



Wisconsin MAPPING BULLETIN

USGS proposes dynamic "National Map"

Aims for collaborative, current product

by Bob Gurda

The U.S. Geological Survey (USGS) has unveiled the concept for a 21st century means to deliver maps and spatial data nationally. If successfully implemented, the system dubbed "The National Map" would be dramatically different than the traditional paper maps for which USGS is well known.

Fundamentally, the proposed system would be based upon digital data drawn from a variety of sources, and would be designed to allow users to add other data. While paper products much like the traditional topographic maps would continue to be provided, the data and mapping/analysis tools would be widely available via the Internet.

Partnerships are key

The USGS, rather than being the primary collector of spatial data, would develop a network of cooperators, both public and private sector, to support the system. The intent is to have the data available to all, so licensing of some copyrighted data would be necessary. Funding of the system is another area that will need serious attention. In developing the draft plan, USGS consulted with a variety of potential partner groups.

Goal of 7-day currency

By 2010, the plan calls for all data available through *The National Map* to be no more than seven day old. This is a tall order requir-

ing not only effective partnerships but much more aggressive data collection, whether it be in area of land ownership, topography, or socio-economic data. In all, the data available would go far beyond the content or traditional topographic maps—in categories of data, in detail, in accuracy, and in currency.

Parallels with WLIS?

An interesting twist in the proposal sets the stage for a link to the proposed Wisconsin Land Information System (WLIS): "State and regional consortia would coordinate area-specific spatial data development to respond to local issues and, where interests align, maintain and operate *The National Map*".

Comment by June 29

USGS is asking for comments to the current draft report by June 29. You can find a copy of the document, including instructions for how to comment, at nationalmap.usgs.gov.

Highlights of this issue....

<i>SCO unveils OrthoFinder website.....</i>	<i>5</i>
<i>Firms to acquire airphotos on speculation.....</i>	<i>10</i>
<i>Clark County GIS on the web.....</i>	<i>11</i>

Complete and return card at bottom of pages 15 & 16

Dear Readers:

On the back cover of this issue is a perforated card which you must complete and return in order to continue receiving the Bulletin.

1st
Class
Stamp
here

State Cartographer's Office
University of Wisconsin-Madison
550 N. Park Street
Rm. 160 Science Hall
Madison, WI 53706-1491

Frequently-Answered Questions on the How and Why of Metadata

by AJ Wortley

On producing metadata files

Q: *I'm just getting into this metadata stuff and it appears to be a good idea. What tool would you suggest is the best one for producing CSDGM (standards-compliant) metadata?*

A: There is no one right answer to this question since it depends on your situation. The answer lies in an evaluation of what tools you already have and how much you want to accomplish in the short term. See recent advice at: www.doa.state.wi.us/olis/wlip/metacollection.asp

The ultimate point is to choose a tool that fits your current situation and then begin metadata production. Only after creating the first few files will you have better criteria for evaluating your choice and future options.

Q: *If I just need to produce a few metadata documents, do I need to obtain a specific tool?*

A: No. Current standards-compliant metadata documents start out as ASCII text documents.

Utility software is then used to check standards compliance and convert the file to other formats for web viewing, software integration, etc. To create the base-level text documents, you only need a word processing or simple text editing program. This way, you simply open a metadata template (or even someone else's good example) and begin editing to document your data.

Q: *How do I post/update/see my metadata on the state clearinghouse (WISCLINC)?*

A: Text file versions or SMMS databases of metadata may be sent to the State Cartographer's Office and we will work with you to get your documentation on the clearinghouse. E-mail attachment is the best method for this.

What to collect and what level of detail to include

Q: *I've decided to document using the FGDC standard (which is long), and various tools only partially help narrow down the fields to fill-in. Is there a short-cut to metadata for a particular theme?*

A: Certainly. We've always encouraged novice metadata producers to start with a metadata template available from the clearinghouse or better yet, another organization's good comprehensive example of metadata for a similar theme. Just start there and edit the information to fit your data.

Q: *Do I really have to include this much detail?*

A: Again, there is no "right" answer to this question. We can only ask that you consider potential users of your information and what they would need to know for appropriate use. These users include people both inside and outside your own organization. The FGDC standard does have certain "mandatory" fields which were perceived to be necessary to almost any user of the data.

Q: *If I can't possibly provide this much detail right now, how do I decide which information to fill in first?*

A: With limited resources to apply toward metadata creation, we advise evaluating which metadata will be immediately useful within your organization. This base-level documentation can always be expanded upon to meet standard requirements and the expanding needs of your data user group.

Once more, why metadata is so valuable

Q: *Who uses this stuff anyway... and how can I justify allocating time to this activity?*

A: First, metadata represents insurance for you and your organization. More broadly, your data would almost certainly be useful to others in your own agency, a clearinghouse, other agencies or departments and other general users unknown as of yet. Yet, without metadata, those potential users may not be able to get full value from the data. You will also find that your own internal data management needs will be supported by your metadata.

And, if you have metadata to back up your data, you're more likely to be able to strike a productive data-sharing agreement with someone else.

Q: *I've heard of an international standard coming. If I produce metadata now, will I have to start from scratch in a year?*

A: No, the FGDC has already funded efforts to supply free utility software to convert current FGDC standard-compliant metadata to the international standard format upon adoption and implementation.

Help is right at hand

Q: *Can I get additional help to start off on the right foot?*

A: Yes, the State Cartographer's Office has many resources to help get started as well as to address hurdles along the way. Don't hesitate to contact us and we'll provide as much assistance as we can to ease the learning curve.



Acts to preserve WLIB

Legislative committee alters Gov's budget

by Ted Koch

The state legislature's Joint Committee on Finance voted on May 31 to significantly alter Governor McCallum's budget proposals concerning the state's land information program. That committee is the prime legislative body charged with reviewing the governor's biennial budget bill, state appropriations and state revenue. It is composed of 16 members, 8 each from the State Senate and Assembly, with an equal balance of Republican and Democratic Party affiliations.

Original proposal was sweeping

As reported in the previous issue of the *Bulletin* (Winter 2001), Governor McCallum's proposed budget for the next two years included provisions to:

- dissolve the Wisconsin Land Information Board (WLIB) and transfer its authority to the state's Department of Administration.
- allocate much of the WLIB's program funds to begin the design and building of the proposed Wisconsin Land Information System (WLIS), and increase the funds available for Comprehensive Planning grants to local and regional governments under the state's new Smart Growth Initiative.
- eliminate the 2003 sunset date for both the WLIB and the Wisconsin Land Council (WLC), that is, making them both permanent.

In its May 31st action, the JCF approved changes to the budget language that do the following:

- retain the current powers, duties and make-up of the WLIB and WLC.
- require the WLIB to establish rules regarding the creation and maintenance of WLIS.
- extend the current September 1, 2003 sunset of the WLIB and WLC to September 1, 2007.
- retain the governor's recommendation that the locally collected filing fee for land records be increased from \$10 to \$11 for the first page, with the stipulation that counties retain and use the additional funds to provide better public access to housing and land use information related to comprehensive planning.

- modify the governor's recommendation on allocation of the \$2 portion of the locally collected filing fee which is sent to the WLIB. Significant changes to the governor's proposal include:
 - reducing Comprehensive Planning grant funds \$200,000 from \$500,000 to \$300,000 annually.
 - creating a Housing Assessment Fund, at \$564,000 annually, earmarked for counties in the form of grants for technology development and improving Internet access to housing assessment and sales data.

Welch continues support

The budget changes approved by the Finance Committee were presented in the form of a motion by Senator Bob Welch (R), a legislative leader in creating the Land Information Program eleven years ago, and an former member of the WLIB. Following a moderate amount of committee discussion, the motion to amend the Governor's proposals passed on a vote of 10-6. Two Democrats along with all eight republican members of the committee voted for the change.

New state agency requirement

In addition to the above action, the Finance Committee also passed, on a 14-2 vote, budget language requiring 11 state agencies to submit to the WLIB information needed by local units of government to complete comprehensive land use plans. The provision requires the agencies to provide the information to the WLIB on an annual basis, and the WLIB is required to process the information to begin making it publicly accessible by May 31, 2002.

Further steps for the state budget

The Joint Finance Committee's budget deliberations are expected to be completed in early June. Following that, the altered budget bill will be routed through both the State Assembly and State Senate (and their respective party caucuses) before achieving final approval. Changes may be made anywhere in the process.

Following legislative passage of the bill, it goes to the governor for signing. In Wisconsin the governor has broad line-item veto powers, so the final Land Information Program provisions that become law are still subject to change at that point.

The state biennial budget is supposed to be completed by July 1; however, for the previous several budgets, legislative action followed by the signing process has not been completed until fall.

What's in a name?

by Ted Koch

Wisconsin has been a state for more than 150 years, and over that time the names and accepted spellings of geographic features within our boundaries have become well established. Oh, every so often the names of places seem to make the news such as when, as has happened several times over the past 10 or so years, the Dept. of Transportation has mistakenly dropped a community name from the official state highway map.

In the 1970s through early '80s there was somewhat of a flurry to name smaller water features depicted on the 7.5-minute topographic map series as those map sheets were completed statewide. For the most part, however, feature naming is established and complete. Geographic names provide us with evidence of the rich and diverse origins of the state. Many names reflect the Native American and ethnic heritage of settlement across Wisconsin.

Wis. Geographic Names Council

To accommodate the naming of unnamed features, to correct misspellings, to eliminate duplicate names, and in rare instances to change the name of a feature, years ago the Legislature assigned responsibility to the Natural Resources Board. The Board then designated these duties to the Dept. of Natural Resources while directing the State Cartographer, Dept of Administration, Dept. of Transportation, and State Geologist to assist as members of the DNR's Geographic Names Council.

Names changes approved by Wisconsin's council are forwarded to the U.S. Board on Geographic Names which is responsible for standardizing names for use by the Federal Government, and geographic names appearing on federal maps

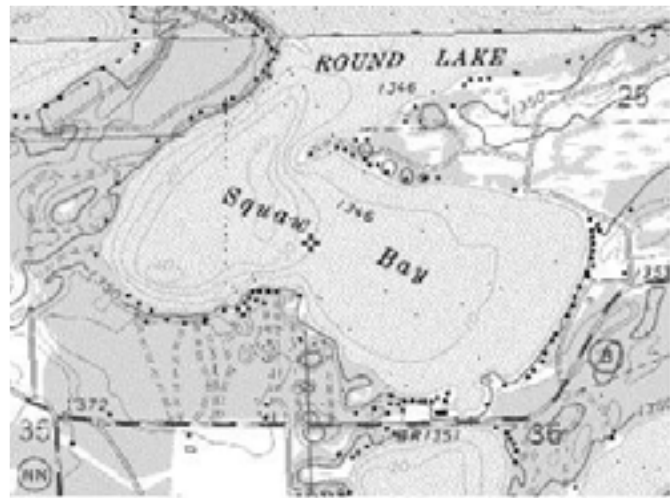
Modest activity in recent years

Over the past 10 years or so, the Geographic Names Council has met once a year to make decisions on naming proposals that have been submitted to the Council. The vast majority of the proposals have come from private individuals requesting that a name be given to a small unnamed stream or pond, or that a small feature be renamed to more properly reflect local historical influences.

The "Squaw" movement emerges

About a year ago the Council was presented with a name change request from the National Park Service's Apostle Islands National Lakeshore that became somewhat higher profile when the story was picked up by some of the state's print media. The Park Service applied to rename Squaw Bay, a Lake Superior bay along the Bayfield County shore near the community of Cornucopia.

The term "squaw" is considered by many to be a derogatory term for a Native American woman, and therefore deserving of replacement by a more appropriate name. Last year, on the recommendation of the Park Service and Bayfield County, the Council approved the recommendation that Squaw Bay be renamed to Mawikwe Bay, which translates in English to Weeping Woman (Bay).



Squaw Bay, east of Hayward, as labeled on the USGS 7.5-minute topographic map sheet named Reserve.

New Sawyer County name changes

Recently this year, the Council met to consider eliminating additional squaw names, this time in Sawyer County. In this instance, the Sawyer County Board had approved a resolution calling for the general elimination of the word squaw as a place name in the county. The Lac Courte Oreilles Tribal Governing Board in February passed a similar resolution.

At its recent meeting, the Council agreed to recommendations that Squaw Creek which flows into Lake Chetac be renamed to Heron Creek, that Squaw lake and its outlet Squaw Creek (both northeast of Lac Courte Oreilles) be renamed Osprey Lake and Osprey Creek respectively, and that the part of Round Lake (due east of Hayward) named Squaw Bay be renamed Richardson Bay. Finally, the council recommended that another Squaw Bay, this one being the westernmost part of Lake Chippewa, be renamed to Ikwe Bay. Ikwe, a Chippewa tribal word, is a respectful name for a Native American woman.

Legislative action this session?

Statewide, about 35 bays, creeks, lakes, islands and flowages continue to carry the squaw name. At the Wisconsin Legislature, a bill (SB 24) to force wholesale changes has been introduced and referred to committee. If the measure is passed into law in its current form, it will prohibit all cities, villages, towns, counties and state agencies from using the term "squaw" for the naming of any public place including an administrative area, water body, recreation area and highway, and further require that if the term is currently used it be eliminated.

If this bill becomes law it will take some time to rename the affected features; however, it will be a process worth the effort.



Metadata in action

SCO unveils on-line digital orthophoto catalog

by Anna Weitzel

The SCO is happy to announce the public release of a new prototype web site dedicated to helping users learn about, search for, and potentially view or obtain digital orthophotos (DOPs). While still under development, the OrthoFinder site presents an interactive way to select and access metadata about past orthophoto projects in Dane County. The site also offers opportunities to learn about orthophoto production in general and how the OrthoFinder web tool was developed.

Federal grant to the SCO

OrthoFinder is the focus of a one-year initiative at the SCO, funded by the Federal Geographic Data Committee, to develop the means through metadata to catalog and access digital orthophoto series. We anticipate that eventually OrthoFinder will be adapted to serve other counties or the whole state. For now, Dane County is good ground for the pilot project because of the variety of available DOPs covering the area.

What you will find

OrthoFinder uses an interactive web mapping application to define the search area. You can select a set of DOP footprints to be displayed on a map of Wisconsin and can then zoom in on an area of interest. Clicking on a footprint brings up a subset of metadata about DOPs covering that area, including the extent of the project, the producer, the imagery date, and the resolution.

Learning or a refresher course

In the educational resources, you will find basic information and links on what orthophoto are, how they are produced, how Wisconsin's various orthophoto coverage evolved, and how they are commonly used in GIS and mapping applications. This information is intended to help educate on this emerging and popular GIS theme and help a user decide which orthophotos to use when multiple overlapping choices are available. You can also learn about the OrthoFinder project itself, including the proposed application, the software behind the web tool, and a project progress report.

Take it for a test drive

To try out OrthoFinder at its current stage of development, point your web browser to: www.geography.wisc.edu/sco/orthocat/

A top-ten listing

Metadata errors ranked

by Bob Gurda

Among those of us who are metadata practitioners, a common test of a metadata file is to run it through an error-checking program. Errors aren't uncommon at all, but most involve missing elements or improper formatting — things that can keep other people from doing effective searches.

Yet, according to one of the more experienced practitioners in the metadata arena, the top ten errors in metadata— those that have long-lasting consequences — are far more strategic or content-related.

An annotated list of these highest-ranked errors has been assembled by Linda Wayne of the North Carolina Center for Geographic Information and Analysis, with contributions from experts around the country.

With apologies to David Letterman, here are the “Ten Most Common Metadata Errors:”

- #10 Defining your dataset too finely or too broadly
- #9 Using incorrect State Plane Coordinate System zone identifier values
- #8 Confusing “Currentness Reference” with “Publication Date”
- #7 Misunderstanding resolution
- #6 Putting too much faith in metadata tools
- #5 Taking the minimalist approach
- #4 Understanding assessments of consistency, accuracy, completeness, and precision
- #3 Glossing over Section 5: Entity and Attributes
- #2 Thinking of metadata as something you do at the end of the data development process

And, the absolutely most common error, #1: Not doing it!

See it all yourself

The 3-page PDF document, which contains an observation about each error, is available on the web at:

www.fgdc.gov/metadata/top10metadataerrors.pdf

New web site unveiled

GeoData Alliance set to go

by Bob Gurda

After a gestation of almost two years, the GeoData Alliance (GDA) is ready to take flight. To help publicize itself, the GDA has announced its redesigned web site: www.geoall.net.

GDA is the product of interest in promoting a National Spatial Data Infrastructure (NSDI) along with the organization concept of chaordism as developed by Dee Hock, the founder of Visa International. As explained by Kathy Covert, Secretary of the GDA's Interim Council of Trustees, the alliance is designed to balance competition and cooperation, a seeming paradox that's modeled on nature. It is meant to evolve organically.

GDA is non-profit and is welcoming memberships at rates ranging from \$50 to \$500. Categories include Individual, Institutional, Alliances, and Affiliates.

The first annual meeting will be on November 2 in Denver, CO, in conjunction with the GeoData Forum.

(source: *GIS Vision on-line magazine*)



OMB would take lead on FGDC

Revisions proposed to Circular A-16

by Ted Koch

Dating back to 1953, Circular A-16, a document produced by the Federal Office of Management and Budget (OMB), has provided guidance to federal agencies involved in mapping and geographic data activities. The Circular was originally issued in 1953, revised in 1967 and 1990, and now is undergoing revision again.

The latest revisions to the circular have recently been drafted by the Federal Geographic Data Committee (FGDC). This revision includes a description of and affirms the purpose of the National Spatial Data Infrastructure (NSDI), and establishes the OMB in a leadership role in the coordination of FGDC operations. Specifically, the current draft of the circular calls for the FGDC to be chaired by the Secretary of the Interior, and the Deputy Director of OMB to serve as Vice-Chair.

Time to comment

Currently, the FGDC is accepting comments regarding the draft circular on an informal basis. Once comments are compiled, a revised draft document will be forwarded to the OMB for a more formalized review process. The current draft of the circular can be found on the FGDC Website at www.fgdc.gov by entering "A-16" into the site's searching function.

(source: *FGDC*)

Five-year advisory group submits final report

FEMA gets advice on mapping

by Bob Gurda

Digital floodplain mapping. Frequent map updates. Partnerships. Modern technology to archive and distribute maps.

These are some of the recent recommendations from the Technical Mapping Advisory Council, a group formed in 1995 by the Federal Emergency Management Agency (FEMA). The council completed its work this last November and submitted its final report.

Floodplain mapping has been a problem

One of FEMA's duties is to administer the National Flood Insurance Program (NFIP), and in this role FEMA has for many years produced a set of Flood Rate Insurance Maps (FIRMs) which have been long criticized for being far too generalized. Studies in Wisconsin have



Muscatine City, IA, 4/24/01 – Mississippi River at 23 feet above flood stage.

shown that these maps often leave some land owners' property unprotected by flood insurance while other owners are forced to purchase unnecessary insurance. Such was reported from the La Crosse area during this spring's flooding along the upper Mississippi River.

Technology catch-up

In general, the recommendations call for FEMA to adopt mapping technology and spatial information management approaches that are now common in other agencies. There is also a call for funding mechanisms to accomplish this increased level of mapping.

The specific recommended actions include:

- Form partnerships with other agencies, states, localities, universities, and private entities. This would build on recent FEMA collaboration with NASA and USGS on GPS and remote sensing.
- Update, create, and maintain digital FIRMs to reflect current conditions, jurisdictional boundaries, and flooding sources.
- Create and maintain in perpetuity a complete archive of maps produced under the NFIP.
- Seek authorization to use disaster funds to update maps following a presidential disaster declaration.

The council's final report is available at www.fema.gov/mit/tsd/tmc_main.htm.

(source: *Natural Hazards Observer*, March 2001)

Asked to study and recommend

State task force looks at elevations

by Bob Gurda

Geodesy. Engineering. Mapping. GIS. Visualization.

Good and consistent elevation data are necessary for all of these uses and many more. To address the challenge of supporting such needs, a state task force has begun to meet, with the idea of outlining goals and identifying costs, benefits, and institutional solutions.

The Wisconsin Land Information Board's *Elevation Data Task Force* has already met twice since mid-April and is on track to submit a report by the end of the year. Its members are drawn from local, regional, state, and federal government, the private sector, and academia. David Moyer, state advisor for the National Geodetic Survey (NGS), was asked to lead the group by Ted Koch, chair of the WLIB.

Sweeping recommendations expected

Impetus for this study arose from the WLIB's review of its Foundational Elements. Although significant program resources had been used to modernize the horizontal control network (based primarily on development of a state High Accuracy Reference Network, or HARN), relatively scant attention had been paid to vertical data.

The task force is taking a strategic perspective. Current data sets, program needs, technological opportunities, costs & benefits, maintenance & custodians, and funding strategies are all on the agenda. If successful, the group will set the tone for elevation data set efforts across the state for many years to come.

Everything's in flux

The group's work comes at a time of great change in the way elevation data is collected and managed. The days of the federal government doing most of this work are gone, and along with that fact comes the need to identify new standards and funding. At the same time, new technolo-

gies of RTK GPS, LIDAR, and IFSAR are challenging traditional methods from surveying (leveling) to topographic mapping.

From the specific to the general

Elevation data exists in many forms. One way to organize this variety is along a continuum from scattered highly accurate point values (traditionally, geodetic benchmarks) to groups of less accurate points that more completely characterize a landscape (traditionally, contour lines; today often in the form of a regular or irregular pattern: a DEM, DTM, or a TIN).

What's needed to map flood hazard?

A good example of the need for elevation data is the quest to better map which areas are—or are not—likely to flood. Current maps purporting to show which properties should be covered (or not covered) by flood insurance are notoriously inaccurate (*see related FEMA article on page 6*).

How much more accuracy is needed, and which areas should be mapped? Does the answer depend on whether the landscape has been glaciated or not?

New values for the HARN?

At its May meeting, the task force heard about efforts primarily within the Wis. Dept. of Transportation to implement a Height Modernization Program (HMP) along the lines recommended by the NGS. In a nutshell, WisDOT wants such a geodetic control system installed to support the use of Real-Time Kinematic techniques that use GPS receivers; this would allow rapid determination of elevations good enough to support highway design analysis, and thus would save significant money in the long run.

The HMP would, for the first time, integrate highly accurate horizontal and vertical values on the same monuments. (In the days prior to GPS, horizontal monuments were mostly on hilltops while vertical ones were scattered along railroad and highway routes). Horizontal values would be published relative to the 1997 adjustment of NAD 83.

The idea is controversial, however. The Wisconsin HARN was established less than ten years ago and about half of the counties then installed additional horizontal control points in a denser pattern for local use, often with WisDOT's help.

WisDOT now wants to develop new values for many of the HARN monuments and in some cases to install new monuments more resistant to movement. Whether the HMP will, on balance, benefit local users may be something that is determined on a county-by-county basis.

Nevertheless, WisDOT is convinced of the benefits to their operations and those of some others, especially in parts of the state where the existing vertical control network has fallen into disrepair.

DEMs & DTMs

Digital representations of elevations spread across various pieces of the state's landscape exist in the form of terrain or elevation models. Such data derived from the contour lines on USGS topographic maps exists statewide. Other more recent data of the same general type has been developed on a project-specific basis, usually in county patches (although some is municipal and some is multi-county) to support digital orthophoto production.

Instead of this scattered approach, it might make much more sense to build a higher-accuracy digital elevation data set that could support a variety of applications for years to come. Coming up with a technical concept for such an approach is one challenge; finding ways to fund it is an equal hurdle.

Near-term plans

In its next several meetings, the task force will continue collecting background information on technologies, institutional programs and plans, and on the potential beneficiaries of a 21st century state elevation data set.

For further information, or to submit comments or suggestions, contact David Moyer, the task force chair, at david.moyer@dot.state.wis.us.

Book analyzes emerging source of data

Commercial high-resolution satellites examined

by Bob Gurda

The advent of high-resolution overhead images that can be purchased on the open market has the potential to change our world — in both good and bad ways. To help illuminate the issues, you might want to consult a new 644-page book.

One-meter satellite images are already available, with higher resolutions in the planning stage. Once the exclusive domain of military and intelligence agencies, this highly detailed imagery is now available to anyone willing to pay the price. Beyond their gee-whiz appeal and comparison with digital orthophotos, a host of policy issues surround this development.

International depth and breadth

With more than two dozen chapters and numerous satellite images, the book, *Commercial Observation Satellites: At the Leading Edge of Global Transparency* examines emerging policy issues, provides a survey of the U.S. and many non-U.S. satellite remote sensing programs, and offers case studies on international security applications of satellite imagery. The authors discuss remote sensing programs and policies from a variety of nations.

The book also contains a detailed bibliography and index, 32 pages of color images, and a description of the past, present, and future of the medium- and high-resolution satellite world. The charts in this section are also available on the ASPRS website at www.asprs.org/asprs/news/satellites/ and will be updated regularly.

ASPRS is co-publisher

The book is edited by a group from RAND, a policy think tank. It brings together an international group of experts to analyze the diverse issues presented by the new, higher resolution commercial and civilian observation satellites, and is published jointly by RAND and the American Society for Photogrammetry and Remote Sensing (ASPRS).

The book sells for \$90. Copies may be purchased from ASPRS on line at www.asprs.org. Click on Publications, then on The ASPRS On-line Store, or email orders to: asprspubs@pmds.com

(source: ASPRS)

Glacial materials and features

Polk County Pleistocene mapped

by Bob Gurda

Another geologic map has hit the shelves. This time, the Wisconsin Geological and Natural History Survey (WGNHS) has produced *Pleistocene Geology of Polk County*, also known as Bulletin 92.

The publication is a package comprised of a 70-page soft-cover book along with a 1:100,000-scale map. The map includes 6 east-west cross sections, one each running through the middle of each tier of PLSS townships.

Pleistocene geologic features are those related to the Ice Ages. Polk County has been completely covered by ice, including during the most recent Wisconsin Glaciation which ended in Polk County only about 10,000 years ago.

Bulletin 92 is available from WGNHS for \$15.00, or the map alone (folded) for \$5.00. Call 608/262-7389 or surf to www.uwex.edu/wgnhs

How to describe “what” and “where”

‘Location Matters’... at DNR

by AJ Wortley

The Wis. Department of Natural Resources recently updated and expanded its *Locational Data Standards* policy document. The policy is pivotal in the DNR’s coordinated approach to collection, storage, use, presentation, distribution, and documentation of its locational data.

Use of the standards will provide a means by which to evaluate *quality* of a DNR data asset and then consider inventory, integration, and application. Secondary benefits would then include long-term improvement of the quality and usefulness of enterprise locational data in the DNR; and ultimately saved time and money through coordinated resource management in locational data activities.

The new standards policy was authored by Lisa Morrison and John Laedlein of DNR’s Enterprise Data Management Section. The document is 80 pages of which 14 pages hold Field Tables and 21 pages hold Look-Up Tables.

The standard and future-related materials may be found on the DNR website at: www.dnr.state.wi.us/org/at/et/geo/location/loc_stds.html

The DNR has plans to produce guides accompanying the new locational data standard, to include: *Locational Data Basics* and *Data Accuracy Basics*.

Milwaukee Map Service product

Dane County gets huge wall map

by Bob Gurda

Do you have a blank space on your wall — a 6-foot x 8-foot space, that is? That’s what you’ll need for Milwaukee Map Service’s revised wall map of Dane County. It includes county-wide numbering, block and exit numbers, zip code boundaries, and comes with a separate street index booklet.

The *Dane County Wall Map* is for serious users. It comes laminated, and for a price of \$229.95.

Custom versions, such as only the greater Madison area, are also available.

For details or to order call 800/525-3822 or look on the web at www.milwaukeeemap.com

Building from the ground up, always

For this issue we talked with Arden Sandsnes, a land surveyor and long-time supporter of land records modernization..*



You have been involved in the push for land records modernization for a long time. Has this always been a professional interest of yours?

No, not really. When I started surveying, there wasn't much of an idea in the profession that we could collectively build a coordinated base of information. Each project was done on its own, in isolation from others. Whether in government or the private sector, we didn't have a very long-term vision. Even when the Interstate Highway System was built, a large number of survey control points were installed, but only temporarily; those should have been monumented and documented for future use, saving money in later years..

The local level of government is best suited to lead this effort.

Then, however, the National Geodetic Survey started talking about using the State Plane Coordinate System as a common basis for mapping, and Professor Jim Clapp (UW-Madison) brought up the idea of a cadastre — a system of tracking real property and the rights related to it. At first it didn't make sense, but especially once electronic distance measuring equipment came along the surveying part of it became possible. It dawned on me that, by using a common coordinate system for all my work, eventually I would have a mapping base that would help me do surveying in the areas between previous projects. Today, with state plane coordinates — and even better, a county coordinate base — available everywhere there is no reason in the world for a surveyor to invent his own coordinate and direction base.

Having served on the Land Information Board (WLIB) for 10 years, what observations do you have?

We started down this road knowing that large challenges were ahead, but also believing that serious experiments would yield the answers that would help everybody. We also looked to local government to do the bulk of the work in this

area, assuming that once methods of modernization were well tested it would be good business for any local government to adopt the best practices. That is, they would learn from each other.

I originally believed, and I believe now more than ever, that the local level of government is best suited to lead this effort. Local government staff are the closest to the collection of the information and to those who use it regularly.

For that reason, I am distressed that in recent years our state program's funding has been directed away from land information experiments. Now, almost all of the modernization funds are going to general day-to-day operations, and most of the money is going to the wealthiest counties. There's no reason to think that those counties can perform better experiments than those with lesser population. In fact, several of our larger counties have not been the leaders they could be.

Some people thought that the WLIB staff spent too much time overseeing the (earlier) competitive grants. The purpose of the oversight was accountability which never bothered me much because the real value in the end is the innovation, not repetitious database building. That is, there's not so much to monitor as you might think.

The state budget bill submitted recently by the governor calls for merging the WLIB and the Wis. Land Council (WLC). It's probably a safe presumption that you don't think much of that idea.

That's right. It will drag the program down, getting it mixed up with land use disputes. In my mind, there's an obvious distinction between the collection of land information and how it is used. The WLIB ought to be in charge of the building of the information, and making it available. That mission should not be confused with other concerns. Of course, good land data can go a long way to support good planning which may help resolve land use disputes before they end up in the lap of a zoning board.

There's an obvious distinction between the collection of land information and how it is used.

What over-arching themes draw your attention?

There is a lack of thinking about how organizations affect one another, and how things play out over the long run. I see this particularly within state agencies. We ought to know how these agencies' plans for data collection will affect each

other and the rest of us. State budget gurus could make this happen, but it doesn't seem to be on their radar screen. The same is true at the federal level. It's tunnel vision and short-term vision, and it ends up costing all of us.

Bureaucrats talk about how they don't have money to do this or that, but then when they do spend money it's too often done without any idea of what's going on in other agencies. We're wasting money through this approach. Instead, we ought to be thinking about land records modernization as a long term investment rather than an expense that only lasts until the next election.

We ought to be thinking about land records modernization as a long term investment.

You sound pessimistic. Do you see some hope?

I am pessimistic on some fronts. The WLIB has been badly hampered by lack of appointments by the governor. Nine months after my own resignation there still isn't a replacement. But even under that burden, the WLIB has been more productive than the WLC. Why anyone thinks that merging those two groups will improve things is beyond me.

But the real hope lies at the local level, the base of strength. I'm going to be turning my energy to helping out with the Wisconsin Land Information Association. That's the only group now that still has the vision and a chance to carry it through.

I've wondered if it might be a revitalizing exercise for our land information community to organize an entourage to go to Russia. They have a golden opportunity to organize their land records in the aftermath of the fall of the Soviet state. We have a lot of experience to offer.

**Arden "Sandy" Sandsnes is Vice President of Royal Oak Engineering, Inc in Madison. He has been active in several professional organizations for many years, and was a member of the Ad Hoc Consortium for the Modernization of Land Records in Wisconsin (early 1980's), was appointed by the governor to the Wisconsin Land Records Committee (1985-1987), and then was appointed by the governor to the Wisconsin Land Information Board (1989, reappointed 1996) from which he resigned in mid-2000.*

Kodak, ISTAR step into market

Aerial imagery on speculation?

by Bob Gurda

A new business model is emerging to meet customer needs for aerial imagery over major U.S. cities: speculation.

Traditionally, aerial photography (or digital imagery) is acquired on contract for a specific customer. While the companies that do this work may retain re-sale rights for a secondary market, the certainty of being paid by the primary client for the work accomplished is the driving force.

We are aware of two firms, so far, that are venturing into speculation mode in a major way: Eastman Kodak and ISTAR, a company based in France. Both have big plans to acquire and market imagery over our country's major urban areas.

Europeans have a head start

ISTAR Americas, Inc. has already acquired its first images in the U.S., over San Francisco. The process involves a high-resolution wide-angle digital stereo camera built in Germany. The result was 600 square miles of imagery captured in only two hours. Each pixel also has an elevation, most likely representing the ground or a structure, which ever is higher.



“This mission marks the launch of a program designed to acquire imagery of over 50 North American cities by mid-2001. It will provide an offer of outstanding quality in response to the growing demand for high resolution mapping products”, said Laurent Renouard, Executive Vice President of ISTAR Americas Inc. Plans apparently include acquisition of 1-meter resolution imagery over the Madison and Milwaukee metropolitan areas, but the schedule hasn't been announced. Further, the precise boundaries of the areas to be covered aren't yet clear.

To date, ISTAR has processed existing imagery of various resolutions into a set of product lines. The company's traditional clientele is the wireless telecommunication market for which line-of-sight and tower placement are critical issues. For further information, visit www.istar.com.

Kodak envisions "one-stop shop"

Eastman Kodak, the venerable giant of the aerial photographic film industry, is branching out to serve more than the primary users with a web-based "store" where one can search, sample, and order imagery, both digital and analog. The most detailed images come from a Canadian company, ALTAPHOTO, which has a project to collect detailed photographs over the 95 largest U.S. urban areas (defined by Metropolitan Statistical Areas, or MSAs).

In Wisconsin, the areas involved appear to be the counties of Milwaukee, Racine, and Kenosha. Color imagery at a scale of 1:1,800 is scheduled to become available by mid-2001. Imagery for about 30 urban areas in other states is already available through this program.

Kodak indicates that an orthophoto by-product can be produced to meet map accuracy standards at 1:1200 (that is, plus or minus 1 meter). Less expensive options which have less or no geometric correction include digital images on CD or prints made from digital scans.

The new Kodak Earth Imaging Products (EIP) Web site can be found at www.kodak.com/go/earthimaging.

Currently, aerial imagery is available on-line from over 30 North American major metropolitan statistical areas (MSAs) and Kodak plans to steadily increase this number to 95 by mid-2001 with the addition of imagery offerings from a number of suppliers from across the continent and around the world.

Industry analysts predict the earth imaging information market will exceed \$1 bil-

lion over the next three years. Kodak EIP will meet the needs of this market by offering many different levels of precision image data from one-meter black-and-white to six-inch resolution color. Kodak will output aerial imagery on CD with viewer or high quality paper prints.



“We are proud to launch Kodak Earth Imaging Products,” said David Ledgerwood, vice president of C&GS. “This newest offering via kodak.com will not only revolutionize how high resolution earth imagery is bought and sold but expand its use. We also take the complexity and frustration out of the search for the best imagery so that image information solutions can be delivered quickly to enable more effective customer decision making.”

Kodak hopes not only to expand the traditional market for aerial imagery, but also hopes to engage imagery providers by offering a one-stop shop that will lower marketing costs.

What about non-urban areas?

The trend toward aerial photography-on-speculation, while fairly new, is simply an extension of the traditional private business model. “Build it and they will come” is the concept.

However, if the market is not sufficient to support a profitable enterprise, then there will be no such service. Given Wisconsin's limited area of dense population, it seems likely that we will see only a very small percentage of our state covered by this kind of speculative aerial photography.

(sources: ISTAR and Kodak press releases)

WI's first local gov't web GIS

Clark County maps hit the net

by David Handley

While online GIS applications are becoming more widespread, no county in Wisconsin has yet used this technology to display comprehensive land information - until now. Clark county's Planning, Zoning, and Land Information Office has put together a fully functional GIS web server.

Using a fairly simple series of layers and tools, the system does a thorough job of covering all the bases. At higher zoom levels, for example, one can observe the extent of DNR wetlands and county forests along with Public Land Survey lines, all overlaid atop 1997 digital air photos or USGS topo quads. Individual parcels are clickable on the map; when queried, their extent is highlighted in yellow, and a text box appears, showing the details of that parcel. There is also a search utility that allows parcels to be found through address or ID number.

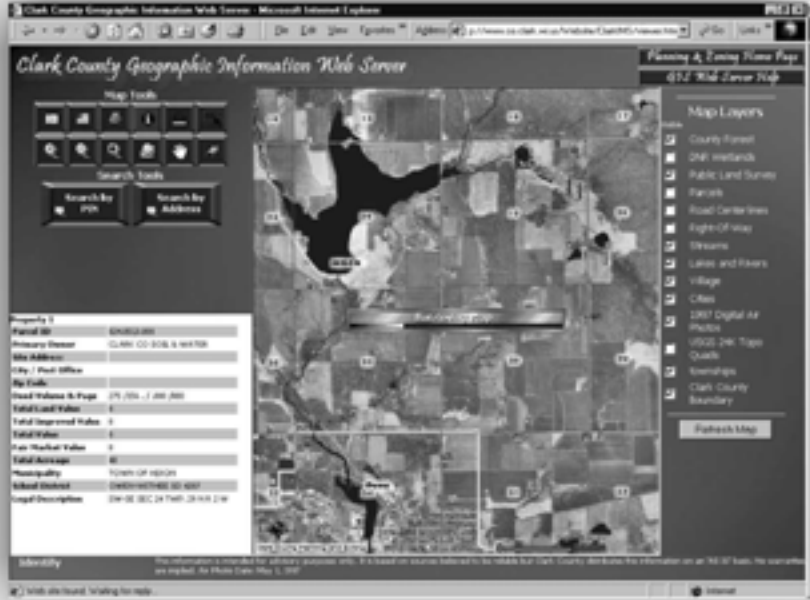
While this system is surely leaps and bounds ahead of other counties in the area of online GIS access, it is not without faults. The maps are often quite slow to load, and would certainly be painfully slow on a 28.8 modem connection. The

controls are often finicky, as well; one wrong click and the entire system seems to go awry, forcing one to start over.

Also, there are large areas of which the parcels have not yet been identified - this includes lots within most of the villages on the map.

Limitations aside, Clark county presents a definite step forward in the area of public land information GIS, and it seems safe to assume that it won't be long before other counties follow its lead. Visit the Clark County GIS web server at

www.co.clark.wi.us/Website/ClarkIMS/viewer.htm



A parcel query brings up a text box of information. The animated 'Retrieving Map' graphic mimics the loading of an image, but may also contribute to slowdown. The layers can be easily switched on or off; leaving too many on can result in map clutter.

A re-introduction to our website

Look at SCO's AP Catalog

by David Handley

As we have previously mentioned, our web team is currently designing an all-new SCO website. That process is moving along rapidly, so look for the results soon.

During the re-design period, we have been making only critical changes to the content of our pages. However, in implementing the design for the new site, we've been looking through all the current pages. Some sections may be ones you haven't visited lately.

Photographs, old & new

The on-line aerial photography catalog is the most complete record of aerial photog-



raphy in Wisconsin, containing information for over 1000 projects. Listings are sorted by county, spanning the period from 1936 to 2000 (with spring 2001 entries coming soon). There is also a linked list of projects that cover multiple counties.

Since the SCO doesn't provide copies of aerial photos, we have an address book to help put you in touch with the federal, state, local or private organization that is the source related to any particular project.

It's easy to find

To find our aerial photo catalog, navigate to the Aerial Photography section and look under Wisconsin Catalog of Aerial Photography. Choose your county of interest, and you'll be off and running.

UW-Madison recognition

SCO's Hemstead wins award

by Ted Koch

At an April 19 ceremony hosted by Chancellor John Wiley, Brenda Hemstead from the State Cartographer's Office was awarded one of the five UW-Madison Classified Employee Recognition Awards for 2001.



Classified employees are those university staff whose positions fall under the state's civil service classification system. Over

5000 UW-Madison staff are included within the classified category.

The classified employee awards are intended to recognize staff who have provided outstanding service to the university, and also that same level of commitment outside of the everyday job responsibilities. At the chancellor's award ceremony, attended by approximately 75 people, winners received a plaque, pin, and a certificate to attend programs at a campus-based management institute.

Going on 22 years

For her award, Brenda was recognized for the outstanding quality and diversity of work she has performed in the SCO over the past twenty years. She joined the office in 1979 when it was barely five years old. Since that time she has performed a variety

of duties including being the SCO's primary contact person for inquiries received from the public, and initiating and implementing many ideas to provide information in a more effective and efficient manner.

Service to the professional community

Outside the SCO, Brenda was recognized for her commitment to, and work with, the WI Land Information Association. In the Association's early years, Brenda took on the responsibility for coordinating the organizational and logistical details for the annual meeting and maintaining the membership rosters. Additionally, over the past four years she served two terms on the WLIA Board of Directors, and as the WLIA's Education Committee Chair.

N. Illinois mayor to take reins

URISA selects new Exec. Dir.

The Urban and Regional Information Systems Association has hired a new Executive Director. Bill Gentes not only has 12 years of experience in the association management field, but also is active in local government affairs.

Gentes has worked with the Paper Industry Management Association, the Automotive Engine Rebuilders Association and the Portland Cement Association.

In addition, Gentes is currently the Mayor of Round Lake, a Illinois community of 6,000 located less than 10 miles south of Kenosha County (WI). He has served as Vice President of his local area library district for 3 terms and 5 years as Chairman of the Round Lake zoning and planning commission.

"This position combines two of my loves, being an association professional and community planning," said Gentes. "I can't wait to get started."

(source: URISA)

A pre-GIS pioneer

McHarg passes on

by Bob Gurda

One of the forefathers of GIS died earlier this year. Ian MchHarg, a native of Scotland, was a professor at the University of Pennsylvania, where he popularized a landscape planning process based on a series of transparent overlays. Each such flap held information in map form on a particular aspect of the landscape. By comparing the layers, a planner could conceive the constraints

and opportunities arising from the various landscape components.

While MchHarg didn't use computers to implement the approach, and didn't invent the analytical overlay method, his proselytizing planted ideas in the minds of the people who a bit later started working out the digital equivalent. The GIS community owes him a debt for his insight and for his persistence in promoting the concept.

MchHarg published one of the most influential books in his discipline, *Design with Nature*, which became quite popular in the 1970's. Copies of this classic are sometimes available in used book shops.

Relocates to South Carolina

von Meyer leaves Badgerland

Consultant Nancy von Meyer, a mainstay in the Wisconsin GIS/LIS community for almost 20 years, pulled up stakes with her husband in April and headed southeast. They sold their farm near Blue Mounds and have taken up residence in Pendleton, South Carolina, a small community in the western part of the state along the Savannah River and near Clemson University.

Their business, Fairview Industries, will continue in operation from the new location. E-mail addresses remain the same.

In addition to working with numerous clients in Wisconsin, Nancy served as president of the Wisconsin Land Information Association and participated on a variety of task forces, committees, etc. here. She will be missed, but we expect that she'll drift back this way now and again.

Professor Emeritus at UW-Madison

“Red” Wagner dies

by Bob Gurda

Eldon C. “Red” Wagner, who trained hundreds if not thousands of land surveyors while a professor at UW-Madison, passed away on May 17. He was 87.



adds Minnesota to Western Great Lakes group

ASPRS chapter gains ground

by Bob Gurda

Photogrammetry and remote sensing professionals in Wisconsin have a newly revitalized regional chapter in their backyard. Upon the recent addition of Minnesota to the earlier set of states making up the Western Great Lakes Chapter of the American Society for Photogrammetry and Remote Sensing (ASPRS), a leadership team is making plans for forthcoming events.

Wisconsin and Minnesota, along with upper Michigan, Illinois, and Indiana now constitute the chapter. Several events have already been held in the Twin Cities area, and the chapter is co-sponsoring the June 7-8 meeting of the Wisconsin Land Information Association in Superior.

Chapter officers are:

- National Director - Doug Fuller (Aero-metric, WI)
- President - Ron Wencil (USGS, MN)
- Vice President - Pat Woodruff (Airborne Data Systems, MN)
- Secretary - Brian Huberty (USDA NRCS - WI)
- Treasurer - Howard Post (Geodata Model Solutions, MN)
- Web Master - Matt Stevens (AeroSys Consulting, MN)
- Membership - John Anderson (EnviroData, MN)
- State Representative - Ann MacLean (Mich. Tech. U., MI)
- State Representative - Pat Willis (IL Dept. of Ag., IL)
- State Representative - Jie Shan (Purdue Univ., IN)
- State Representative - Bob Gurda (SCO, WI)
- State Representative - Jennifer Read (Minn.DOT, MN)
- Webmaster - Matt Stevens (AeroSys Consulting, MN)
- Membership - John Anderson (Envirodata, MN)



maps, plats, newsletter, Paul Wolf

ACSM honors Wisconsin projects

by Bob Gurda

Harold Charlier must have thought that he’d hit the jackpot. Visiting Las Vegas earlier this spring, he was invited to the stage four times to receive Wisconsin awards from the American Congress on Surveying and Mapping (ACSM). Harold was in attendance as representative from the Wisconsin Society of Land Surveyors.



The map *Wisconsin Land Cover* won for “Best Thematic Map” of 2000 in the professional map design competition. It was produced by a group of WISCLAND participants and is available for sale from the SCO for \$10 (see our web site for details). Winners in other categories included the National Geographic Society, Alaska Imus Graphics, and Nystrom Division of Herff Jones, Inc.

In the National Society of Professional Surveyor’s Map/Plat Design Competition, three Wisconsin groups were recognized for their work: David Mau (Mau & Associates, Green Bay) and Stuart Foltz (Foltz & Associates, Minocqua). In addition, David Karl of the City of La Crosse was on hand to receive his award.

Harold Charlier himself received a Certificate of Merit in the Newsletter of the Year Competition. He’s been editing the *Wisconsin Professional Surveyor* for more years than most of us can remember.

Another Wisconsin-related honor was granted to Paul Wolf, Emeritus Professor of Civil and Environmental Engineering at the University of Wisconsin-Madison. He was recognized for his lifetime contributions to surveying education. Paul was on hand to receive his award, along with his son and 3-year old grandson.

Success in La Crosse

WLIA's Annual Conference Recap

by Brenda Hemstead

The Wisconsin Land Information Association (WLIA) had record attendance at its 14th annual conference held in La Crosse, February 27 - March 2, 2001. Over 620 people attended the event, including 149 registered exhibitors with 46 booths.

The conference began with a day-long series of 10 workshops with 223 participants. One of the workshops was *free* for educators in grades 5-12 on how to use geographic information systems in the classroom that attracted 25 attendees. All of the workshops were well attended and a huge success.

The conference proper began the second day with a series of packed informative sessions running concurrently in four tracks. A plenary session covered thirty years of GIS evolution in Wisconsin, and expanded applications of NASA technology for monitoring changes in land use was the theme of the keynote address.

WLIA gives out honors

Awards were given in several categories. Tim Barnett, Al Brokmeier, Paula Cummings, Hugh Harper, Brenda Hemstead, Marilyn Mueller, and Patricia Wodele were honored with the Distinguished Service Award/Outgoing Board Members; Scott Godfrey and Ayres Associates were honored with the Outstanding Contribution Award; Ben Niemann was honored with the Al Miller Sustained Service Award; Arden "Sandy" Sandsnes was honored with the Distinguished Service Award; the Natural Resources Conservation Service was honored with the Friend of Land Records Award; Waukesha County was honored with the Local Government Achievement Award; and Jerry Sullivan was honored with the Presidential Honor Award.

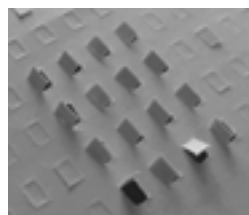


In the annual map contest, winners were Jeff Hartman, Portage County Planning & Zoning for the Basemap Poster; Lisa Olson-McDonald, DOA/OLIS for Small Format; Mitch Moline, WDNR for Thematic Map; Janet Sausen, WDNR for Map Poster; Dan Seidensticker, Dane County RPC for Orthophoto-Based Map; Doug Prigge, Vilas County for Black & White Map; Jordan Hantman & Hanna Jensen, UW-ERSC for Best Student Poster; Jeff Hartman & Rod Sutter, Portage County Planning & Zoning for the President's Award; and Janet Sausen, WDNR for People's Choice Award.

Election results announced

Jane Licht, Register of Deeds for Dane County, was chosen to be president-elect. Voted in for 2-year terms on the Board of Directors were:

- Mark Walter, Bay-Lake Regional Planning Commission



- Al Luloff, WI Dept. of Natural Resources
- Don Dittmar, Waukesha County
- Marilyn Mueller, Kewaunee County
- Ken Pabich, Calumet County
- Mark Teuteberg, Oconto County

Plan for 2002

Next year's annual conference is scheduled for Green Bay, March 11 - 15, 2002. Visit WLIA's website for further information at www.co.ozaukee.wi.us/WLLA/.

In Milwaukee, Aug. 12-14

URISA sets street/address conference

The Urban and Regional Systems Association (URISA) is bringing their 3rd Annual "Street Smart and Address Savvy" Conference to Milwaukee this summer. It will be held at the Hyatt Regency, August 12-14. Visit www.urisa.org for details.

WLIA event in the Waukesha area, July 19

Public Access Workshop Planned

by Ted Koch

The Wisconsin Land Information Association (WLIA) is sponsoring a one-day workshop on July 19 to continue discussions on an important policy issue facing Wisconsin's land information community: public access.

The workshop is designed to: provide an update on Wisconsin Land Information Program initiatives related to the Public Access Foundational Element and possible Strategic Initiative grants; share news about Wisconsin legislative activities related to public access and privacy; and present an overview of the Indiana Public Access Counselor, a resource for Indiana citizens and government agencies.

Diverse group of speakers

The event will feature presentations by WI State Senator John Erpenbach, Indiana Public Access Counselor Anne O'Conner, the WI Realtors Association's Mike Theo, and others from the Wisconsin land information community. The workshop is scheduled from 9:00 a.m. to 3:00 p.m. in the Waukesha area (exact location to be determined).

For registration information, contact WLIA by email at abarrett@uniontel.net, fax at 715/366-4501, or telephone at 800/344-0421; or visit their website at www.co.ozaukee.wi.us/WLLA/. Non-members are always welcome!

.....Selected Regional Conferences and Technical Meetings.....

June 7-8, 2001, **Wisconsin Land Information Association Quarterly Meeting** will be held at Barker's Island in Superior, WI. Contact: WLIA at 800/344-0421 or visit www.co.ozaukee.wi.us/WLLA/

June 26, 2001, **Creating and Using Orthophotography for GIS Applications** at UW-Madison, B102 Steenbock Library. Visit www.lit.wisc.edu or email: tmclclin@facstaff.wisc.edu or call 608/263-5534.

June 27-28, 2001, **3D Visualization of GIS Data** at UW-Madison, B102 Steenbock Library. Visit www.lit.wisc.edu or email: tmclclin@facstaff.wisc.edu or call 608/263-5534.

July 19, 2001, **Public Access Forum** sponsored by WLIA will be held in Waukesha. Visit: www.co.ozaukee.wi.us/WLLA/

August 10-11, 2001, **Wisconsin Society of Land Surveyor's Annual Summer Meeting** will be held at the Monona Terrace in Madison, WI. Visit www.wsls.org/

August 12-14, 2001, **Street Smart and Address Savvy 2001** will be held at the Hyatt Regency, Milwaukee, WI. Contact: 847/824-6300, or visit www.urisa.org

Sept. 6-7, 2001, **Wisconsin Land Information Association Quarterly Meeting** will be held in New Richmond, WI. Contact: WLIA at 800/344-0421 or visit www.co.ozaukee.wi.us/WLLA/

Sept. 7-11, 2001, the **National States Geographic Information Council (NSGIC) Meeting** will be held at the Hyatt Regency in St. Louis, MO. Call: 859-514-9208 or visit www.nsgic.org/

Sept. 9-12, 2001, the **Wisconsin Counties Association Annual Convention** will be held in Oshkosh, WI. Call: 800/922-1993 or visit www.wicounties.org

Sept. 19-21, 2001, the **Wisconsin Real Property Listers Association Annual State Meeting** will be held at the Comfort Inn in Mineral Point, WI. Contact: Cheryl Zellmer at 608/266-4120 or email: zellmer@co.dane.wi.us

Sept. 24-26, 2001, **Midwest-Great Lakes ArcInfo User Conference - 2001: A Spatial Odyssey** will be held at the Hyatt Regency Hotel in Oak Brooke, IL. Visit: www.isgs.uiuc.edu/mwarc/

October 3-6, 2001, **NACIS Annual Meeting** will be held in Portland, OR. For more information visit their website at: www.nacis.org

October 18-20, 2001, **ACSM Annual Convention** will be held in Galveston, TX. Call: 301/493-0200 or visit www.acsm.net

October 20-24, 2001, **URISA 2001 Annual Conference and Exposition Convention Center** will be held at the Hyatt, Long Beach, CA. Contact: 847/824-6300, or visit www.urisa.org

November 5-6, 2001, **Illinois GIS Association (ILGIS) Fall Conference** will be held at the Radisson Hotel, Lisle, IL. Contact: Ruth Anne Tobias at 815/753-0922 or email at rtobias@niu.edu.

November 14, 2001, **GIS Day 2001**. Visit www.gisday.com for registration and information.

Dec. 6-7, 2001, **Wisconsin Land Information Association Quarterly Meeting** will be held in Wisconsin Dells, WI. Contact: WLIA at 800/344-0421 or visit www.co.ozaukee.wi.us/WLLA/.

To see a more extensive calendar of regional events, and to use hot links to other calendars, visit the SCO website.

Readers!! In order to continue receiving the Wisconsin Mapping Bulletin, you must detach and return the card below. Please check your address and complete our brief survey.

1st Class
Stamp
here

State Cartographer's Office
University of Wisconsin-Madison
550 N. Park Street
Rm. 160 Science Hall
Madison, WI 53706-1491

About the SCO...

The State Cartographer's Office (SCO), established in 1973, is a unit of the University of Wisconsin-Madison. The SCO is located on the 1st Floor of Science Hall.

Our permanent staff consists of five people—Ted Koch, State Cartographer (608/262-6852), Bob Gurda, Assistant State Cartographer (608/262-6850), A.J. Wortley, Outreach Specialist (608/265-8106), Brenda Hemstead, Administrative Assistant (608/263-4371), and Ana Rumm, Financial Specialist, plus several part-time graduate and undergraduate students.

Wisconsin Mapping Bulletin

Published quarterly by the Wisconsin State Cartographer's Office. A University of Wisconsin-Madison outreach publication distributed free upon request.

News is welcome on completed or ongoing projects, published maps or reports, or conferences/ workshops. Local and regional information is especially encouraged. The editor makes all decisions on content. Deadline for the next issue is July 6, 2001.

Editor: Bob Gurda
Illustrations: Brenda Hemstead, Anna Weitzel, David Handley, and Jacki Mullen
Desktop publishing: Brenda Hemstead
Printing: UW-Printing Services
Mailing: UW-Extension Bulk Mail

Please send all comments, corrections, and news items to:

State Cartographer's Office
Room 160 Science Hall
550 N. Park Street
Madison, WI 53706-1491
phone: 608/262-3065
fax: 608/262-5205
email: sco@facstaff.wisc.edu

About our Internet Web site...

Here, you will find links mentioned in *Bulletin* articles, information on a wide range of mapping topics, news items, functions and activities of the SCO, our on-line aerial photography catalog, a calendar of events, and links to related web sites. We encourage those of you with Internet access check out the SCO's homepage at

www.geography.wisc.edu/sco

About the WISCLINC Web site...

A second Internet resource is the on-line Wisconsin Land Information Clearinghouse (WISCLINC). Its address is:

www.wisclinc.state.wi.us

At this site you can search and read metadata files, download certain data files, learn about our continuing work in this area, and link to other state clearinghouses.

State Cartographer's Office
Univ. of Wisconsin-Madison
Rm. 160 Science Hall
550 N. Park Street
Madison, WI 53706-1491

ADDRESS SERVICE REQUESTED

Nonprofit Organization
U. S. POSTAGE
PAID
Madison, Wisconsin
Permit No. 658

Please keep me on the mailing list for the WMB YES NO

To help us serve your needs, please answer the questions below

- How many individuals read/see the copy of the *Bulletin* that you receive? _____
- What kinds of topics covered in the *Bulletin* interest you the most? _____
the least? _____
- Typically, what portion of each issue do you read (cumulatively) within these time spans following delivery?
 - one week 0% 25% 50% 75% 100%
 - one month 0% 25% 50% 75% 100%
 - one year 0% 25% 50% 75% 100%
- How many times per year do you use the SCO's website?
 0 1-10 11-20 20 or more
- Do you subscribe to e-mail lists for GIS/mapping news, or to the WLIP Technical Assistance List Server?
 Yes, and read regularly
 Yes, but read only occasionally
 No, but would be interested in news relevant primarily to WI
 No, and not interested in e-mail news delivery