replaced by Cynthia Pahl and would, after this meeting, no longer be providing the fiscal analysis report to the Committee.

Bauer: stated that the MCAMLIS Committee greatly appreciates Alex's work and that the fiscal reports have immeasurably improved over the time she has supported the Committee.

Kotze directed the Committee to the revised summary report based on a lower revenue projection obtained from Mr. La Fave. Further noting that the $4 account appeared to be in deficit based on the new revenue projection.

A series of questions and discussion followed with regard to possible accounting and project funding options that could be implemented to avert any possible deficit.

Bauer: stated that based on a consensus of the Committee that no particular action was needed today based on this report, but it will be revisited at our next meeting.

Bauer: stated for the minutes, that the report was accepted by consensus and is to be placed on file.

IV. <u>OLD BUSINESS</u>

IV(a) None

V. <u>NEW BUSINESS</u>

V(a) None

VI. <u>CORRESPONDENCE</u>

VII. <u>DATE, TIME AND PLACE OF NEXT MEETING</u>

September 22, 2009 @ 9:00am

VIII. <u>ADJOURNMENT</u>

Motion: Nehmer moved to adjourn
Second: Bennett motion carried unanimous

Respectfully submitted,

William C. Shaw
MCAMLIS Project Manager

DEPARTMENT OF TRANSPORTATION & PUBLIC WORKS
MILWAUKEE COUNTY LAND INFORMATION OFFICE

2711 West Wells Street, Rm 426, Milwaukee, WI 53208 (414) 278-2176

MEMORANDUM

TO: MCAMLIS Steering Committee
FROM: William C. Shaw, MCAMLIS Project Manager
DATE: September 10, 2009

SUBJECT: Enterprise Address System Project Status

BACKGROUND

The Milwaukee County Automated Mapping and Land Information System (MCAMLIS) Steering Committee approved a project to provide for the development of a Countywide "Enterprise Address System" (EAS).

It was determined that a need for an EAS was a result of the many County and Regional services that rely on high quality address information to effectively provide critical services.

To meet this need, the EAS project is designed to provide a comprehensive approach to the management of all Milwaukee County Address information.

The EAS Project focus is on the establishment of data, technology and organizational components required to serve all Milwaukee County units of government as well as the many individual public service agencies that use address information in their day-to-day operations.

ACTIVITIES THIS PERIOD – 7/09 – 9/09

- Completed primary delivery of EAS street centerline and address point location data in support of the Village of Bayside Dispatch Center (Positron) CAD system implementation project
- Develop, build, test and deploy Version 2.x of the MCLIO Interactive Mapping Service (attached MCLIO Interactive Map Service Dashboard and live demonstration)
- Reconcile the EAS database to allow dynamic linking of parcels, addresses, units and structures (attached; centerline to structure and address to building status maps)
- Reconcile EAS Street Centerline
    1. Completed Wauwatosa and West Allis geometry/attribute corrections (initial geocoding rate: 82.8%; final geocoding rate: 99.9%)
    2. Updated MCAMLIS geometry to include changes identified in the City of Milwaukee's June 2009 DIME file
    3. Using processes previously employed to rectify non-Milwaukee MCAMLIS centerlines, have begun identifying & correcting geometry/attribute errors within the City of Milwaukee

NEXT

- Ongoing effort toward incorporating multiple address source information
- Continue address integration implementing the countywide EAS Address Model
- EAS Status report to be followed by a live demonstration of the MCLIO Interactive Mapping Services website highlighting capabilities and improvements

Attach: MCAMLIS EAS Address Model Status: Structure-to-Address Relationship
MCAMLIS EAS Address Model Status: Centerline-to-Address Relationship
MCLIO Interactive Mapping Service Dashboard

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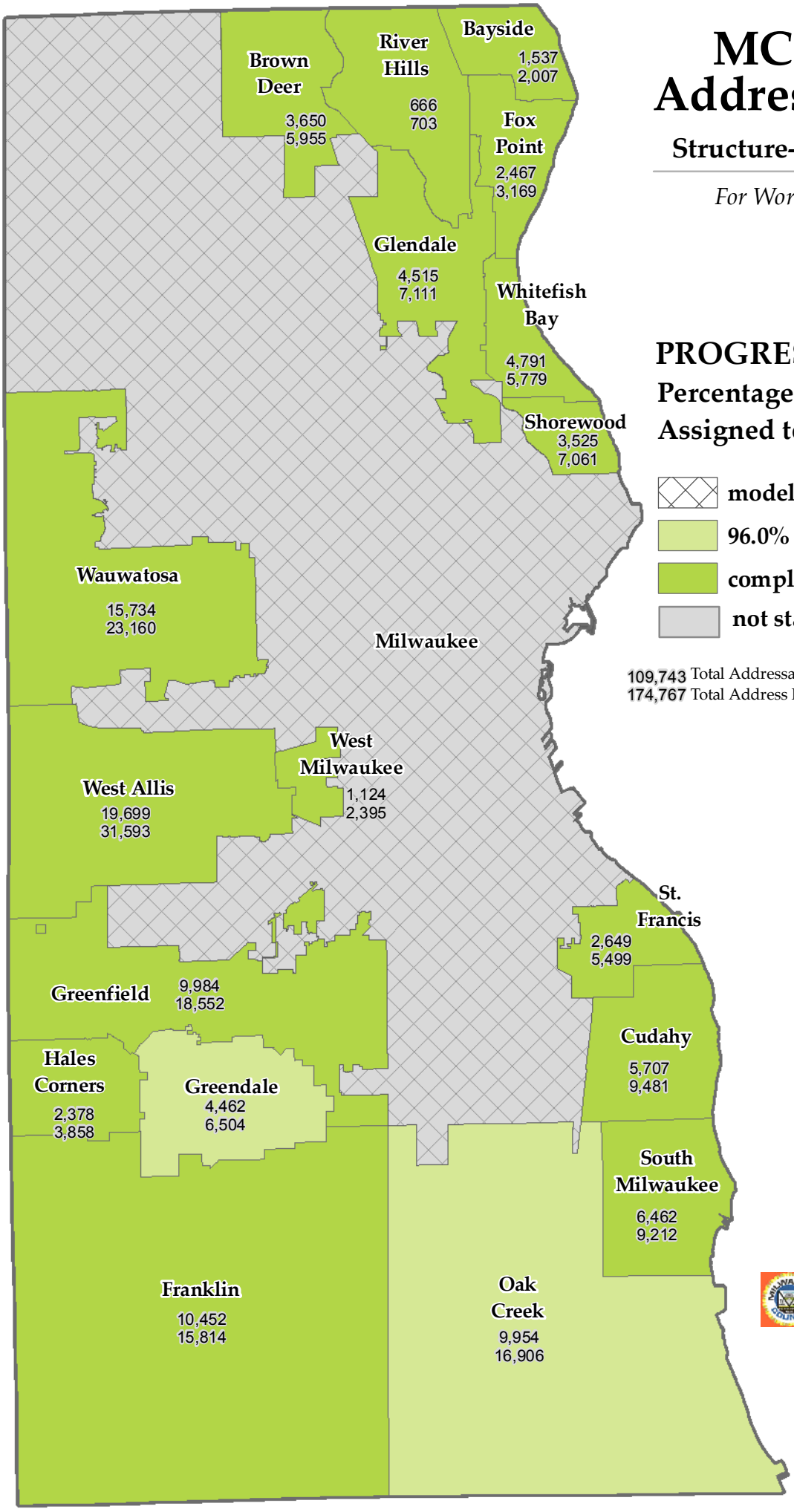
MCAMLIS EAS Address Model Status

Structure-to-Address Relationship

For Work Performed through 9-8-09



PROGRESS

Percentage of Addresses Assigned to Structures

- model to be constructed
- 96.0% - 98.0% (field collection required)
- complete / ongoing maintenance (>98%)
- not started: 60% complete (est.)

109,743 Total Addressable Building Polygons (excluding Milwaukee)
174,767 Total Address Records (excluding Milwaukee)

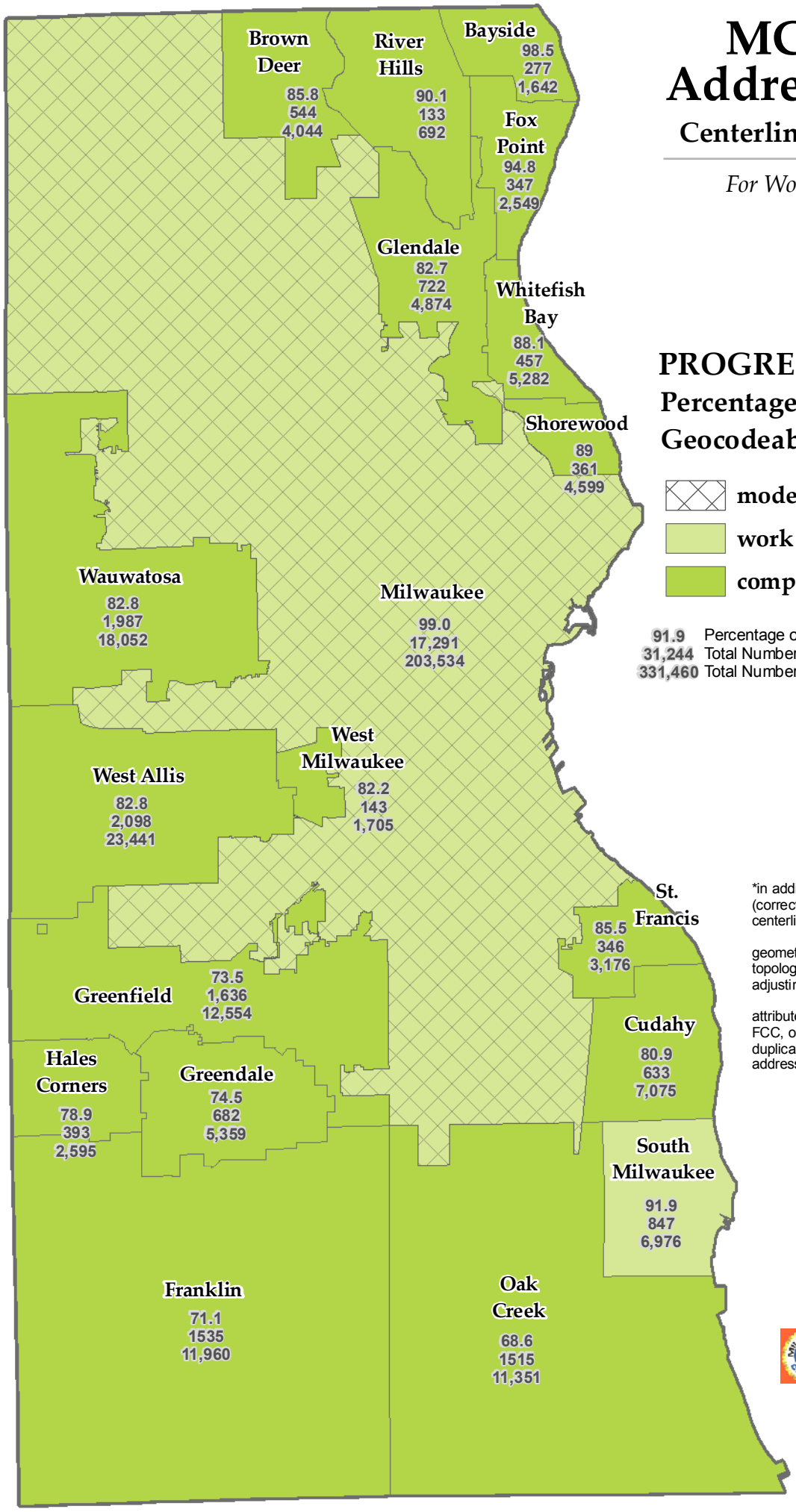
N

Milwaukee County Land Information Office

MCAMLIS EAS Address Model Status

Centerline-to-Address Relationship

For Work Performed through 9-8-09



PROGRESS

Percentage of Addresses Geocodeable to Centerline Segments

- model to be constructed
- work remaining* (<=99%)
- complete / ongoing maintenance (>99%)

91.9 Percentage of Geocodeable Addresses Prior to Error Correction
31,244 Total Number of Centerlines
331,460 Total Number of Unique Addresses (excluding units)

*in addition to work required to improve geocoding rates (correcting range gaps, range overlaps, null ranges, etc.), centerline error correction also includes the following:

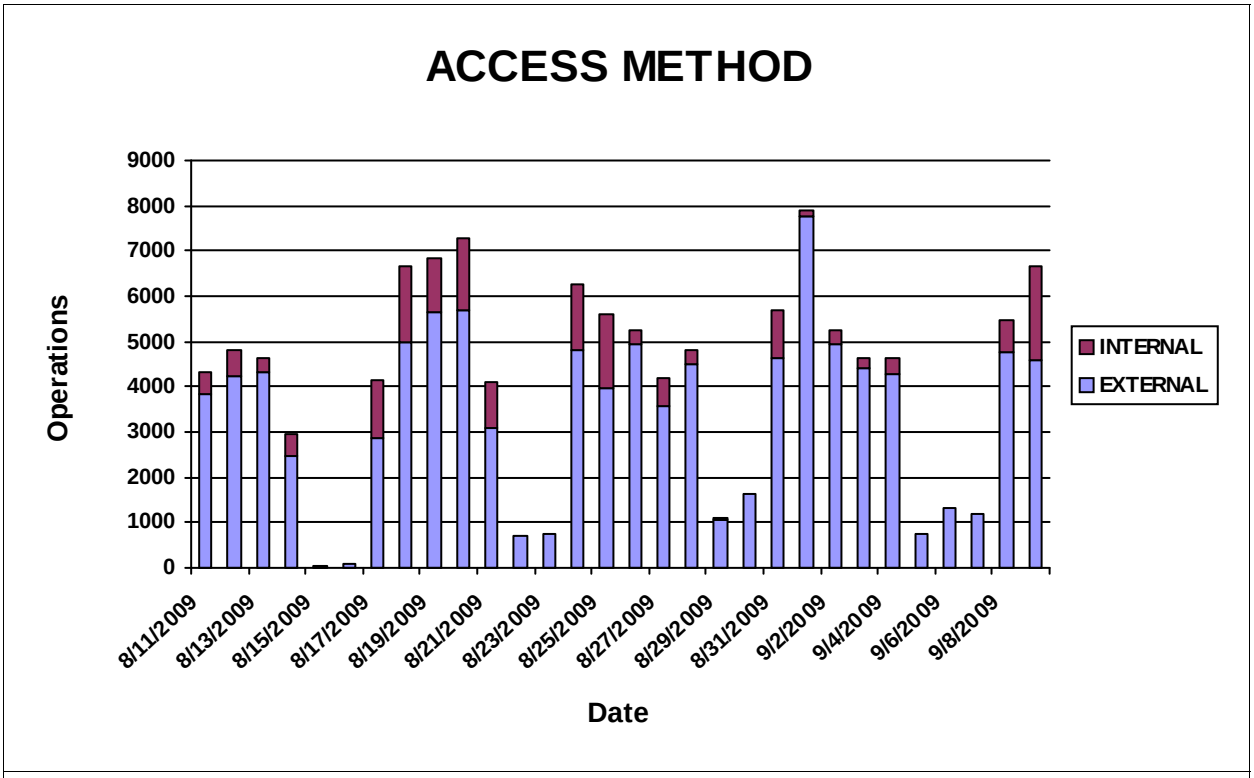
geometry correction:
topology / node analysis, intermodal & municipal boundary splits, adjusting alignment & intersection location, digitized direction, etc.

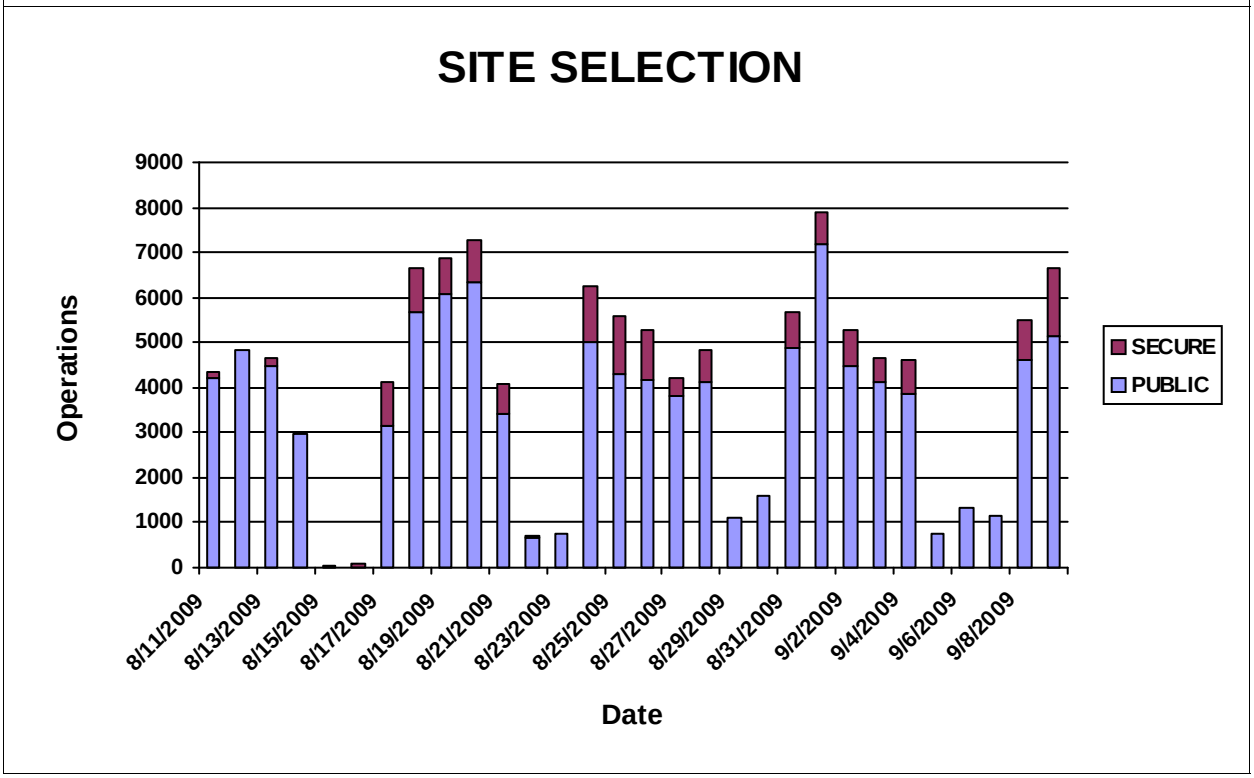
attribute correction:
FCC, owner, routability, L&R municipality, name/type/dir, duplicate/null centerline IDs, alternate names, address & building table corrections, highway table updates, etc.

N

Milwaukee County Land Information Office

MCLIO Map Services Dashboard





DEPARTMENT OF TRANSPORTATION & PUBLIC WORKS

MILWAUKEE COUNTY LAND INFORMATION OFFICE

2711 West Wells Street, Rm 426, Milwaukee, WI 53208 (414) 278-2176

MEMORANDUM

TO: MCAMLIS Steering Committee

FROM: William C. Shaw, MCAMLIS Project Manager

DATE: July 14, 2009

SUBJECT: Internet Access to the Milwaukee County Plats of Survey Project Status

BACKGROUND

The Southeastern Regional Planning Commission, under requirement of the Wisconsin State Statute, serves as Surveyor for Milwaukee County. As such, the Commission is responsible for receiving and filing copies of land survey plats prepared by land surveyors for real property parcels in Milwaukee County. The Commission has maintained the files concerned since 1984 and those filings are currently in hard copy format.

At its regular meeting held March 24th, 2009, the MCAMLIS Steering Committee approved a staff recommendation authorizing MCAMLIS and Commission Staff to jointly conduct efforts such that the existing hard copy files be converted to and maintained in digital format to facilitate user access through the Internet via the Milwaukee County Land Information Office (MCLIO) Interactive Mapping website. At the conclusion of this effort the responsibility for maintaining the files would shift to the Milwaukee County Automated Mapping and Land Information System and be managed under the direction of the MCAMLIS Project manager.

Activities this Period – 7/09-9/09 through 9/9/2009

- **Phase 1: Plat Conversion and Internet Application**

	Total	Completed	% Complete	% Remaining	$$	Est. $$
Scanning Drawers	38	8	21%	79%	$9,123	$40,000
Phase Management	200	34.5	17%	83%	$828	$5,000
Develop web Retrieval			50%	50%	$0	$4,000
Total					$9,951	$49,000

- **Phase 2: Digital File Indexing and Website Enhancement**

	Total	Completed	% Complete	% Remaining	$$	Est. $$
Address Match	45750	45750	100%	0%	$0	$0
Address Missing	27980	4391	16.5%	83.5%	$2,286	$33,700
New Plats	6000	0	0%	100%	$0	$6,300
Total	79730	50141	63%	37%	$2,286	$40,000

- Design, develop, test and deploy MCLIO web-based document retrieval procedures utilizing the MCLIO Interactive Mapping Service website
- Completed re-estimate of overall project costs (see revised table attached)

NEXT

- Continue regular scheduling of scanning process
- Implement automated and manual procedures necessary to reference digitally scanned plat documents to a correct parcel location
- Continue test and deployment of web based document retrieval procedures utilizing the MCLIO Interactive Mapping Service website

Attach: Proposal to provide Internet Access to the Milwaukee County Plats of Survey
Re-Estimate (8/14/2009)

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PROPOSAL TO PROVIDE INTERNET ACCESS TO THE MILWAUKEE COUNTY PLATS OF SURVEY

Re-Estimate (8/14/2009)

Phase 1: Plat Conversion and Internet Application			
Responsibility	**Task**	**Estimated Time to Complete**	**Estimated Cost**
Mid City Blue	• Scan approximately 80,000 plats • Convert to PDF format files • Assign unique file names	36 weeks	$40,000
MCAMLIS	• Scanning Product acceptance review and work monitoring allocation	200 Hrs @ $25/hr	$5,000
MCAMLIS	• Develop web application for access and retrieval of plat files by reference map search and database search • Host application on Milwaukee County Land Information Office website	40 Hrs @ $100/hr	$4,000
Totals		17 - 31 weeks	$49,000

Phase 2: Digital File Indexing and Website Enhancement			
Responsibility	**Task**	**Estimated Time to Complete**	**Estimated Cost**
Contractor or MCAMLIS staff	• Perform address matching to assign parcel ID numbers to 45,000 plat files • Research and manually assign parcel ID numbers and addresses for remaining 35,000 plat files	16 - 32 weeks	$40,000
Totals		16 - 32 weeks	$40,000

Phase 3: Annual Maintenance of Plats of Survey			
Responsibility	**Task**	**Estimated Time to Complete**	**Estimated Cost**
Selected Contractor or MCAMLIS staff	• Scan and index approximately 2,000 new plats each year	3 weeks	$5,000
MCAMLIS Staff	• Incorporate plats into application on Milwaukee County land information office website	1 weeks	$500
Totals		4 weeks	$5,500

Plat Scanning Cost Analysis

Number of Documents	*Size of Document*	*Cost*
2,353	11X17	$352.95
1	11X22	$0.90
332	12X18	$298.80
1	12X20	$0.90
298	13X17	$268.20
1	13X26	$1.35
1	13X28	$1.35
1	14X17	$0.90
2	14X22	$2.70
1	17X17	$1.35
10	17X22	$13.50
1	17X30	$1.35
1	17X36	$2.25
2	18X18	$2.70
401	18X24	$541.35
2	18X36	$4.50
1	19X29	$1.80
1	20X23	$1.80
1	20X24	$1.80
1	20X30	$2.25
2	21X30	$4.50
1	22X22	$1.80
4	22X30	$9.00
77	22X34	$207.90
9	24X24	$16.20
8	24X30	$18.00
1,287	24X36	$3,474.90
1	24X40	$2.25
4	24X42	$12.60
1	24X45	$3.60
3	24X48	$10.80
1	24X70	$5.40
1	25X30	$2.70
229	30X42	$927.45
2	30X48	$9.00
1	30X50	$4.95
1	30X54	$5.40
2	32X36	$7.20
1	34X42	$4.50
1	34X48	$5.40
4	34X57	$27.00
1	34X59	$6.75
3	36X36	$12.15

1	36X40	$4.50
1	36X42	$4.95
70	36X48	$378.00
1	36X54	$6.30
5	36X58	$33.75
2	36X60	$13.50
1	37X42	$4.95
1	9X17	$0.90
2	9X18	$1.80
15,264	LEGAL	$2,289.60
4	LETTER	$0.60
20,408	***Total Cost***	$9,021.00

DEPARTMENT OF TRANSPORTATION & PUBLIC WORKS

MILWAUKEE COUNTY LAND INFORMATION OFFICE

2711 West Wells Street, Rm 426, Milwaukee, WI 53208 (414) 278-2176

MEMORANDUM

TO: MCAMLIS Steering Committee

FROM: William C. Shaw, MCAMLIS Project Manager

DATE: September 11, 2009

SUBJECT: Milwaukee County 2009 Topographic Mapping Status

BACKGROUND

The project consists of the acquisition of aerial photography for mapping purposes, the updating of digital terrain model files, and the preparation and revision of 1:1200 scale (one inch equals 100 feet scale), two-feet contour interval, digital topographic mapping for an approximately 3.1square-mile project area known as the Marquette Interchange Reconstruction Project Area.

The digital terrain model files and digital topographic map files shall be prepared to meet National Map Accuracy Standards at a publication scale of 1:1200 (one inch equals 100 feet).

The Commission assisted MCAMLIS in obtaining the revised digital terrain model files and revised digital topographic mapping for the 3.1-square-mile Project Area. The terrain model file revision and mapping shall be completed in accordance with the standards and specifications set forth in the original Topographic Mapping Agreement of December 22, 2004. The Commission will review the digital files to ensure that the deliverable materials meet project specifications.

The work to be performed includes the acquisition of new aerial photography for mapping purposes, the update and revision of digital terrain model files, and the update and revision of large-scale digital topographic mapping for the 3.1-square-mile Project Area. Digital color orthophotography will not be prepared as part of the work described in this Addendum.

Activities this Period –7/07- 9/09

This project is complete, no further reoporting is required:

- Obtained new aerial photography for mapping purposes
- Updated and revised the digital terrain model files
- Re-constituted planimetric and topographic feature data within the omitted areas
- Posted final product on the MCLIO Interactive Mapping Services website
- Distributed updates to all regional and local units of government and MCAMLIS Utility partners

Attach: Exhibit describing updated area

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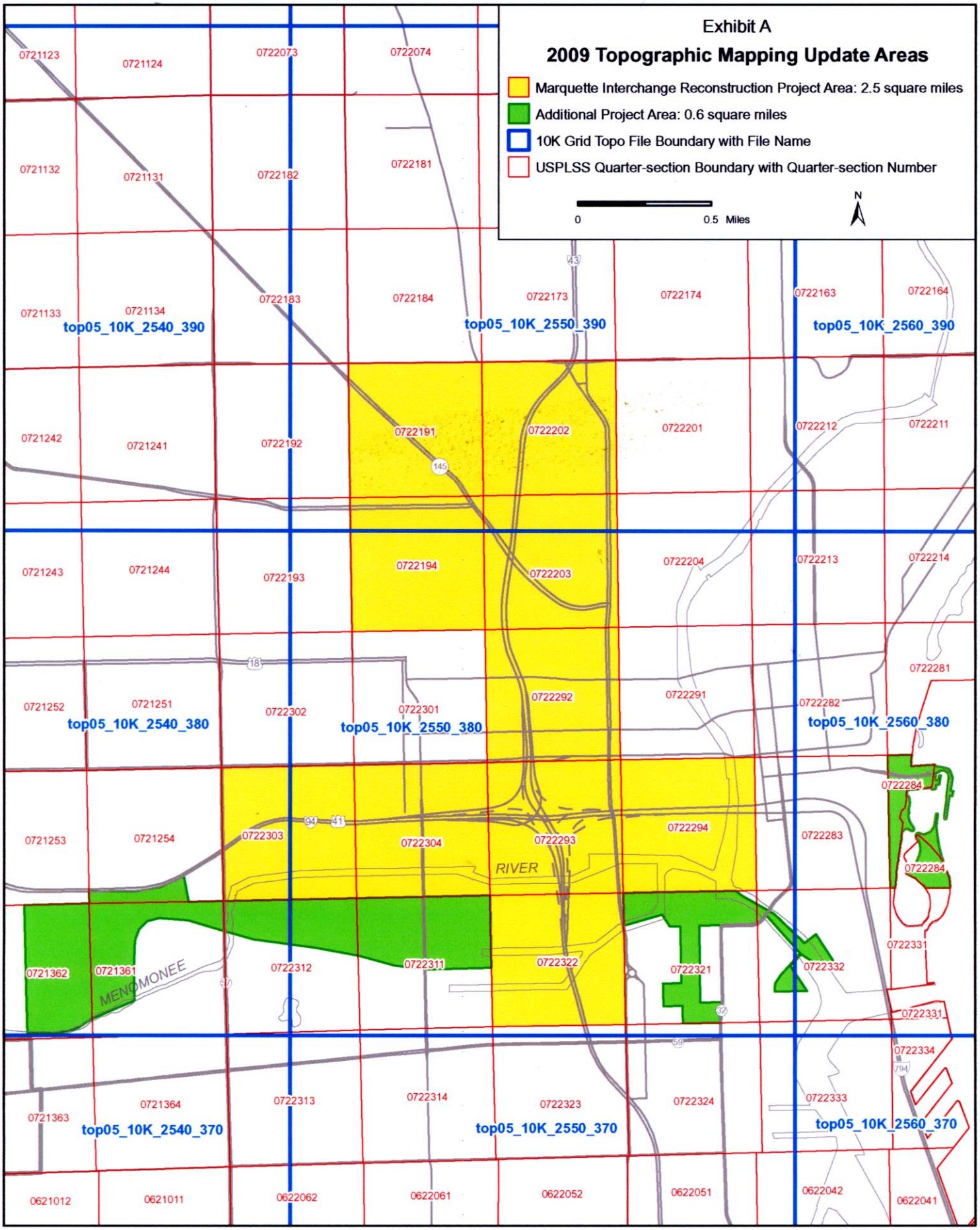

Map Document: (M:\Special_Projects\miscellaneous_nonworkcode_projects\2009TopoUpdateMilwCo\Topo2005\UpdateAreas_TGridBasemap_4report.mxd)
10/15/2008 -- 10:56:56 AM

DEPARTMENT OF TRANSPORTATION & PUBLIC WORKS

MILWAUKEE COUNTY LAND INFORMATION OFFICE

2711 West Wells Street, Rm 426, Milwaukee, WI 53208 (414) 278-2176

TO: MCAMLIS Steering Committee

FROM: William C. Shaw, MCAMLIS Project Manager

DATE: September 11, 2009

SUBJECT: LiDAR IMAGE PILOT PROJECT STATUS

BACKGROUND

The MCAMLIS Steering Committee authorized staff to enter into a partnership agreement with UWM to co-sponsor acquisition of LiDAR data within a pilot designated test area(s). The products developed within the proposed pilot test areas will be used in determining the suitability of using LiDAR to guide the maintenance of topographic and planimetric features data managed by MCAMLIS.

The value of the MCAMLIS 2005 Topographic Mapping (an investment of over $3.2 million) is depreciating as changes are made on the ground. Identifying those changes are difficult without a method of detecting where features have been modified, added or removed. LiDAR is thought to provide a mechanism to highlight and direct maintenance activities, thus allowing staff to incrementally maintain rather than conduct wholesale replacement of topographic mapping features, as has been done in the past.

A MCAMLIS Staff Report regarding the feasibility and value of using this technology in support of detecting topographic and planimetric maintenance requirements will be delivered to the MCAMLIS Steering Committee within the 3rd Quarter of 2009. A staff recommendation regarding future use and direction of LiDAR technology will be provided subsequently.

Activities this Period – 7/09 – 9/09

- Received 2009 topographic/planimetric feature data including the Marquette Interchange (July/August 2009)
- Conducted a thorough review of LiDAR-derived elevation data located within an area of the Marquette Interchange that was included in recent photogrametric updates (attached Report No.2 describing an Evaluation of LiDAR Products as a source for MCAMLIS Topographic Data)
- Reports 1 & 2 conclude the staff evaluation of LiDAR image data for purposes of MCAMLIS Planimetric and Topograhic maintenance

Next

- Summarize final report findings and provide recommendation(s)

Attach: LiDAR Pilot Project Report No. 2

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LiDAR Report #2: An Evaluation of LiDAR Products As a Source for MCAMLIS Topographic Data

Milwaukee County Land Information Office
August 12, 2009

Introduction

This study seeks to answer the following question: can LiDAR (setting aside other considerations such as cost) serve as a source of terrain data that is as accurate as data that is currently derived via photogrammetric techniques?

Methods Overview & Results

This study's boundaries are defined by the intersection of the LiDAR pilot study's AOI #1 and the area including the Marquette Interchange that recently received topographic/planimetric updates. This area of interest (AOI) was selected because it represents the narrowest window of time between the capture of LiDAR data and the capture of the aerial photography that served as a basis for the photogrammetric data. This allows for the most direct comparison of topographic data from the two sources.

Current photogrammetric DTM points, which are held to accuracy requirements of at least 90% of all points being within 1.0 feet of their true vertical position, were considered as the baseline from which an assessment of the accuracy of LiDAR elevation values was made. Ten sample plots of equal size were selected, each representing 1% by area of this study's AOI, capturing a sample population that consists of approximately 10% of the DTM points (Figure 1). Since the spatial resolution and distribution uniformity of the LiDAR data (1000 points per 1000 m^2, distributed uniformly) exceeds that of the photogrammetry-sourced DTM data (approx. 4.4 points per 1000 m^2, distributed at the discretion of the photogrammetrist), only those LiDAR DTM points within 1 meter of a photogrammetric DTM points were included in this study. This simplification facilitates a more direct comparison between LiDAR and photogrammetry by limiting the effect on mean elevation calculations of LiDAR points located where photogrammetric points were not placed. The mean and standard deviation of elevation values from each data source within each of the 10 sample areas are summarized in Table 1 and are discussed in the following section.

Figure 1: Sample Plots, Marquette Interchange Area

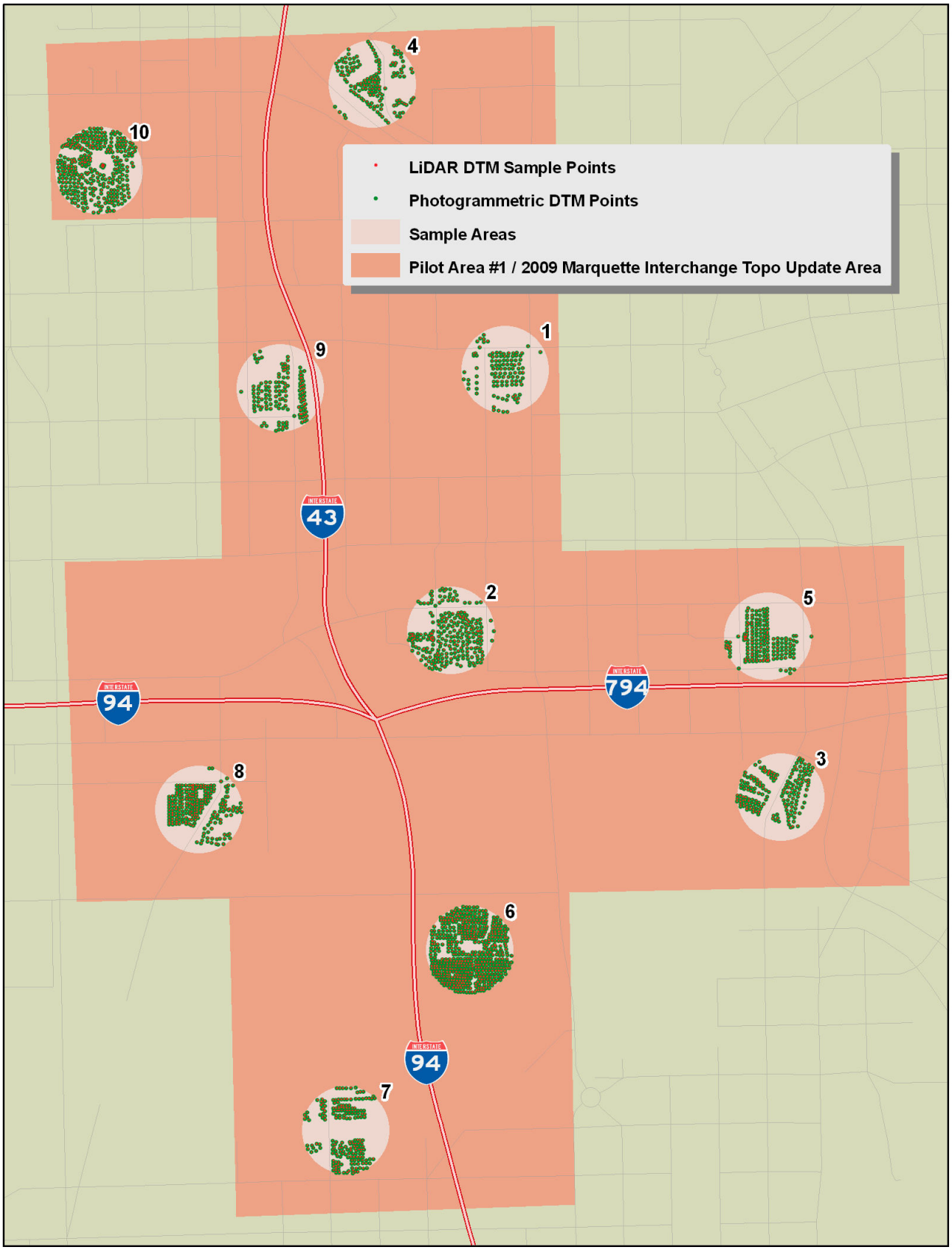


Table 1: Comparison of LiDAR and Photogrammetric Mean Elevation Values

SAMPLE PLOT	No. of Elevation Points		Elevation Points per 1000m^2		Mean Elevation, feet			Standard Deviation	
	LiDAR	PG	LiDAR	PG	LiDAR	PG	Absolute Difference	LiDAR	PG
1	334	109	10.0	3.3	596.83	597.05	0.22	5.61	5.77
2	780	248	23.3	7.4	631.49	631.46	0.03	4.67	4.62
3	546	178	16.3	5.3	588.38	588.79	0.41	2.07	1.71
4	478	152	14.3	4.5	663.42	663.42	0.01	5.60	5.81
5	510	168	15.2	5.0	589.16	589.54	0.38	1.07	1.03
6	1695	540	50.6	16.1	587.19	587.32	0.13	1.40	1.37
7	611	197	18.2	5.9	588.48	588.56	0.08	2.35	2.28
8	718	229	21.4	6.8	588.10	587.79	0.31	1.50	1.46
9	423	138	12.6	4.1	648.83	651.05	**2.23**	**13.98**	**11.63**
10	1067	339	31.8	10.1	679.46	679.51	0.05	2.67	3.08

Observations & Discussion

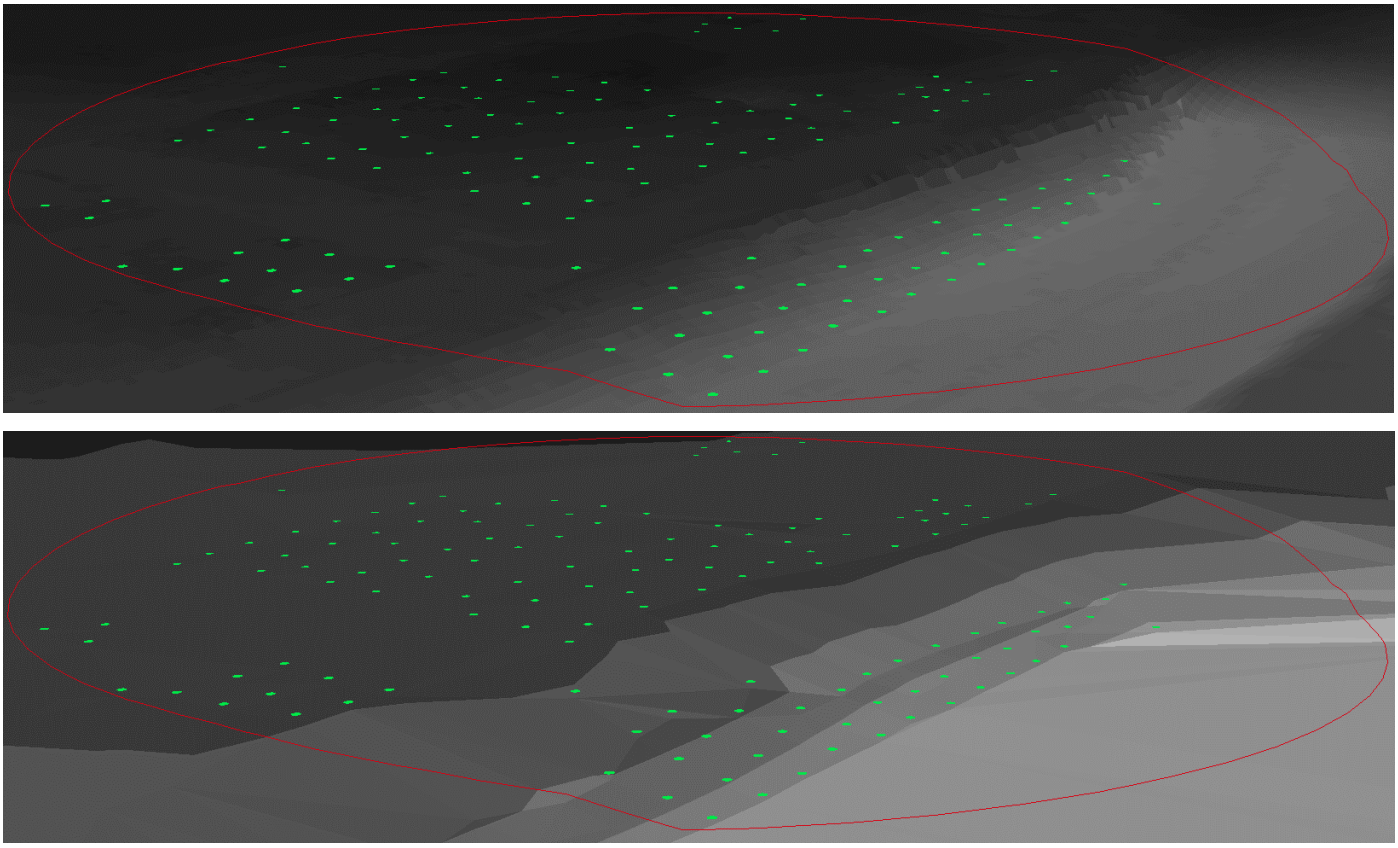
Nine of the ten sample plots exhibited mean LiDAR elevation values that were very comparable to those of the photogrammetric points (absolute difference), well within the current accepted tolerance of at least 90% of points being within +/- 1 foot of their true vertical position.

The greatest absolute difference in mean elevation values between LiDAR- and photogrammetry-sourced data (and the only observed mean value that lies outside of the +/- 1 foot tolerance) was observed in sample plot 9. This plot exhibited the greatest elevation variability among the 10 plots, with standard deviation values of 13.98 ft. (LiDAR) and 11.63 ft. (photogrammetric) that are roughly comparable between the two data sources. The variability in sample plot 9 could suggest that the differential between mean LiDAR and mean photogrammetric elevation values may be attributable more to outliers introduced through sample plot placement than to error.

Figure 2 provides a sense of the elevation variability found in plot 9. The lightest shading (lowest elevation, approx 622 ft.) is a portion of the I-43 corridor, sloping up approximately 17° to the darkest-shaded (highest elevation, approx. 662 ft.) portion of the image. In green are the photogrammetric DTM points that fell within study plot 9 (bounded by the red line) from which the surface in the bottom image was generated. Figure 2 also provides an example of the superior surface resolution available with LiDAR data: while a surface generated from photogrammetry-derived data is limited by the placement of elevation points, LiDAR's uniform placement of returns across a scanned area (1 elevation value per m^2 in this case) provides a much "smoother" and consistent surface model.

Figure 2: Sample Plot 9

LiDAR-derived surface (top), PG-derived surface (bottom)



Conclusion & Recommendations

LiDAR's accuracy as a source of elevation data is comparable to that of data provided through photogrammetric means. As evidenced is this study, a distinct advantage of LIDAR over photogrammetry is the "smoothness" in which surfaces are modeled, offering a representation of ground terrain that is more uniform and resolved than a surface created from photogrammetric sources. Assuming practical considerations such as cost are acceptable, LiDAR products should be adopted as the source of terrain data and other elevation-based digital products such as contour lines.

Summary MCAMLIS
9/13/2009

MCAMLIS Financial Report		AS OF 7/13/09		AS OF 9/13/09		9-22 Requests
12/31/08 Balance (Balance Sheet)*	$	949,873.62	$	949,873.62	$	949,873.62
2009 Revenue Activity (YTD)**						
2009 YTD Activity $1.00	$	76,771.00	$	105,789.00	$	105,789.00
2009 YTD Activity $4.00	$	304,722.00	$	419,581.00	$	419,581.00
Other Revenue	$	745.00	$	940.00	$	940.00
Total Revenue YTD 2009	$	382,238.00	$	526,310.00	$	526,310.00
2009 Expenditure Activity (YTD) including Encumbrances						
Personnel Services	$	-	$	-	$	-
Services	$	858,468.58	$	904,898.41	$	904,898.41
Commodities	$	1,101.50	$	1,401.50	$	1,401.50
Capital Outlay	$	19,480.00	$	19,480.00	$	19,480.00
Crosscharges	$	142,080.21	$	195,094.63	$	195,094.63
Total Expenditure YTD 2009	$	(1,021,130.29)	$	(1,120,874.54)	$	(1,120,874.54)
BALANCE AS OF 9-13-09	$	310,981.33	$	355,309.08	$	355,309.43
Remaining Projected Revenues for 2009**	$	392,762.00	$	298,690.00	$	298,690.00
Remaining Projected Expenditures for 2009***	$	(404,274.71)	$	(304,530.46)	$	(304,530.46)
2009 Projected Balance	$	(11,512.71)	$	(5,840.46)	$	(5,840.46)
Remaining Balance as of 9/13/09 (Based on Budget/Projectio	$	299,468.62	$	349,468.62	$	349,468.97
Remaining Unrestricted Balances Based on 12-31-08 Close						
12/31/08 Balance (Balance Sheet)*	$	949,873.97	$	949,873.97	$	949,873.97
Remaining Unrestricted Balance $1.00 Fee	$	240,361.97	$	240,361.97	$	240,361.97
Remaining Unrestricted Balance $4.00 Fee	$	709,511.68	$	709,511.68	$	709,511.68
Outstanding Authorized Commitments (Non-Encumbered) 2009-Onward						
$4.00 Fee						
2009 YTD Project Expenditures for $4 Fee (Encumbrances + Actual)	$	(954,000.20)	$	(908,287.20)	$	(843,287.20)
Additional Authorized Expenditures	$	(11,557.50)	$	(57,270.50)	$	(57,270.50)
2009 $4 Fee Expenditures YTD	$	(136,931.69)	$	(188,162.77)	$	(188,162.77)
2009 $4 Fee Remaining Projected Expenditures***	$	(180,718.47)	$	(129,487.23)	$	(129,487.23)
Remaining Unrestricted Balance $4.00 Fee	$	709,511.68	$	709,511.68	$	709,511.68
2009 YTD Revenue for $4 Fee	$	304,722.00	$	419,581.00	$	419,581.00
2009 $4 Fee Remaining Projected Revenues**	$	315,278.00	$	200,419.00	$	200,419.00
Reserve Revenue, not to be expended	$	(70,000.00)	$	(70,000.00)	$	(70,000.00)
Remaining Unrestricted Balance $4.00 Fee	$	(23,696.18)	$	(23,696.02)	$	41,303.98
Remaining Restricted Balance $4.00 Fee	$	(12,138.68)	$	33,574.48	$	98,574.48
$1.00 Fee						
2009 YTD Project Expenditures for $1 Fee (Encumbrances + Actual)	$	(82,679.90)	$	(109,601.42)	$	(109,601.42)
Additional Authorized Expenditures	$	(113,961.85)	$	(87,040.33)	$	(247,040.33)
2009 $1 Fee Expenditures YTD	$	(6,250.02)	$	(8,333.36)	$	(8,333.36)
2009 $1 Fee Remaining Projected Expenditures***	$	(6,250.02)	$	(4,166.64)	$	(4,166.64)
Remaining Unrestricted Balance $1.00 Fee	$	240,361.97	$	240,361.97	$	240,361.97
2009 YTD Revenue for $1 Fee	$	76,711.00	$	105,789.00	$	105,789.00
2009 $1 Fee Remaining Projected Revenues**	$	78,229.00	$	49,211.00	$	49,211.00
Reserve Revenue, not to be expended	$	(17,500.00)	$	(17,500.00)	$	(17,500.00)
Remaining Unrestricted Balance $1.00 Fee	$	168,720.18	$	168,720.22	$	8,720.22
Remaining Restricted Balance $1.00 Fee	$	282,682.03	$	255,760.55	$	255,760.55

+ 47,000 $8,020

Note: The $1 Fee Revenue can be used for no other purpose than Register of Deeds projects. Any amount not expended in this manner cannot be used for other MCAMLIS tasks.

* Balance includes both $1.00 and $4.00 fee revenue; Based on data provided by John La Fave and the 2007 ending operating balance, the balance sheet acount was divided between the two funds.

** Total revenues for 2009 are anticipated to be $565,000 for the $1 fee and $620,000 for the $4 fee plus $4,000 in misc. revenue. This is $50,000 less then total budgeted revenues. This is based on John La Fave's estimate that there will be approximatley 165,000 documents recorded in 2009.

*** Projected expenditures for 2009 are anticipated to be the budgeted amount for all accounts except for the 6000 accounts - which are covered in the additional authorized expenditure line. This is divided between the $1 and $4 fee based on the budgeted amounts.

Note: The amount of the reserve fund balance, as determined by the committee, is set at ten percent of current budgeted revenues. This equals $87,500 in 2009, of which $70,000 is for the $4 fee and $17,500 is for the $1 fee.

Summary MCAMLIS
9/21/2009

MCAMLIS Financial Report		AS OF9/13/09		TOTALS
12/31/08 Balance (Balance Sheet)*	$	949,873.97	$	949,873.97
2009 Revenue Activity (YTD)**				
2009 YTD Activity $1.00		$105,789.00		
2009 YTD Activity $4.00		$419,581.00		
Other Revenue	$	940.00		
Total Revenue YTD 2009				$526,310.00
2009 Expenditure Activity (YTD) including Encumbrances				
Personnel Services		$0.00		
Services		$904,898.41		
Commodities		$1,401.50		
Capital Outlay		$19,480.00		
Crosscharges		$195,094.63		
Total Expenditure YTD 2009				($1,120,874.54)
BALANCE AS OF 9-13-09			$	**355,309.43**
Remaining Projected Revenues for 2009**		$298,690.00		
Remaining Projected Expenditures for 2009***		($304,530.46)		
2009 Projected Balance				($5,840.46)
Remaining Balance as of 9/13/09 (Based on Budget/Projections)			$	**349,468.97**

Remaining Unrestricted Balances Based on 12-31-08 Close		
12/31/08 Balance (Balance Sheet)*	$	949,873.97
Remaining Unrestricted Balance $1.00 Fee	$	240,361.97
Remaining Unrestricted Balance $4.00 Fee	$	709,511.68

Outstanding Authorized Commitments (Non-Encumbered) 2009-Onward

$4.00 Fee

2009 YTD Project Expenditures for $4 Fee (Encumbrances + Actual)	$	(908,287.20)
Additional Authorized Expenditures	$	(57,270.50)
2009 $4 Fee Expenditures YTD	$	(188,162.77)
2009 $4 Fee Remaining Projected Expenditures***	$	(129,487.23)
Remaining Unrestricted Balance $4.00 Fee	$	709,511.68
2009 YTD Revenue for $4 Fee	$	419,581.00
2009 $4 Fee Remaining Projected Revenues**		$200,419.00
Reserve Revenue, not to be expended	$	(70,000.00)
Remaining Unrestricted Balance $4.00 Fee	$	**(23,696.02)**
Remaining Restricted Balance $4.00 Fee	$	**33,574.48**

$1.00 Fee

2009 YTD Project Expenditures for $1 Fee (Encumbrances + Actual)	$	(109,601.42)
Additional Authorized Expenditures	$	(87,040.33)
2009 $1 Fee Expenditures YTD	$	(8,333.36)
2009 $1 Fee Remaining Projected Expenditures***	$	(4,166.64)
Remaining Unrestricted Balance $1.00 Fee	$	240,361.97
2009 YTD Revenue for $1 Fee	$	105,789.00
2009 $1 Fee Remaining Projected Revenues**		$49,211.00
Reserve Revenue, not to be expended	$	(17,500.00)
Remaining Unrestricted Balance $1.00 Fee	$	**168,720.22**
Remaining Restricted Balance $1.00 Fee	$	**255,760.55**

Note: The $1 Fee Revenue can be used for no other purpose than Register of Deeds projects. Any amount not expended in this manner cannot be used for other MCAMLIS tasks.

* Balance includes both $1.00 and $4.00 fee revenue; Based on data provided by John La Fave and the 2007 ending operating balance, the balance sheet acount was divided between the two funds.

** Total revenues for 2009 are anticipated to be $565,000 for the $1 fee and $620,000 for the $4 fee plus $4,000 in misc. revenue. This is $50,000 less then total budgeted revenues. This is based on John La Fave's estimate that there will be approximatley 165,000 documents recorded in 2009.

*** Projected expenditures for 2009 are anticipated to be the budgeted amount for all accounts except for the 6000 accounts - which are covered in the additional authorized expenditure line. This is divided between the $1 and $4 fee based on the budgeted amounts.

Note: The amount of the reserve fund balance, as determined by the committee, is set at ten percent of current budgeted revenues. This equals $87,500 in 2009, of which $70,000 is for the $4 fee and $17,500 is for the $1 fee.

2009 Outstanding Commitments as of 9/13/09

Organization 1923-Automated Land Information System
$4.00 Fee

Vendor Name	Description	Amount Authorized	Amount Paid - Prior Years	2009 Amount Encumbered	Amount Paid 2009 YTD	Total Amount Paid 2009 (Encumbrances + Actual)	Remaining Unpaid Balance
SOUTHEASTERN WI REGIONAL	MCAMLIS Floodland Mapping Phase 1	$ 206,000.00	$ 197,353.00	$ 8,647.00	$ -	$ 8,647.00	$ -
SOUTHEASTERN WI REGIONAL	MCAMLIS Floodland Mapping Phase 2	$ 436,000.00	$ 24,000.00	$ 412,000.00	$ -	$ 412,000.00	$ -
SOUTHEASTERN WI REGIONAL	County Surveyor (per year*)	$ 77,175.00	$ -	$ -	$ 77,175.00	$ 77,175.00	$ -
SOUTHEASTERN WI REGIONAL	Topographic Mapping Project**	$ 3,264,304.00	$ 3,212,785.00	$ -	$ 51,519.00	$ 51,519.00	$ -
CITY OF MILWAUKEE	Cadastral Address Maintenance (per year*)	$ 83,652.00	$ -	$ 41,826.00	$ 41,826.00	$ 83,652.00	$ -
MILWAUKEE COUNTY	Enterprise Address System***	$ 272,000.00	$ 148,667.30	$ 56,849.96	$ 66,482.74	$ 123,332.70	$ -
MILWAUKEE COUNTY	North Shore Fire Department	$ 10,000.00	$ 2,900.00	$ -	$ 7,100.00	$ 7,100.00	$ -
Quarles & Brady	Copyright Review**	$ 10,000.00	$ -	$ -	$ 4,542.50	$ 4,542.50	$ 5,457.50
Pictometry	Oblique Imagery Technology	$ 98,590.00	$ 52,458.00	$ -	$ 46,132.00	$ 46,132.00	$ -
Latitude	Server Design	$ 35,000.00	$ 35,000.00			$ -	$ -
LiDar Project		$ 10,000.00	$ -	$ 3,900.00	$ 1,287.00	$ 5,187.00	$ 4,813.00
MILWAUKEE COUNTY	Internet Access to Plats of Survey	$ 136,000.00	$ -	$ 81,932.10	$ 7,067.90	$ 89,000.00	$ 47,000.00
	TOTAL	**$ 4,638,721.00**	**$ 3,673,163.30**	**$ 605,155.06**	**$ 303,132.14**	**$ 908,287.20**	**$ 57,270.50**

Data from Milwaukee County Advantage System and Gary Drent, A&E as of September 1, 2009

Notes

*Per Year authorizations are reauthorized each year therefore they do not include prior year expenditures or authorizations.

** On September 30, 2008 the MCAMLIS Steering Committee authorized two additional expenditure authorities for existing projects: $7,500 for the Copyright Review project and $11,594 for the Topographical Mapping Project.

*** On March 24, 2009 the MCAMLIS Steering Committee authorized $65,000 of additional expenditure authority for the Enterprise Address System.

Authorized $1.00 Fee Projects

$1.00 Fee Authorized Projects as of September, 2009								
Year Authorized	**Project Description**	**Amount Authorized**	**Amount Paid 2002-2008**	**Amount Paid 2009 YTD**	**Amount Encumbered 2009**	**2009 Total Amount Paid (Encumbrances + Actual)**	**Total Amount Paid for Project (2002-2009)**	**Remaining Unpaid Balance**
2002	Large Format Scanner	$13,090.00	$13,090.00	$0.00	$0.00	$0.00	$13,090.00	$0.00
2003	Improvements to Computer System	$240,000.00	$240,000.00	$0.00	$0.00	$0.00	$240,000.00	$0.00
2003	Electronic Recording	$45,000.00	$30,550.81	$0.00	$0.00	$0.00	$30,550.81	$0.00
2003	External Hard Drive/Two SNAP Servers	$40,000.00	$40,000.00	$0.00	$0.00	$0.00	$40,000.00	$0.00
2003/2005	Digital Images; Conversion of Microfiche	$400,000.00	$400,000.00	$0.00	$0.00	$0.00	$400,000.00	$0.00
2005	Scanning A Card	$50,000.00	$50,000.00	$0.00	$0.00	$0.00	$50,000.00	$0.00
2005	Improvements to Computer System II	$450,000.00	$450,000.00	$0.00	$0.00	$0.00	$450,000.00	$0.00
2007	Improvements to Computer System III	$150,000.00	$150,000.00	$0.00	$0.00	$0.00	$150,000.00	$0.00
2008	Improvements to Computer System IV	$150,000.00	$73,358.25	$75,010.20	$1,631.55	$76,641.75	$150,000.00	$0.00
2009	Improvements to Computer System V	$120,000.00	$0.00	$27,007.77	$5,951.90	$32,959.67	$32,959.67	$87,040.33
Total		**$1,658,090.00**	**$1,373,640.81**	**$102,017.97**	**$7,583.45**	**$109,601.42**	**$1,556,600.48**	**$87,040.33**
Data from John La Fave, Register of Deeds as of 9/10/09								

2009 Fiscal Report as of 9/13/09 - MCAMLIS					
Rev / Exp	Revenue / Expense Name	Budget Amount	Actual Amount	Encumbrance	Net Amount
3237	RETAINED FEES -- $4.00 PORTION	$ 700,000.00	$ 419,581.00	$ -	$ (280,419.00)
3238	RETAINED FEES -- $1.00 PORTION	$ 175,000.00	$ 105,789.00	$ -	$ (69,211.00)
RECORD & FILING FEES		**$ 875,000.00**	**$ 525,370.00**	**$ -**	**$ (349,630.00)**
4999	OTHER MISC REVENUE	$ 4,000.00	$ 940.00	$ -	$ (3,060.00)
OTHER REVENUE		**$ 4,000.00**	**$ 940.00**	**$ -**	**$ (3,060.00)**
Total Revenues		**$ 879,000.00**	**$ 526,310.00**	**$ -**	**$ (352,690.00)**
5001	DIRECT LABOR CHARGED	$ -	$ -	$ -	$ -
PERSONAL SERVICES		**$ -**	**$ -**	**$ -**	**$ -**
6080	POSTAGE	$ 500.00	$ 74.47	$ -	$ 425.53
6147	PROF. SERV.-DATA PROCESS	$ 35,000.00	$ 6,854.85	$ 4,893.30	$ 23,251.85
6148	PROF. SERV-RECURRING OPER	$ 1,041,605.00	$ 393,392.77	$ 483,019.90	$ 165,192.33
6637	R/M COMPUTER EQUIP	$ 12,150.00	$ 12,500.00	$ -	$ (350.00)
6812	MEETINGS OTHER AUTH TRAVL	$ 6,000.00	$ 4,163.12	$ -	$ 1,836.88
6999	SUNDRY SERVICES	$ -	$ -	$ -	$ -
SERVICES		**$ 1,095,255.00**	**$ 416,985.21**	**$ 487,913.20**	**$ 190,356.59**
7915	COMPUTER SOFTWARE	$ 6,102.00	$ 1,401.50	$ -	$ 4,700.50
COMMODITIES		**$ 6,102.00**	**$ 1,401.50**	**$ -**	**$ 4,700.50**
8558	COMPUTER EQUIPMENT-REPL>$500	$ 19,480.00	$ -	$ 19,480.00	$ -
CAPITAL OUTLAYS		**$ 19,480.00**	**$ -**	**$ 19,480.00**	**$ -**
9706	PRO SERV DIV SERVICES	$ 279,568.00	$ 178,427.91	$ -	$ 101,140.09
9742	DAS SERVICES	$ 25,000.00	$ 16,666.72	$ -	$ 8,333.28
CROSSCHARGES		**$ 304,568.00**	**$ 195,094.63**	**$ -**	**$ 109,473.37**
Total Expenses		**$ 1,425,405.00**	**$ 613,481.34**	**$ 507,393.20**	**$ 304,530.46**
Grand Totals		**$ (546,405.00)**	**$ (87,171.34)**	**$ (507,393.20)**	**$ (48,159.54)**

Blanace Sheet Account Reconciliation			
2007 Ending Balance		$	1,395,573
2008 Fund Transfer		$	(600,000)
2008 Year End Balance		$	154,301
		$	**949,874**
$4 Fee Balance Sheet			
2007 Balance		$	1,098,594
2008 Adjustment (Fund Transfer)		$	(600,000)
2008 Year End Balance		$	210,918
		$	**709,512**
$1 Fee Balance Sheet			
2007 Balance		$	296,979
2008 Adjustment (Fund Transfer)		$	-
2008 Year End Balance		$	(56,617)
		$	**240,362**

		2009 Budget	2010 Request
5084-1922	MCAMLIS		
	R3 SUMMARY AND DETAIL		
PS	Personal Services	0	267,714
SV	Services	387,452	264,592
CM	Commodities	5,000	830
DD	Debt & Depreciation	0	1,095
CP	Capital Outlay	19,480	20,000
XC	Crosscharges - Service Chgs	292,068	105,768
AB	Crosscharges - Abatements	0	0
TOTEXP	Total Expenditures	704,000	660,000
OD	Other Direct Revenue	704,000	620,523
IR	Indirect Revenue	0	39,477
TOTREV	Total Revenues	704,000	660,000
LEVY	Property Tax Levy	0	(0)
5199	Salaries-Wages Budget	0	129,118
5312	Social Security Taxes	0	9,870
5407	OPEB Liability	0	29,024
5420	Employee Health Care	0	31,728
5421	Employee Pension	0	25,584
5422	Legacy Healthcare	0	27,522
5423	Legacy Pension	0	14,868
		0	267,714
6050	Contract Pers Serv Short	0	10,000
6080	Postage	500	500
6147	Prof. Serv-Data Process	35,000	35,000
6148	Prof. Serv-Recurring Oper	333,802	189,793
6336	Internet Expenses	0	299
6637	R/M Computer Equip	12,150	22,700
6803	Auto Allowance	0	300
6812	Meetings Other Auth travel	6,000	6,000
		387,452	264,592
7910	Office Supplies	0	630
7915	Computer Software	5,000	0
7917	DP Supplies	0	200
		5,000	830

		2009 Budget	2010 Request
8010	Debt Depreciation	0	1,095
8558	Computer Equip Replc	19,480	20,000
9702	Technical Support & Infrastructure	0	7,234
9706	Professional Serv	279,568	42,171
9719	Risk Management Services	0	173
9742	DAS Services	12,500	12,500
9768	Application Chgs - Network	0	2,971
9769	Application Chgs - Mainframe	0	144
9771	HRIS Allocation	0	905
9774	Worker Comp Med and WC Pay	0	745
9776	Telephone Allocation	0	704
9777	Insurance Services	0	8,985
9778	Worker's Compensation Adm	0	127
9779	Central Service Allocation	0	2,743
9781	CH Complex Space Rental	0	25,363
9788	PC Charges	0	1,005
		292,068	**105,768**
3237	Retained Fees $4 portion	700,000	615,523
3806	Professional Services	0	39,477
4999	Other Misc Revenue	4,000	5,000
		704,000	**660,000**

1 REQ R3 NO VARIANCE {ADM} {3470, Land Records Modernization}

Object	Line Name	PY2ACT	PY2BUD	PY1ACT	PY1BUD	CYBUD	DEPRQFN
3470	Land Records Modernization						
	R3 SUMMARY AND DETAIL						
SV	Services						150,000
TOTEXP	Total Expenditures						150,000
OD	Other Direct Revenue						150,000
TOTREV	Total Revenues						150,000
LEVY	Property Tax Levy						
6148	Prof. Serv-Recurring Oper						150,000
3238	Retained Fees-$1 Portion						150,000

DEPARTMENT OF TRANSPORTATION & PUBLIC WORKS

MILWAUKEE COUNTY LAND INFORMATION OFFICE

2711 West Wells Street, Rm 426, Milwaukee, WI 53208 (414) 278-2176

MEMORANDUM

TO: MCAMLIS Steering Committee

FROM: William C. Shaw, MCAMLIS Project Manager

DATE: September 11, 2009

SUBJECT: 2010 MCAMLIS Orthophotography Project Planning and Staff Recommendation

BACKGROUND

At five-year intervals in years ending in zero and five, SEWRPC typically acquires aerial photography/orthophotography sufficient to cover its seven-county planning jurisdiction and immediate environs. The 2010 program envisions the acquisition of 1-foot pixel, color, and digital orthophotography for the entire seven county region. Milwaukee County, however, has requested consideration of additionally acquiring 4-inch pixel, color, digital orthophotography along with 4-inch pixel, color, digital Oblique image photography funded by a combination of USDOT STF-M funds and MCAMLIS matching funds.

Alternatively, 6-inch pixel, color, digital orthophotography is available with or without oblique image photography.

PROPOSAL

Options specified on the following page require the inclusion of 1-foot pixel, color, and digital orthophotography meeting USGS digital orthophotography performance specifications. Pictometry AccuPLUS products are not currently certified to be funded by USGS and therefore must be combined with either 1-foot or 6-inch digital orthophotography that meet USGS requirements to be included as part of the 2010 SEWRPC Orthophotography Project.

Note: USGS Orthophotography performance specifications with regard to the AccuPLUS product(s) are currently under review. Phil Evenson, the Regional Orthophotography Project manager, allows that funding the AccuPLUS product(s) would be contingent upon the comparison of future AccuPLUS product(s) obtained under this agreement through the development and application of a performance specification to certify accuracies via field survey work conducted in accordance with SEWRPC, Milwaukee County Surveyor, MCAMLIS and Aerometric Engineering personnel. The results of this test against the (yet to be determined) performance specification will be used to further certify or de-certify AccuPLUS product(s) as part of any future regional orthophotography programs.

Additionally, Options 3 through 6 will require software maintenance and professional services distribution costs totaling $28,000 spread over 2 yrs.

Option 1: 1-FOOT PIXEL, COLOR, DIGITAL ORTHOPHOTOGRAPHY

The acquisition of 1-foot pixel, color, digital orthophotography at a cost of $5,554 (see Table 1: Final Budget, 2010 SEWRPC Orthophotography Project). This cost is being offset by a combination of USGS, USDOT STF-M & SEWRPC contributions.

Total estimated cost to MCAMLIS of this option is $5,554

Option 2: 6-INCH PIXEL, COLOR, DIGITAL ORTHOPHOTOGRAPHY

The acquisition of 6-inch pixel, color, digital orthophotography at a cost of $55,044 (verbal quote, Phil Evenson, 2010 SEWRPC Orthophotography Project). This cost is being offset by a combination of USGS, USDOT STF-M & SEWRPC contributions.

Total estimated cost to MCAMLIS of this option is $55,044

Option 3: 1-FOOT PIXEL ORTHOPHOTOGRAPHY & PICTOMETRY INTERNATIONAL ACCUPLUS 6-INCH PIXEL

a) The acquisition of 1-foot pixel, color, digital orthophotography at a cost of $5,554 (see Table 1: Final Budget, 2010 SEWRPC Orthophotography Project). This cost is being offset by a combination of USGS, USDOT STF-M & SEWRPC contributions.

b) The acquisition of 6-inch pixel, color, digital orthophotography Pictometry International AccuPLUS 6-inch pixel, color, digital orthophotography and oblique image photography combined. The cost of the Pictometry AccuPLUS product is $118,944 (see Pictometry AccuPLUS Quote dated 7/24/2009). This cost is expected to be offset by a minimum of $95,155 obtained from USDOT STF-M funds. The remaining cost of $63,833 is required from MCAMLIS.

Total estimated cost to MCAMLIS of this option is $5,554 + $23,789 + $28,000= $57,343

Option 4: 1-FOOT PIXEL ORTHOPHOTOGRAPHY & PICTOMETRY INTERNATIONAL ACCUPLUS 4-INCH PIXEL

a) The acquisition of 1-foot pixel, color, digital orthophotography at a cost of $5,554 (see Table 1: Final Budget, 2010 SEWRPC Orthophotography Project). This cost is being offset by a combination of USGS, USDOT STF-M & SEWRPC contributions.

b) The acquisition of 4-inch pixel, color, digital orthophotography Pictometry International AccuPLUS 4-inch pixel, color, digital orthophotography and oblique image photography combined. The cost of the Pictometry AccuPLUS product is $158,988 (see Pictometry AccuPLUS Quote dated 7/24/2009). This cost is expected to be offset by a minimum of $95,155 obtained from USDOT STF-M funds. The remaining cost of $63,833 is required from MCAMLIS.

Total estimated cost to MCAMLIS of this option is $5,554 + $63,833 + $28,000 = $97,387

Option 5: 6-INCH PIXEL ORTHOPHOTOGRAPHY & PICTOMETRY INTERNATIONAL ACCUPLUS 6-INCH PIXEL

a) The acquisition of 6-inch pixel, color, digital orthophotography at a cost of $55,044 (verbal quote, Phil Evenson, 2010 SEWRPC Orthophotography Project). This cost is being offset by a combination of USGS, USDOT STF-M & SEWRPC contributions.

b) The acquisition of 6-inch pixel, color, digital orthophotography Pictometry International AccuPLUS 6-inch pixel, color, digital orthophotography and oblique image photography combined. The cost of the Pictometry AccuPLUS product is $118,944 (see Pictometry AccuPLUS Quote dated 7/24/2009). This cost is expected to be offset by a minimum of $95,155 obtained from USDOT STF-M funds. The remaining cost of $23,789 is required from MCAMLIS.

Total estimated cost to MCAMLIS of this option is $55,044 + $23,789 + $28,000= $106,833

Option 6: 6-INCH PIXEL ORTHOPHOTOGRAPHY & PICTOMETRY INTERNATIONAL ACCUPLUS 4-INCH PIXEL

a) The acquisition of 6-inch pixel, color, digital orthophotography at a cost of $55,044 (verbal quote, Phil Evenson, 2010 SEWRPC Orthophotography Project). This cost is being offset by a combination of USGS, USDOT STF-M & SEWRPC contributions.

b) The acquisition of 4-inch pixel, color, digital orthophotography Pictometry International AccuPLUS 4-inch pixel, color, digital orthophotography and oblique image photography combined. The cost of the Pictometry AccuPLUS product is $158,988 (see Pictometry AccuPLUS Quote dated 7/24/2009). This cost is expected to be offset by a minimum of $95,155 obtained from USDOT STF-M funds. The remaining cost of $63,833 is required from MCAMLIS.

Total estimated cost to MCAMLIS of this option is $55,044 + $63,832 + $28,000 = $146,876

RECOMMENDATION

Staff recommends:

- MCAMLIS Steering Committee approval of **Option 4:** 1-FOOT PIXEL ORTHOPHOTOGRAPHY & PICTOMETRY INTERNATIONAL ACCUPLUS 4-INCH at an estimated cost to MCAMLIS of $97,387.
  a) **Option 2:** 6-INCH PIXEL, COLOR, DIGITAL ORTHOPHOTOGRAPHY that is the current digital orthophotography benchmark set in 2005. This option is less expensive with a cost to MCAMLIS of $55,044 than Option 4 but does not include digital oblique image photography
  b) **Option 3:** 1-FOOT PIXEL ORTHOPHOTOGRAPHY & PICTOMETRY INTERNATIONAL ACCUPLUS 6-INCH could be considered a second choice at an estimated cost to MCAMLIS of $57,343. This option is recommended to be considered if funding is of ultimate concern. This would have adequate resolution but lower resolution than the 2008 Pictometry image photography which is 4-inch and has proved to be well suited due to its superior quality and capability for advanced applications
  c) **Option 1:** 1-FOOT PIXEL, COLOR, DIGITAL ORTHOPHOTOGRAPHY is the least expensive option at a cost to MCAMLIS of $5,554 but misses the mark with regard to a multitude of applications and high-quality, high-resolution needs that have evolved over time and does not include oblique image photography

d) **Option 5**: 6-INCH PIXEL ORTHOPHOTOGRAPHY & PICTOMETRY INTERNATIONAL ACCUPLUS 6-INCH **& Option 6:** 6-INCH PIXEL ORTHOPHOTOGRAPHY & PICTOMETRY INTERNATIONAL ACCUPLUS 4-INCH are not recommended due to cost and unnecessary high-resolution product redundancy

- Detailed Related Cost and Payment Distribution of recommended Options 3 or 4

a) **Option 4:** 12″ certified orthophotography $5,554, Pictometry, Inc. $158,988 over 2 yrs ($95,155 in 2010 - $63,833 in 2011) for imagery acquisition & digital image processing, $13,000 over 2 yrs. ($6,500 in 2010 - $6,500 in 2011) for specialized website enabling software and $15,000 over 2yrs ($7,500 in 2010 - $7,500 in 2011) for professional services to assist deployment.

Item	2010		2011		Totals
	SEWRPC	MCAMLIS	SEWRPC	MCAMLIS	
12” USGS Certified Orthophotography	$39,663	$5,554	$0	$0	$45,217
4" AccuPLUS Imagery	$95,155	$0	$0	$63,833	$158,988
Pictometry Image Navigator	$0	$6,500	$0	$6,500	$13,000
Professional Services	$0	$7,500	$0	$7,500	$15,000
Subtotal	$134,818	$19,554	$0	$77,833	$232,205
Project Totals	$154,372		$77,833		$232,205

b) **Option 3:** 12″ certified orthophotography $5,554, Pictometry, Inc. $118,944 over 2 yrs ($95,155 in 2010 - $23,789 in 2011) for imagery acquisition & digital image processing, $13,000 over 2 yrs. ($6,500 in 2010 - $6,500 in 2011) for specialized website enabling software and $15,000 over 2yrs ($7,500 in 2010 - $7,500 in 2011) for professional services to assist deployment.

Item	2010		2011		Totals
	SEWRPC	MCAMLIS	SEWRPC	MCAMLIS	
12” USGS Certified Orthophotography	$39,663	$5,554	$0	$0	$45,217
4" AccuPLUS Imagery	$95,155	$0	$0	$23,789	$118,944
Pictometry Image Navigator	$0	$6,500	$0	$6,500	$13,000
Professional Services	$0	$7,500	$0	$7,500	$15,000
Subtotal	$134,818	$19,554	$0	$37,789	$192,161
Project Totals	$154,372		$37,789		$192,161

Attach: 2010 SEWRPC Orthophotography Project, Table 1, Final Budget
Pictometry International, AccuPLUS Quote # 072409DL
Pictometry International, AccuPLUS Technical Specifications

* * * * *

Table 1

Final Budget

2010 SEWRPC Orthophotography Project

Regional Base Product: 12-inch Color Orthophotos

Source of Revenue	Amount	Percent of Total
U.S. Geological Survey	$156,000	34.1
U.S. Department of Transportation (STP-M)	210,400	45.9
SEWRPC	30,000	6.6
Counties (Apportioned by Area) Kenosha .....$6,345 Milwaukee .....5,544 Ozaukee .....5,359 Racine .....7,823 Walworth .....13,244 Washington.....9,979 Waukesha.....13,306 $61,600	61,600	13.4
Total	$458,000	100.0

Note: These are preliminary budget amounts as of August 2009.

jgm 08-31-09
#140448 v4 - PreRevBudget/Tbl1

AccuPLUS Quote

Pictometry®
Visual Intelligence™

DATE	QUOTE #
7/24/2009	072409DL

BILL TO
MCAMLIS
Bill Shaw
2711 Well St.
City Campus Room 426
Milwaukee, WI 53208

SHIP TO
MCAMLIS
Bill Shaw
2711 Well St.
City Campus Room 426
Milwaukee, WI 53208

P.O. Number	Customer ID	REP	SHIP	Terms	PROJECT
PO #	Milwaukee, WI	DL	Pictometry	TBD	WIMILW10

AccuPLUS Ortho and Oblique Imagery

Sectors	ITEM CODE	DESCRIPTION	PRICE EACH	AMOUNT
269	4" AccuPLUS*	4" GSD Orthos and Oblique Imagery	591.03	$158,987.07
269	*6" AccuPLUS**	6" GSD Orthos and Oblique Imagery	442.17	$118,943.73
	**AccuPLUS Accuracy Specifications Attached* **Pricing based upon a 6 year contract with out clause for years 3-6*			

LiDAR and Derivative LiDAR Products

Sq/MI	ITEM CODE	DESCRIPTION	PRICE EACH	AMOUNT
242	*LiDAR**	1.0M Point Spacing LiDAR/suitable for 2' contours	70.00	$16,940.00
242	*CONTOUR (2')*	Contour Data (2 foot contours)	15.00	$3,630.00
242	*LiDAR**	.7M Point Spacing LiDAR/suitable for 1' contours	180.00	$43,560.00
242	*CONTOUR (1')*	Contour Data (1 foot contours)	15.00	$3,630.00
242	*DEM*	Priced per sq mi	15.00	$3,630.00
242	*DSM*	Priced per sq mi	15.00	$3,630.00
242	*VOIDS, ETC*	Voids, Slopes, Intensity Grids	15.00	$3,630.00
242	*Hyrdo Break*	Hydro Enforced Breaklines	45.00	$10,890.00
242	*Planimetric Break*	Planimetric Breaklines	45.00	$10,890.00
	**LiDAR Specifications Attached*			

Optional FEMA Reports

Sq/MI	ITEM CODE	DESCRIPTION	PRICE EACH	AMOUNT
242	FEMA Accuracy	FEMA Accuracy Assessment Report	30.00	$7,260.00
242	FEMA QC	FEMA Quality Control Report	30.00	$7,260.00

Quote Valid until December 1, 2009

Pictometry International Corp. 100 Town Centre Drive Rochester, NY 14623

Pictometry AccuPlus®

Acquisition:
Flight plans will be prepared to capture image frames with 60% forward overlap and 30% sidelap in order to provide sufficient overlap for automatic aerial triangulation and mitigation of building lean in orthophotography produced.

Source imagery will be acquired during times of optimal environmental conditions. Imagery will be captured only when solar altitude is 30 degrees or greater, and generally between 10 a.m. and 2 p.m., except where capture season offers significantly longer window. Imagery will be acquired with ground free of snow cover and deciduous vegetation less than 30% of full bloom. Frames with clouds will be rejected and reflown. Any planned deviation from these conditions imposed by capture window constraints will be discussed with client prior to commencement of acquisition.

Camera:
Pictometry utilizes a custom-designed mapping camera incorporating a Kodak sensor and custom-designed photogrammetric lenses. The sensor is fully calibrated according to Pictometry's calibration process which was licensed to the USGS in 2003. Pictometry's sensor provides a dynamic range of 12 bits per band, RGB (resampled to 8 bits during processing).

Ortho-Rectification:
Prior to the production of orthophotography, Pictometry will perform automatic aerial triangulation, utilizing the directly observed Exterior Orientations (EOs) and ground control points (GCPs), measured by a licensed surveyor, for the purpose of orienting the individual frames for creation of the final ortho imagery. In addition to the GCPs, sophisticated matching techniques will be employed to automatically create tie points for use in performing a bundle adjustment.

Pictometry will utilize high accuracy LiDAR, combined with the calibrated camera interior orientations, ground control points, and adjusted EOs to rectify the images. When the rectification requires a resampling of the source imagery, a cubic convolution method will be utilized.

Horizontal Accuracy:

4" orthos: 1.50 ft., NSSDA 95%, meets or exceeds the following:
1:600 (1" = 50') National Map Accuracy Standards (+/- 1.67ft.)
1:1200 (1" = 100') ASPRS Class I Standards (RMSE = 1.0 ft)

6" orthos: 1.73 ft., NSSDA 95%, meets or exceeds the following:
1:1200 (1" = 100') National Map Accuracy Standards (+/- 3.33ft.)
1:1200 (1" = 100') ASPRS Class I Standards (RMSE = 1.0 ft)

12" orthos: 3.46 ft., NSSDA 95%, meets or exceeds the following:
1:1200 (1" = 100') National Map Accuracy Standards (+/- 3.33ft.)
1:2400 (1" = 200') ASPRS Class I Standards (RMSE = 2.0 ft.)

Mosaic:
Global color balancing will be applied to all orthophotos to create homogeneous orthophotos within the project area. Local adjustments of brightness values, color and contrast will be performed if needed. There will be no obvious seam edge between two adjacent orthophotos. Mosaic will be created using automated seamline steering, with manual edits to eliminate feature misalignment caused by seamlines which pass thru features above the elevation surface. Feature alignment across seamlines will be 3 pixels or better. When possible, seamlines wil be steered away from elevated features to improve orthophoto quality.

Once the mosaic has been produced, the imagery will be tiled and named according to the customer-provided (or Pictometry-generated) scheme for delivery.

Deliverables:
All deliverables in customer preferred coordinate system.

- Project-wide seamless mosaic in MrSID or ECW format*
- Tiled imagery according to customer-provided tiling scheme – available as TIFF, GeoTIFF or JPG
- FGDC compliant metadata

*Customer may prefer several smaller mosaics if project area is especially large.

3. TECHNICAL SPECIFICATIONS: High Accuracy Obliques
- See High Accuracy Oblique technical specs

4. TECHNICAL SPECIFICATIONS: LiDAR
- See LiDAR 1.0M Bare Earth Model technical specs

5. TECHINCAL SPECIFICATIONS: Near IR
- See Near IR technical specs

DEPARTMENT OF TRANSPORTATION & PUBLIC WORKS
MILWAUKEE COUNTY LAND INFORMATION OFFICE

2711 West Wells Street, Rm 426, Milwaukee, WI 53208 (414) 278-2176

MEMORANDUM

TO: MCAMLIS Steering Committee

FROM: William C. Shaw, MCAMLIS Project Manager

DATE: September 11, 2009

SUBJECT: 2010 MCAMLIS Orthophotography Project Planning and Staff Recommendation

BACKGROUND

At five-year intervals in years ending in zero and five, SEWRPC typically acquires aerial photography/orthophotography sufficient to cover its seven-county planning jurisdiction and immediate environs. The 2010 program envisions the acquisition of 1-foot pixel, color, and digital orthophotography for the entire seven county region. Milwaukee County, however, has requested consideration of additionally acquiring 4-inch pixel, color, digital orthophotography along with 4-inch pixel, color, digital Oblique image photography funded by a combination of USDOT STFM funds and MCAMLIS matching funds. STP Surface Transport Pg

Alternatively, 6-inch pixel, color, digital orthophotography is available with or without oblique image photography.

PROPOSAL

Options specified on the following page require the inclusion of 1-foot pixel, color, and digital orthophotography meeting USGS digital orthophotography performance specifications. Pictometry AccuPLUS products are not currently certified to be funded by USGS and therefore must be combined with either 1-foot or 6-inch digital orthophotography that meet USGS requirements to be included as part of the 2010 SEWRPC Orthophotography Project.

Note: USGS Orthophotography performance specifications with regard to the AccuPLUS product(s) are currently under review. Phil Evenson, the Regional Orthophotography Project manager, allows that funding the AccuPLUS product(s) would be contingent upon the comparison of future AccuPLUS product(s) obtained under this agreement through the development and application of a performance specification to certify accuracies via field survey work conducted in accordance with SEWRPC, Milwaukee County Surveyor, MCAMLIS and Aerometric Engineering personnel. The results of this test against the (yet to be determined) performance specification will be used to further certify or de-certify AccuPLUS product(s) as part of any future regional orthophotography programs.

Additionally, Options 3 through 6 will require software maintenance and professional services distribution costs totaling $28,000 spread over 2 yrs.

Option 1: 1-FOOT PIXEL, COLOR, DIGITAL ORTHOPHOTOGRAPHY

The acquisition of 1-foot pixel, color, digital orthophotography at a cost of ~~$5,554~~ $5426 1% cost (see Table 1: Final Budget, 2010 SEWRPC Orthophotography Project). This cost is being offset by a combination of USGS, USDOT ~~STF~~ STP-M & SEWRPC contributions.

Total estimated cost to MCAMLIS of this option is $5,554

Option 2: 6-INCH PIXEL, COLOR, DIGITAL ORTHOPHOTOGRAPHY

$ 27 799 + 5436 = 33 235

The acquisition of 6-inch pixel, color, digital orthophotography at a cost of ~~$55,044~~ (verbal quote, Phil Evenson, 2010 SEWRPC Orthophotography Project). This cost is being offset by a combination of USGS, USDOT ~~STF~~-M & SEWRPC contributions.

Oblique add. cost

MMCAMLIS pay 4% of cost

Total estimated cost to MCAMLIS of this option is ~~$55,044~~ 33235

Option 3: 1-FOOT PIXEL ORTHOPHOTOGRAPHY & PICTOMETRY INTERNATIONAL ACCUPLUS 6-INCH PIXEL

a) The acquisition of 1-foot pixel, color, digital orthophotography at a cost of ~~$5,554~~ $5436 (see Table 1: Final Budget, 2010 SEWRPC Orthophotography Project). This cost is being offset by a combination of USGS, USDOT ~~STF~~-M & SEWRPC contributions.

must be delivered to USGS

b) The acquisition of 6-inch pixel, color, digital orthophotography Pictometry International AccuPLUS 6-inch pixel, color, digital orthophotography and oblique image photography combined. The cost of the Pictometry AccuPLUS product is $118,944 (see Pictometry AccuPLUS Quote dated 7/24/2009). This cost is expected to be offset by a ~~minimum~~ of $95,155 obtained from USDOT ~~STF~~-M funds. The remaining cost of ~~$63,833~~ 23789 is required from MCAMLIS.

23789 + 28000

80/20 matching

Total estimated cost to MCAMLIS of this option is ~~$5,554~~ 5436 + $23,789 + $28,000 = ~~$57,343~~ 57225

Pictometry, software 2 yr.

20% match to 118944

Option 4: 1-FOOT PIXEL ORTHOPHOTOGRAPHY & PICTOMETRY INTERNATIONAL ACCUPLUS 4-INCH PIXEL

a) The acquisition of 1-foot pixel, color, digital orthophotography at a cost of ~~$5,554~~ 5436 (see Table 1: Final Budget, 2010 SEWRPC Orthophotography Project). This cost is being offset by a combination of USGS, USDOT STF-M & SEWRPC contributions.

b) The acquisition of 4-inch pixel, color, digital orthophotography Pictometry International AccuPLUS 4-inch pixel, color, digital orthophotography and oblique image photography combined. The cost of the Pictometry AccuPLUS product is $158,988 (see Pictometry AccuPLUS Quote dated 7/24/2009). This cost is expected to be offset by ~~a minimum of~~ $95,155 obtained from USDOT ~~STF~~-M funds. The remaining cost of $63,833 is required from MCAMLIS.

fund by 80/20

Total estimated cost to MCAMLIS of this option is ~~$5,554~~ 5436 + $63,833 + $28,000 = ~~$97,387~~ 97269

132 050

Option 5: 6-INCH PIXEL ORTHOPHOTOGRAPHY & PICTOMETRY INTERNATIONAL ACCUPLUS 6-INCH PIXEL

27 799 + 59% = 33 235

a) The acquisition of 6-inch pixel, color, digital orthophotography at a cost of ~~$55,044~~ (verbal quote, Phil Evenson, 2010 SEWRPC Orthophotography Project). This cost is being offset by a combination of USGS, USDOT STF-M & SEWRPC contributions.

b) The acquisition of 6-inch pixel, color, digital orthophotography Pictometry International AccuPLUS 6-inch pixel, color, digital orthophotography and oblique image photography combined. The cost of the Pictometry AccuPLUS product is $118,944 (see Pictometry AccuPLUS Quote dated 7/24/2009). This cost is expected to be offset by a minimum of $95,155 obtained from USDOT STF-M funds. The remaining cost of $23,789 is required from MCAMLIS.

Total estimated cost to MCAMLIS of this option is ~~$55,044~~ 33235 + $23,789 + $28,000= ~~$106,833~~ 85 024

95
111
206 Fed

Option 6: 6-INCH PIXEL ORTHOPHOTOGRAPHY & PICTOMETRY INTERNATIONAL ACCUPLUS 4-INCH PIXEL

a) The acquisition of 6-inch pixel, color, digital orthophotography at a cost of ~~$55,044~~ 33235 (verbal quote, Phil Evenson, 2010 SEWRPC Orthophotography Project). This cost is being offset by a combination of USGS, USDOT STF-M & SEWRPC contributions.

b) The acquisition of 4-inch pixel, color, digital orthophotography Pictometry International AccuPLUS 4-inch pixel, color, digital orthophotography and oblique image photography combined. The cost of the Pictometry AccuPLUS product is $158,988 (see Pictometry AccuPLUS Quote dated 7/24/2009). This cost is expected to be offset by ~~a minimum of~~ $95,155 obtained from USDOT STF-M funds. The remaining cost of $63,833 is required from MCAMLIS.

not incl. obliques for 1 and 2

Total estimated cost to MCAMLIS of this option is ~~$55,044~~ 33235 + ~~$63,832~~ 63833 + $28,000 = ~~$146,876~~ 125 068

Send Order
option 1 5436 Adequate
option 2 33235 Proposed could add obliques
option 5 85024 comparison
option 4 97269
option 6 125068

option 2A - Option 2 + obliques
adds Option would get 4" pixel order + obliques

RECOMMENDATION

Staff recommends:

- MCAMLIS Steering Committee approval of **Option 4:** 1-FOOT PIXEL ORTHOPHOTOGRAPHY & PICTOMETRY INTERNATIONAL ACCUPLUS 4-INCH at an estimated cost to MCAMLIS of ~~$97,387.~~ 97269
  a) **Option 2:** 6-INCH PIXEL, COLOR, DIGITAL ORTHOPHOTOGRAPHY that is the current digital orthophotography benchmark set in 2005. This option is less expensive with a cost to MCAMLIS of ~~$55,044 than Option 4~~ 31862 but does not include digital oblique image photography
  b) **Option 3:** 1-FOOT PIXEL ORTHOPHOTOGRAPHY & PICTOMETRY INTERNATIONAL ACCUPLUS 6-INCH could be considered a second choice at an estimated cost to MCAMLIS of ~~$57,343. This option is recommended to be considered if funding is of ultimate concern.~~ 57225 This would have adequate resolution but lower resolution than the 2008 Pictometry image photography which is 4-inch and has proved to be well suited due to its superior quality and capability for advanced applications
  c) **Option 1:** 1-FOOT PIXEL, COLOR, DIGITAL ORTHOPHOTOGRAPHY is the least expensive option at a cost to MCAMLIS of ~~$5,554~~ 5436 but misses the mark with regard to a multitude of applications and high-quality, high-resolution needs that have evolved over time and does not include oblique image photography

COST SHARE NEGOTIATIONS BENNETT

needed

d) **Option 5:** 6-INCH PIXEL ORTHOPHOTOGRAPHY & PICTOMETRY INTERNATIONAL ACCUPLUS 6-INCH & **Option 6:** 6-INCH PIXEL ORTHOPHOTOGRAPHY & PICTOMETRY INTERNATIONAL ACCUPLUS 4-INCH are not recommended due to cost and unnecessary high-resolution product redundancy

- Detailed Related Cost and Payment Distribution of recommended Options 3 or 4

a) **Option 4:** 12" certified orthophotography ~~$5,554~~ 5436, Pictometry, Inc. $158,988 over 2 yrs ($95,155 in 2010 - $63,833 in 2011) for imagery acquisition & digital image processing, $13,000 over 2 yrs. ($6,500 in 2010 - $6,500 in 2011) for specialized website enabling software and $15,000 over 2yrs ($7,500 in 2010 - $7,500 in 2011) for professional services to assist deployment. ?

Item	2010 SEWRPC	2010 MCAMLIS	2011 SEWRPC	2011 MCAMLIS	Totals
12" USGS Certified Orthophotography	$39,663	~~$5,554~~ 5436	$0	$0	~~$45,217~~ 45099
4" AccuPLUS Imagery	$95,155	$0	$0	$63,833	$158,988
Pictometry Image Navigator	$0	$6,500	$0	$6,500	$13,000
Professional Services	$0	$7,500	$0	$7,500	$15,000
Subtotal	$134,818	$19,554	$0	$77,833	$232,205
Project Totals	$154,372		$77,833		$232,205

118944 x 0.2 required 20% match or 23789

23783 must be spent in 2010

b) **Option 3:** 12" certified orthophotography ~~$5,554~~ 5436, Pictometry, Inc. $118,944 over 2 yrs ($95,155 in 2010 - $23,789 in 2011) for imagery acquisition & digital image processing, $13,000 over 2 yrs. ($6,500 in 2010 - $6,500 in 2011) for specialized website enabling software and $15,000 over 2yrs ($7,500 in 2010 - $7,500 in 2011) for professional services to assist deployment.

Item	2010 SEWRPC	2010 MCAMLIS	2011 SEWRPC	2011 MCAMLIS	Totals
12" USGS Certified Orthophotography	$39,663	~~$5,554~~ 33225	$0	$0	~~$45,217~~ 45099
4" AccuPLUS Imagery	$95,155	$0 19000	$0	~~$23,789~~ 5000	$118,944
Pictometry Image Navigator	$0	$6,500	$0	$6,500	$13,000
Professional Services	$0	$7,500	$0	$7,500	$15,000
Subtotal	$134,818	$19,554	$0	~~$37,789~~	$192,161
Project Totals	$154,372		$37,789		$192,161

6" 180213 TOTAL

5436 27,799

must be 2010

38554 19,000

Attach: 2010 SEWRPC Orthophotography Project, Table 1, Final Budget
Pictometry International, AccuPLUS Quote # 072409DL
Pictometry International, AccuPLUS Technical Specifications

* * * * *

38554
33225
71779
72,000

Table 1

Final Budget

2010 SEWRPC Orthophotography Project

Regional Base Product: 12-inch Color Orthophotos

Source of Revenue		Amount	Percent of Total
U.S. Geological Survey		$156,000	34.1
U.S. Department of Transportation (STP-M)		241 600 ~~210,400~~	52.8 ~~45.9~~
~~SEWRPC~~		~~30,000~~	~~6.6~~
Counties (Apportioned by Area)		60 400 ~~61,600~~	13.1 ~~13.4~~
Kenosha	~~$6,345~~	6221	
Milwaukee	~~5,544~~	5436	
Ozaukee	~~5,359~~	5255	
Racine	~~7,823~~	7671	
Walworth	~~13,244~~	12 986	
Washington	~~9,979~~	9785	
Waukesha	~~13,306~~	13 046	
	~~$61,600~~	60 400	
Total		$458,000	100.0

Note: These are preliminary budget amounts as of August 2009.

jgm 08-31-09
#140448 v4 - PreRevBudget/Tbl1

DEPARTMENT OF TRANSPORTATION & PUBLIC WORKS
MILWAUKEE COUNTY LAND INFORMATION OFFICE

2711 West Wells Street, Rm 426, Milwaukee, WI 53208 (414) 278-2176

MEMORANDUM

TO: MCAMLIS Steering Committee
FROM: William C. Shaw, MCAMLIS Project Manager
DATE: September 10, 2009

SUBJECT: Enterprise Address System Project – Request to reallocate previously approved project funding from the $4 to the $1 fund

BACKGROUND

At its March 24th, 2009 meeting the MCAMLIS Steering Committee approved funding an additional request of $65,000 to continue EAS Project initiatives. The total funds approved for this project are currently set at $272,000 and in-line with the overall project estimate as presented and approved by the Steering Committee July 11th, 2006. To date all of these funds have been allocated from the $4 retained fees as part of the MCAMLIS Land Information improvement fund.

A significant portion of the work associated with this project has been dedicated to providing public access to Land Information records using Internet web mapping services. As originally envisioned these services would be more readily identified with the $1 retained fees as part of providing Land Information access on the internet and meets the statutory requirements of the $1 funding source.

MCAMLIS Steering Committee approval is requested to effect this change and reallocate funds previously approved as part of the $4 fee to instead be drawn from the $1 fee.

ESTIMATED COST

Original project estimate to complete the EAS project:	$272,000
Amount requested and approved by the MCAMLIS Steering Committee	$272,000
$4 funds requested to be authorized as part of this request	($65,000)
$1 funds requested to be authorized as part of this request	$65,000

RECOMMENDATION

Based upon staff assessment, which is in agreement with the LIO, the following is recommended to the Steering Committee:

- It is recommended that the Steering Committee authorize reallocation of $65,000 from the $4 fund to the $1 fund for use to carry out the remainder of the EAS project. Approval of this request does not change the current EAS funding which remains $272,000.

****

MILWAUKEE COUNTY FISCAL NOTE FORM

DATE: 9/21/09

Original Fiscal Note X

Substitute Fiscal Note

SUBJECT: Request to modify the funding source for the additionally authorized $65,000 in funding for the Enterprise Address System Project from the $4 fee account to the $1 fee account.

FISCAL EFFECT:

___ No Direct County Fiscal Impact

__ Existing Staff Time Required

_X_ Increase Operating Expenditures – **($1 fee Account)**

(If checked, check one of two boxes below)

_X_ Absorbed Within Agency's Budget

__ Not Absorbed Within Agency's Budget

_X_ Decrease Operating Expenditures – **($4 fee Account)**

___ Increase Operating Revenues

___ Decrease Operating Revenues

$1 Account	**Expenditure or Revenue Category**	**Current Year (2009)**	**Subsequent Year (2010)**
Operating Budget	Expenditure	$65,000	$0
	Revenue	$0	$0
	Net Cost	$65,000	$0
Capital Improvement Budget	Expenditure		
	Revenue		
	Net Cost		
$4 Account	**Expenditure or Revenue Category**	**Current Year (2009)**	**Subsequent Year (2010)**
Operating Budget	Expenditure	($65,000)	$0
	Revenue	$0	$0
	Net Cost	($65,000)	$0
Capital Improvement Budget	Expenditure		
	Revenue		
	Net Cost		

DESCRIPTION OF FISCAL EFFECT

In the space below, you must provide the following information. Attach additional pages if necessary.

A. Briefly describe the nature of the action that is being requested or proposed, and the new or changed conditions that would occur if the request or proposal were adopted.
B. State the direct costs, savings or anticipated revenues associated with the requested or proposed action in the current budget year and how those were calculated. If annualized or subsequent year fiscal impacts are substantially different from current year impacts, then those shall be stated as well. In addition, cite any one-time costs associated with the action, the source of any new or additional revenues (e.g. State, Federal, user fee or private donation), the use of contingent funds, and/or the use of budgeted appropriations due to surpluses or change in purpose required to fund the requested action.
C. Discuss the budgetary impacts associated with the proposed action in the current year. A statement that sufficient funds are budgeted should be justified with information regarding the amount of budgeted appropriations in the relevant account and whether that amount is sufficient to offset the cost of the requested action. If relevant, discussion of budgetary impacts in subsequent years also shall be discussed. Subsequent year fiscal impacts shall be noted for the entire period in which the requested or proposed action would be implemented when it is reasonable to do so (i.e. a five-year lease agreement shall specify the costs/savings for each of the five years in question). Otherwise, impacts associated with the existing and subsequent budget years should be cited.
D. Describe any assumptions or interpretations that were utilized to provide the information on this form.

A. The MCAMLIS Steering Committee previously approved a proposal from the MCAMLIS Project Manager to increase the expenditure authorization by $65,000 for the Enterprise Address System (EAS) Project. The total allocation for this project is currently $272,000. The addition authorization funded $65,000 from the $4 fee account. The presented proposal from the MCAMLIS Project Manager and Register of Deeds seeks to modify the funding source for the $65,000 from the $4 fee account to the $1 fee account.

B. This proposal would modify the original funding source for the $65,000 in expenditure authority from the $4 fee account to the $1 fee account and would fully fund the remaining elements of the EAS project, including converting existing site addresses maintained as part of the County parcel mapping system, creating site addresses for the City of Milwaukee and creating web-based user application.

C. Approval of this request would result in an expenditure decrease of $65,000 from the $4 fee account and an expenditure increase of $65,000 from the $1 fee account. Per the September 2009 fiscal report, the $4 fee account is projecting an unrestricted *deficit* of $23,696 and the $1 fee account is projecting an unrestricted *surplus* of $168,720. Assuming that this action is approved, the fiscal report would be updated and the $4 fee account would reflect an unrestricted *surplus* of $41,304 and the $1 fee account would reflect an unrestricted *surplus* of $103,720.

D. It is assumed that all authorized expenditures will be spent in 2009; that the $4 fee and $1 fee accounts will continue to maintain the reserve levels as established by the MCAMLIS Steering Committee; and that 2009 revenue is achieved at the level projected most recently by the Register of Deeds. **This fiscal note also does not reflect additional requests being brought before the MCAMLIS Steering Committee, which if approved will modify the unrestricted balances of each account.** No other assumptions are included.

Prepared By: C.J. Pahl, Milwaukee County, DAS- Fiscal Affairs

REGISTER OF DEEDS

Milwaukee County

JOHN LA FAVE • Register of Deeds

September 9, 2009

To: MCAMLIS Steering Committee
From: John La Fave, Register of Deeds (ROD) J. L.
Re: Request for new authorization for additional spending for **Improvements to Computerized System**

(1) Register of Deeds requests that the MCAMLIS Steering Committee authorize spending $65,000 from the $1.00 retained fee account to fund a portion of the Enterprise Address System (EAS) Project, as described by the MCAMLIS Project Manager.

(2) Register of Deeds requests that the MCAMLIS Steering Committee approve a new authorization of **$95,000** from the $1.00 retained fee for **Improvements to Computerized System** in the Register of Deeds department. The authorization currently in place will be used up to complete the project to digitize and index document images from 1985, 1986 and 1987.

This new **2009 - Improvements to Computerized System VI** project will enable the Register of Deeds to digitize additional images and to index grantee/grantor party names and legal descriptions from those documents. Register of Deeds estimates this amount will cover documents and images for year 1984 and most of 1983.

The Register of Deeds would like to continue its ongoing program to convert additional document images from microfilm to digital format. It is extremely beneficial for the public and our department to access these images via computer both within our office and on the Internet rather than having to handle microfilm.

Register of Deeds will continue to utilize the services of Superior Support Resources (SSR), a registered Milwaukee County DBE vendor using their existing price agreement in place with Milwaukee County.

Thank you.

COURTHOUSE, ROOM 103 • 901 NORTH 9TH STREET • MILWAUKEE, WISCONSIN 53233 • (414) 278-4021 • FAX (414) 223-1257

September 9, 2009

To: MCAMLIS Steering Committee
From: John La Fave, Register of Deeds (ROD)
Re: Request for new authorization for additional spending for **Improvements to Computerized System**

(1) Register of Deeds requests that the MCAMLIS Steering Committee authorize spending $65,000 from the $1.00 retained fee account to fund a portion of the Enterprise Address System (EAS) Project, as described by the MCAMLIS Project Manager.

(2) Register of Deeds requests that the MCAMLIS Steering Committee approve a new authorization of **$95,000** from the $1.00 retained fee for **Improvements to Computerized System** in the Register of Deeds department. The authorization currently in place will be used up to complete the project to digitize and index document images from 1985, 1986 and 1987.

This new **2009 - Improvements to Computerized System VI** project will enable the Register of Deeds to digitize additional images and to index grantee/grantor party names and legal descriptions from those documents. Register of Deeds estimates this amount will cover documents and images for year 1984 and most of 1983.

The Register of Deeds would like to continue its ongoing program to convert additional document images from microfilm to digital format. It is extremely beneficial for the public and our department to access these images via computer both within our office and on the Internet rather than having to handle microfilm.

Register of Deeds will continue to utilize the services of Superior Support Resources (SSR), a registered Milwaukee County DBE vendor using their existing price agreement in place with Milwaukee County.

Thank you.

MILWAUKEE COUNTY FISCAL NOTE FORM

DATE: 9/21/09

Original Fiscal Note **X**

Substitute Fiscal Note

SUBJECT: Authorization to approve $95,000 in expenditure authority from the $1 fee account for the Improvements to Computerized System VI Project.

FISCAL EFFECT:

___ No Direct County Fiscal Impact

__ Existing Staff Time Required

_X_ Increase Operating Expenditures – **($1 fee Account)**

(If checked, check one of two boxes below)

_X_ Absorbed Within Agency's Budget

__ Not Absorbed Within Agency's Budget

___ Decrease Operating Expenditures

___ Increase Operating Revenues

___ Decrease Operating Revenues

$1 Account	**Expenditure or Revenue Category**	**Current Year (2009)**	**Subsequent Year (2010)**
Operating Budget	Expenditure	$95,000	$0
	Revenue	$0	$0
	Net Cost	$95,000	$0
Capital Improvement Budget	Expenditure		
	Revenue		
	Net Cost		

DESCRIPTION OF FISCAL EFFECT

In the space below, you must provide the following information. Attach additional pages if necessary.

A. Briefly describe the nature of the action that is being requested or proposed, and the new or changed conditions that would occur if the request or proposal were adopted.
B. State the direct costs, savings or anticipated revenues associated with the requested or proposed action in the current budget year and how those were calculated. If annualized or subsequent year fiscal impacts are substantially different from current year impacts, then those shall be stated as well. In addition, cite any one-time costs associated with the action, the source of any new or additional revenues (e.g. State, Federal, user fee or private donation), the use of contingent funds, and/or the use of budgeted appropriations due to surpluses or change in purpose required to fund the requested action.
C. Discuss the budgetary impacts associated with the proposed action in the current year. A statement that sufficient funds are budgeted should be justified with information regarding the amount of budgeted appropriations in the relevant account and whether that amount is sufficient to offset the cost of the requested action. If relevant, discussion of budgetary impacts in subsequent years also shall be discussed. Subsequent year fiscal impacts shall be noted for the entire period in which the requested or proposed action would be implemented when it is reasonable to do so (i.e. a five-year lease agreement shall specify the costs/savings for each of the five years in question). Otherwise, impacts associated with the existing and subsequent budget years should be cited.
D. Describe any assumptions or interpretations that were utilized to provide the information on this form.

A. The MCAMLIS Steering Committee has been presented with a proposal from the Register of Deeds (ROD) to establish a new authorization of $95,000 from the $1 retained fee for Improvements to the Computerized System VI. This project will continue the initiative to digitize documents contained on microfilm. The additional appropriation will enable the Register of Deeds to digitize documents from 1984 and a portion of 1983.

B. This project would authorize $95,000 of expenditure authority with Superior Support Resources (SSR). SSR has been working with the ROD throughout this project and they are a certified County DBE.

C. Approval of these actions would result in the expenditure of $95,000 from the $1 fee account. These project costs are not included in the 2009 MCAMLIS Budget but the September 2009 fiscal report is projecting an unrestricted surplus of $168,720 for the $1 fee. Sufficient funds are available in 2009 to cover these expenditures if approved.

D. It is assumed that all authorized expenditures will be spent in 2009; that $1 fee account will continue to maintain the reserve levels as established by the MCAMLIS Steering Committee; and that 2009 revenue is achieved at the level projected most recently by the Register of Deeds. **This fiscal note also does not reflect additional requests being brought before the MCAMLIS Steering Committee, which if approved will modify the unrestricted balances of each account.** No other assumptions are included.

Prepared By: C.J. Pahl, Milwaukee County, DAS- Fiscal Affairs

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
W239 N1812 ROCKWOOD DRIVE • PO BOX 1607 • WAUKESHA, WI 53187-1607 • TELEPHONE (262) 547-6721
FAX (262) 547-1103

Serving the Counties of: KENOSHA
MILWAUKEE
OZAUKEE
RACINE
WALWORTH
WASHINGTON
WAUKESHA

MEMORANDUM

TO: Mr. Jeffrey S. Polenske, P.E., City Engineer, City of Milwaukee
Mr. William C. Shaw, MCAMLIS Project Manager, Milwaukee County
Mr. Thomas W. Chapman, P.E., Section Manager, Milwaukee Metropolitan Sewerage District

FROM: Southeastern Wisconsin Regional Planning Commission Staff

DATE: August 18, 2009

SUBJECT: **UPDATED FLOODPLAIN AND FLOODWAY DELINEATIONS ALONG WOODS CREEK IN MILWAUKEE COUNTY**

Preliminary draft, updated floodplain maps for the Woods Creek tributary of the Menomonee River are enclosed. These maps were developed under a joint program funded by the Milwaukee County Automated Mapping and Land Information System Steering Committee, the Milwaukee Metropolitan Sewerage District (MMSD), and the Southeastern Wisconsin Regional Planning Commission (SEWRPC). The maps show floodplain and floodway boundaries for the one-percent-annual-probability (100-year recurrence interval) flood occurring under planned land use and existing channel conditions. The 10-, 50-, and 500-year recurrence interval floodplain boundaries occurring under planned land use and existing channel conditions are also delineated. Table 1 lists the maps that are provided.

These maps are part of a larger update of floodplain information for the major streams within the Menomonee River watershed. The maps provide the City of Milwaukee with an opportunity to adopt a one-percent-probability floodplain for local zoning and Federal flood insurance purposes along this stream.

Hydrologic and hydraulic methods used in the current mapping update include the U.S. Environmental Protection Agency HSPF continuous simulation hydrologic model and the U.S. Army Corps of Engineers HEC-RAS hydraulic simulation model. The HSPF model was developed under the recently completed regional water quality management plan update for the greater Milwaukee watersheds and MMSD 2020 Facilities Plan. The HEC-RAS model was derived from models used in previous Commission and MMSD watershed planning efforts, including that used for the current regulatory floodplain mapping.

Please review the enclosed maps and contact Mr. Michael G. Hahn of the Commission staff with any questions or comments. It would be appreciated if comments were provided by September 25, 2009. Following review of the preliminary maps, we will incorporate any necessary changes. If requested to do so, we will assist the communities in preparing a submittal to WDNR and FEMA asking their review and

approval of the maps prior to local adoption for zoning purposes and issuance of a FEMA Letter of Map Revision or Physical Map Revision.

We trust that the information provided will be useful to you and we look forward to assisting you with this important project.

* * *

#146553 v1 - MCAMLIS - WOODS CREEK TRANSMITTAL MEMO
MGH/LLK/pk/mlh

Enclosures

cc: Mr. Kurt W. Bauer, MCAMLIS Steering Committee
Mr. David C. Fowler, MMSD
Ms. Tanya L. Meyer, WDNR-Southeast Region
Mr. Robert M. Watson, WDNR-Madison
Mr. Kenneth M. Hinterlong, FEMA Region V
Mr. Al Franitza, City of Milwaukee Planning Department

Table 1

WOODS CREEK FLOODPLAIN MAPS PROVIDED

Town/Range	U.S. Public Land Survey System One-Quarter Section
Township 7 North, Range 21 East	Section 35-SW 1/4
	Section 35-SE 1/4
	Section 36-NW 1/4
	Section 35-NE 1/4

Source: SEWRPC.

#146553 V1 - MCAMLIS - WOODS CREEK TRANSMITTAL MEMO
MGH/LLK/pk
08/17/09

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
W239 N1812 ROCKWOOD DRIVE • PO BOX 1607 • WAUKESHA, WI 53187-1607• TELEPHONE (262) 547-6721
FAX (262) 547-1103

Serving the Counties of: KENOSHA MILWAUKEE OZAUKEE RACINE WALWORTH WASHINGTON WAUKESHA

MEMORANDUM

TO: Mr. Jeffrey S. Polenske, P.E., City Engineer, City of Milwaukee
Mr. William C. Shaw, MCAMLIS Project Manager, Milwaukee County
Mr. Thomas W. Chapman, P.E., Section Manager, Milwaukee Metropolitan Sewerage District

FROM: Southeastern Wisconsin Regional Planning Commission Staff

DATE: August 18, 2009

SUBJECT: **UPDATED FLOODPLAIN AND FLOODWAY DELINEATIONS ALONG LYONS PARK CREEK IN MILWAUKEE COUNTY**

Preliminary draft, updated floodplain maps for the Lyons Park Creek tributary of the Kinnickinnic River are enclosed. These maps were developed under a joint program funded by the Milwaukee County Automated Mapping and Land Information System Steering Committee, the Milwaukee Metropolitan Sewerage District (MMSD), and the Southeastern Wisconsin Regional Planning Commission (SEWRPC). The maps show floodplain and floodway boundaries for the one-percent-annual-probability (100-year recurrence interval) flood occurring under planned land use and existing channel conditions. The 10-, 50-, and 500-year recurrence interval floodplain boundaries occurring under planned land use and existing channel conditions are also delineated. Table 1 lists the maps that are provided.

These maps are part of a larger update of floodplain information for the major streams within the Kinnickinnic River watershed. The maps provide the City of Milwaukee with an opportunity to update the maps currently used for local zoning and Federal flood insurance purposes along this stream. Within the City, the existing maps for both local zoning and Federal flood insurance were developed a relatively long time ago and do not reflect current development and channel conditions along much of this tributary.

Hydrologic and hydraulic methods used in the current mapping update include the U.S. Environmental Protection Agency HSPF continuous simulation hydrologic model and the U.S. Army Corps of Engineers HEC-RAS hydraulic simulation model. The HSPF model was developed under the recently completed regional water quality management plan update for the greater Milwaukee watersheds and MMSD 2020 Facilities Plan and incorporates an additional 28 years of meteorological data over that used to develop the current regulatory floodplain information. The HEC-RAS model was derived from models used in previous Commission and MMSD watershed planning efforts, including that used for the current regulatory floodplain mapping.

Please review the enclosed maps and contact Mr. Michael G. Hahn of the Commission staff with any questions or comments. It would be appreciated if comments were provided by September 25, 2009. Following review of the preliminary maps, we will incorporate any necessary changes and, if requested to do so, we will assist the communities in preparing a submittal to WDNR and FEMA asking their review and approval of the maps prior to local adoption for zoning purposes and issuance of a FEMA Letter of Map Revision or Physical Map Revision.

We trust that the information provided will be useful to you and we look forward to assisting you with this important project.

* * *

#146551 v1 - MCAMLIS - LYONS PARK CREEK TRANSMITTAL MEMO
MGH/LLK/pk

Enclosures

cc: Mr. Kurt W. Bauer, MCAMLIS Steering Committee
Mr. David C. Fowler, MMSD
Ms. Tanya L. Meyer, WDNR-Southeast Region
Mr. Robert M. Watson, WDNR-Madison
Mr. Kenneth M. Hinterlong, FEMA Region V
Mr. Al Franitza, City of Milwaukee Planning Department

Table 1

LYONS PARK CREEK FLOODPLAIN MAPS

Town/Range	U.S. Public Land Survey System One-Quarter Section
Township 6 North, Range 21 East	Section 10-NE 1/4
	Section 11-NW 1/4
	Section 10-SE 1/4
	Section 11-SW 1/4
	Section 14-NW 1/4

Source: SEWRPC.

#146551 V1 - MCAMLIS - LYONS PARK CREEK TRANSMITTAL MEMO
MGH/LLK/pk
08/17/09

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
W239 N1812 ROCKWOOD DRIVE • PO BOX 1607 • WAUKESHA, WI 53187-1607• TELEPHONE (262) 547-6721
FAX (262) 547-1103

Serving the Counties of: KENOSHA MILWAUKEE OZAUKEE RACINE WALWORTH WASHINGTON WAUKESHA

MEMORANDUM

TO: Mr. Jeffrey S. Polenske, P.E., City Engineer, City of Milwaukee
Mr. Richard J. Sokol, Director of Neighborhood Services, City of Greenfield
Mr. William C. Shaw, MCAMLIS Project Manager, Milwaukee County
Mr. Thomas W. Chapman, P.E., Section Manager, Milwaukee Metropolitan Sewerage District

FROM: Southeastern Wisconsin Regional Planning Commission Staff

DATE: August 18, 2009

SUBJECT: **UPDATED FLOODPLAIN AND FLOODWAY DELINEATIONS ALONG VILLA MANN CREEK AND VILLA MANN CREEK TRIBUTARY IN MILWAUKEE COUNTY**

Preliminary draft, updated floodplain maps for Villa Mann Creek and the Villa Mann Creek Tributary in the Kinnickinnic River watershed are enclosed. These maps were developed under a joint program funded by the Milwaukee County Automated Mapping and Land Information System Steering Committee, the Milwaukee Metropolitan Sewerage District (MMSD), and the Southeastern Wisconsin Regional Planning Commission (SEWRPC). The maps show floodplain and floodway boundaries for the one-percent-annual-probability (100-year recurrence interval) flood occurring under planned land use and existing channel conditions. The 10-, 50-, and 500-year recurrence interval floodplain boundaries occurring under planned land use and existing channel conditions are also delineated. Table 1 lists the maps that are being provided to each community, Milwaukee County and the MMSD.

These maps are part of a larger update of floodplain information for the major streams within the Kinnickinnic River watershed. The maps provide the City of Milwaukee with an opportunity to replace the existing approximate Federal Emergency Management Agency floodplain delineation along the lower reach of Villa Mann Creek with a detailed delineation and to adopt that floodplain for local zoning purposes. They also provide the Cities of Greenfield and Milwaukee with opportunities to adopt one-percent-probability floodplains for local zoning and Federal flood insurance purposes along the remainder of Villa Mann Creek and along the Villa Mann Creek Tributary.

Hydrologic and hydraulic methods used in the current mapping update include the U.S. Environmental Protection Agency HSPF continuous simulation hydrologic model and the U.S. Army Corps of Engineers HEC-RAS hydraulic simulation model. The HSPF model was developed under the recently completed regional water quality management plan update for the greater Milwaukee watersheds and MMSD 2020 Facilities Plan. The HEC-RAS model was derived from models used in previous Commission and MMSD watershed planning efforts.

Please review the enclosed maps and contact Mr. Michael G. Hahn of the Commission staff with any questions or comments. It would be appreciated if comments were provided by September 25, 2009. Following review of the preliminary maps, we will incorporate any necessary changes and, if requested to do so, we will assist the communities in preparing a submittal to WDNR and FEMA asking their review and approval of the maps prior to local adoption for zoning purposes and issuance of a FEMA Letter of Map Revision or Physical Map Revision.

We trust that the information provided will be useful to you and we look forward to assisting you with this important project.

* * *

#146554 v1 - MCAMLIS - VILLA MANN CREEK TRANSMITTAL MEMO
MGH/LLK/pk/mlh

Enclosures

cc: Mr. Kurt W. Bauer, MCAMLIS Steering Committee
Mr. David C. Fowler, MMSD
Ms. Tanya L. Meyer, WDNR-Southeast Region
Mr. Robert M. Watson, WDNR-Madison
Mr. Kenneth M. Hinterlong, FEMA Region V
Mr. Al Franitza, City of Milwaukee Planning Department

Table 1

VILLA MANN CREEK & VILLA MANN CREEK TRIBUTARY FLOODPLAIN MAPS PROVIDED TO COMMUNITIES

Town/Range	U.S. Public Land Survey System One-Quarter Section	Communities/Agencies Provided Maps
Township 6 North, Range 21 East	Section 24-SE 1/4	City of Greenfield Milwaukee County MMSD
Township 6 North, Range 22 East	Section 19-SW 1/4	City of Milwaukee Milwaukee County MMSD
	Section 19-NW 1/4	City of Milwaukee Milwaukee County MMSD
	Section 19-NE 1/4	City of Milwaukee Milwaukee County MMSD

Source: SEWRPC.

#146554 V1 - MCAMLIS - VILLA MANN CREEK TRANSMITTAL MEMO
MGH/LLK/pk
08/17/09

City of Franklin

Engineering Department

9229 West Loomis Road, Franklin, Wisconsin 53132-9728 (414) 425-7510 Fax: (414) 425-3106

August 10, 2009

The Honorable «First_Name» «Last_Name», «Title»
«Community»
«Address»
«City», «State» «Zip»

Dear «Title» «Last_Name»:

As the Intergovernmental Corporation Council (ICC) representative to the Milwaukee County Automated Mapping and Land Information System (MCAMLIS) Steering Committee, I have been directed by the Steering Committee to obtain contacts from the eighteen suburban communities to develop a user group for the County's MCAMLIS Geographic Information System (GIS).

In order to assure that each community in Milwaukee County is making full use of the GIS developed through the MCAMLIS, it is recommended that a list of individuals be developed from each community as contacts to distribute the updates and improvements to GIS. The systems availability range from a web-based system where no additional hardware or software is required to multiple layers that can be integrated into a community's GIS.

Would you please provide the MCAMLIS Steering Committee with the individual member of your staff that would best serve as the contact for the above stated purpose? Please provide the name, address, telephone number and email address on the form provided and return it to me in the self-addresses envelope.

Thank you.

Yours very truly,

John M. Bennett, P.E.
City Engineer

JMB/sg
Encl.

cc: MCAMLIS Steering Committee

Milwaukee County Automated Mapping Land Information
System Steering Committee

Contact Information
For
Geographic Information

Name of Community: _____

Contact Person: _____

Address: _____

_____

_____

Telephone Number: _____

Email Address: _____

Comments: _____

_____

_____

_____

Return to: John M. Bennett, City Engineer
City of Franklin
9229 W. Loomis Road
Franklin, WI 53132

Attn: MCAMLIS

First Name	Last Name	Title	Community	Address	City	State	Zip
Richard	Bolender	Mayor	City of Oak Creek	8640 S. Howell Avenue	Oak Creek	WI	53154
Robert	Brunner	Village President	Village of River Hills	8330 N. Green Bay Road	River Hills	WI	53217
Dave	De Angelis	Village Manager	Village of Elm Grove	13600 Juneau Boulevard	Elm Grove	WI	53122
Dan	Devine	Mayor	City of West Allis	7525 W. Greenfield Avenue	West Allis	WI	53214
Sam	Dickman	Village President	Village of Bayside	9075 N. Regent Road	Bayside	WI	53217
Jill	Didier	Mayor	City of Wauwatosa	7725 W. North Avenue	Wauwatosa	WI	53213
Ronald	Hayward	Village President	Village of West Milwaukee	4755 W. Beloit Road	West Milwaukee	WI	53214
John	Hermes	Village President	Village of Greendale	6500 Northway	Greendale	WI	53129
Guy	Johnson	Village President	Village of Shorewood	2423 E. Shorwood	Shorewood	WI	53211
Carl	Krueger	Village President	Village of Brown Deer	4800 W. Green Brook Drive	Brown Deer	WI	53223
Ryan	McCue	Mayor	City of Cudahy	5050 S. Lake Drive	Cudahy	WI	53110
Michael	Neitzke	Mayor	City of Greenfield	7325 W. Forest Home Avenue	Greenfield	WI	53220
Kathleen	Pritchard	Village President	Village of Whitefish Bay	4903 N. Cumberland Boulevard	Whitefish Bay	WI	53217
Al	Richards	Mayor	City of St. Francis	4235 S. Nicholson Avenue	St. Francis	WI	53235
Robert	Ruesch	Village President	Village of Hales Corners	5740 S. 124th Street	Hales Corners	WI	53130
Jerome	Tepper	Mayor	City of Glendale	2140 W. Green Tree Road	Glendale	WI	53209
Michael	West	Village President	Village of Fox Point	7414 N. Seneca Road	Fox Point	WI	53217
Thomas	Zepecki	Mayor	City of South Milwaukee	2424 15th Avenue	South Milwaukee	WI	53172

2009 – 2010 LEGISLATURE

LRB–2416/1
MES:jld:rs

2009 ASSEMBLY BILL 349

July 24, 2009 – Introduced by Representatives PARISI, TURNER, ROYS, PASCH, FIELDS, ZIGMUNT, BENEDICT, SCHNEIDER, BERCEAU, DEXTER, SEIDEL, TOLES, HRAYCHUCK and JORGENSEN, cosponsored by Senators ERPENBACH and TAYLOR. Referred to Committee on Urban and Local Affairs.

AN ACT ***to create*** 66.0145 of the statutes; **relating to:** limiting the searchability of a governmental Internet listing of property taxes assessed.

Analysis by the Legislative Reference Bureau

Under this bill, if a city, village, town, or county that maintains property tax assessment records (taxation district) maintains an Internet listing of property taxes assessed by the taxation district and if the listing contains the name of a property owner whose property is assessed, the listing may not be searchable, by name, by members of the general public. Such an Internet listing may contain the property taxes assessed by the taxation district for each parcel number or street address within the jurisdiction.

The bill also specifically authorizes a taxation district to maintain records in its offices that contain the property taxes assessed by the taxation district for each parcel number or street address within the jurisdiction, and these office records may also contain the name of the property owner.

For further information see the ***local*** fiscal estimate, which will be printed as an appendix to this bill.

The people of the state of Wisconsin, represented in senate and assembly, do enact as follows:

SECTION 1. 66.0145 of the statutes is created to read:

66.0145 Listing of property tax assessments. (1) In this section, "taxation district" means a city, village, town, or county that maintains property tax assessment records.

(2) If a taxation district maintains an Internet listing of property taxes assessed within its jurisdiction and if that listing contains the name of the property owner against whom the assessment is made, the Internet listing may not be searchable, by name, by members of the general public. The Internet listing may contain the amount of property taxes assessed for each parcel number or street address within the jurisdiction.

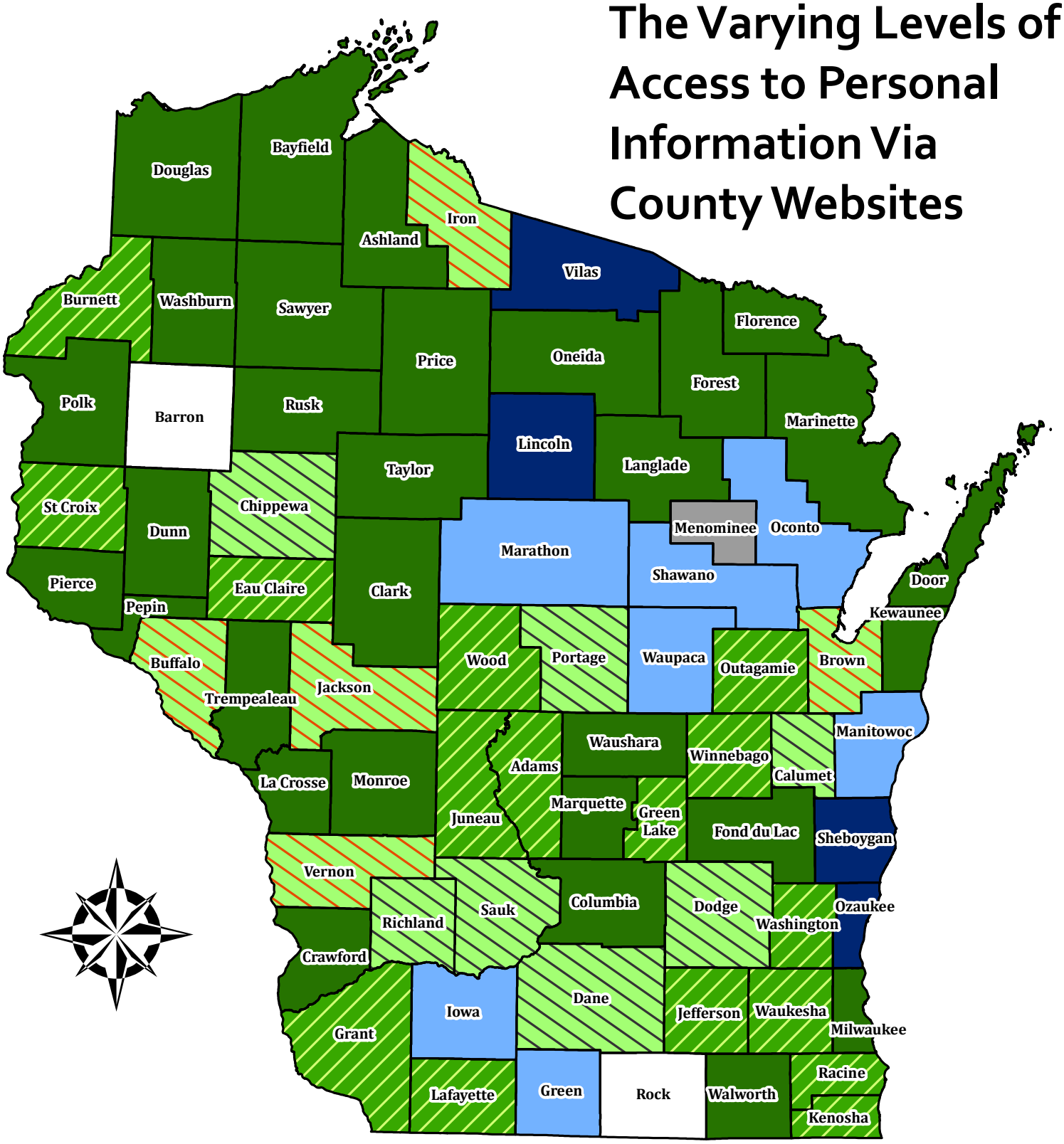
(3) A taxation district may maintain records in the taxation district's offices that contain a list of property taxes assessed by the taxation district for each parcel number or street address, and such a listing may include the property owner's name.

SECTION 2. Effective date.

(1) This act takes effect on the first day of the 3rd month beginning after publication.

(END)

The Varying Levels of Access to Personal Information Via County Websites



Personal Information Access Policies (Owner Names)

- No Restrictions **(30)**
- Only Restricts Searches By Name Search Results Show Names **(16)**
- Selective Access to Info. - Names removed for Individual By Request **(7)**
- Selective Access to Info.- Names Removed for Persons With Demonstrated Safety Needs (Law Enforcement,etc) **(5)**
- Secure Access to Personal Info. **(7)**
- Restrict All Information **(4)**
- N/A - No Website **(1)**
- No Data **(2)**

Map Created by the Waupaca County Land Information Office with data provided by the State Cartographers Office.

IHG: 08/21/2009