



Wisconsin MAPPING BULLETIN

Land info report due for delivery to legislature

Merger or not?

by Bob Gurda and Ted Koch

Feverish activity is assured this summer as the Wis. Land Information Board (WLIB), in concert with the Wis. Land Council, prepares a major report required by the legislature and governor. The report, which is to be an evaluation of the two organizations' programs with recommendations on potentially merging them, is due by September 1.

Few proposals to change the function or mechanisms of any government program are without some controversy, and this one is no different. There are pros and cons to any particular adjustment — or to the status quo for that matter.

The joint report of the WLIB (formed in 1989) and the WLC (which began meeting in July, 1998) will require cooperation between the two groups, and particularly their respective executive committees. The Wis. Dept. of Administration's Office of Land Information Services provides staff support to both groups.

The WLIB oversees a program largely focused on modernizing information capabilities in local governments, especially counties. Its segregated funds are raised through a fee on document filings at county court houses. The WLC is responsible to make recommendations to the governor on issues relating to statewide land use goals and policies, and to award grant funds for production of locally written comprehensive land use plans.

Process set for summer

Over the past month, the Executive Committees of both organizations have met twice jointly to discuss the report's format and content. It will be a single document covering the current status of both organizations, including tasks that have been completed, those that are ongoing, and others that may never be completed or even begun.

Both the WLIB and WLC are hoping to identify and evaluate several potential future scenarios for working together more closely. These scenarios will be evaluated by the full membership of both bodies before the drafting of the final document.

It is hoped that a single recommendation, approved by both organizations, will be forwarded to the legislature and governor.

Through the month of July, the public will have an opportunity to comment on a draft of the report with final adjustments made during August.

Historical timing

As the 15th anniversary of the report of the Wisconsin Land Records Committee (WLRC) arrives on July 1, it will be interesting to see if the WLIB is once again targeted for elimination. Previous attempts have been derailed in the legislature with the Thompson, and more recently McCallum administration being the advocates of eliminating the WLIB through a merger with the WLC.

The WLRC made a ground-breaking study during the two years of its existence beginning in 1985. It made recommendations that Wisconsin establish a state program to modernize land records, and that the people interested in this kind of work form a professional organization; both became reality within two years of the WLRC's final report. That report was issued on July 1, 1987, less than six months after Tommy Thompson became governor.

Keep up on the news

We will be monitoring the development and completion of the report. Check our web site's news section for updates.

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WLIB News

by Ted Koch

The Wisconsin Land Information Board last met on March 14 in Green Bay, and May 23 in Madison. The Board's next meeting will be held June 28 in Madison, which will be a joint meeting with the Wisconsin Land Council.

DOA designee changes

Wisconsin Department of Administration (DOA) Secretary George Lightbourn has named Tom Krauskopf to be his representative on the WLIB. Tom, who is Deputy Administrator for DOA's Division of Housing and Intergovernmental Relations, replaces Tom Solberg who has been the DOA representative for the past four years.

Local grants approved

[paragraph head says "grants approved" but paragraph doesn't say anything about approvals, only applications].

Forty-six of the state's 72 counties have submitted applications totaling \$570,000 for the Strategic Initiative Grant (SIG), one of four varieties of local grants available to counties through the Land Information Program. The 2002 SIG grant has as a top priority, placing basic property information on the Internet (see Winter, 2002 issue of the Bulletin for details). Two of the applications have been rejected for not meeting grant requirements, while several others require additional information before receiving final approval.

Report work begins

The board and support staff from the DOA's Office of Land Information Services has begin work on a required report due to the

governor and state legislature by September 1. The report is specified in state statute, requiring the WLIB and the Wisconsin Land Council (WLC) to issue a report concerning the continuation of their functions and also the feasibility of combining the functions of both entities.

The executive committees of both groups met jointly on May 23 to begin discussions on the content and recommendations of the report. At that meeting both committees agreed that additional work was needed on identifying those specific issues both the WLC and WLIB should be focusing on in the near future. The committees decided to have an additional meeting separately, and then to come back for another joint meeting on June 6.

WLC News

The Wisconsin Land Council last met on April 19 in Madison. The WLC's next meeting will be held June 28 in Madison, which will be a joint meeting with the WLIB.

Officers elected

At its April 19 meeting, the WLC elected Bill Mielke as Vice-Chair, and re-elected Arnold Clement as Secretary. Mielke, who is president of Rukert & Mielke, an engineering and consulting firm in Waukesha, replaces Terry Mulcahy, the now-retired secretary of the WI Dept. of Transportation. Clement is the Director of Planning and Development, and heads the Land Information Office in Racine County. Mulcahy's position on the WLC will be filled by Tom Carlson, the current acting Secretary of WIDOT. Tim Hanna, the chair of the WLC, is appointed by the governor, and continues in that position.

SCO staff report

Comings and goings

by Bob Gurda

This spring is bringing a number of changes to the SCO's student staff. Graduating this May were undergraduates Jacki Mullen and David Handley whose talents grew and adapted through the period when we made a major change in our web site.

Recently we added Bonner Karger and Fred Harris to our undergraduate staff. Both are entering their final year in Geography/Cartography/GIS.

Later this summer we will have a major adjustment in our graduate student positions.

New logo sports "Badger red"

SIAC steps up its visibility

by Bob Gurda

SIAC — the Spatial Information and Analysis Consortium at UW-Madison — is changing its colors. Well, at least literally!

This group of faculty, staff, and students interested in Geographic Information Science and related disciplines is moving into a more active period. As part of efforts to modernize the group, we have done a make over of SIAC's web site.

As the most visible evidence of updating so far, we have updated the SIAC web site and built a new logo. Come by and see what's happening at www.geography.wisc.edu/sco/siac/.



Q: *What unit is a “mil” of angle? I see it used in describing “north” on USGS topo maps.*

A: A mil is 1/6400 of a 360-degree circle. That’s a very small slice, if you think of a circle as a pie.

The unit has military origins, particularly as involved with the adjusting of angles for artillery pieces. Actually, in centuries past, the term mil has had several different definitions. The current usage, though, at least in the U.S., is the 1/6400 of a full circle.

That fraction works out to 0.05625 degrees, or 3.375 minutes, or 202.5 seconds — each equaling one mil.

As used on USGS topo maps, mils as units show up on the diagram that illustrates the angles between the various types of north: geographic north, grid north, and magnetic north. You might wonder how there can be different types of north. Isn’t north just north?

First, magnetic north — the direction that a compass needle points — varies over Wisconsin, and even changes over time. So, that direction isn’t necessarily the same as what we sometimes call true north, or the direction toward to north pole. As a result, the USGS indicated the direction toward magnetic north at the time a particular map was published, and labeled the angle between the two with its size in degrees as well as mils..

The third “north” that the USGS shows is grid north. This is the direction (at the center of a particular map sheet) in which a mapping grid is oriented. For USGS maps, the grid of choice is usually UTM, or Universal Transverse Mercator. The UTM grid is controlled by its map projection, and the difference between UTM north and true north varies — primarily in an east-west pattern — across the zone being mapped. Look at two adjacent maps that lie on opposites side of the 90th meridian of longitude (where UTM zones 15 and 16 abut), and the effect will be obvious.

Only rarely is grid north the same direction as true north, although the difference between the two is fairly small. A random selection of twenty-five USGS 7.5-minute topo maps shows the deviation between true north and grid north ranging from 4 to 36 mils and averaging 24. The deviation can be positive or negative depending on location.

Q: *What are “fire numbers” and what do they have to with street addresses?*

A: Fire numbers were developed primarily by rural fire departments in the 20th century to identify properties (particularly their driveway entrances) because there was no other helpful addressing system. Typically the number was printed on a reflective sign and mounted on a post along the road. At the time, many rural households had a mail address something like “Rural Route 2” which provided few geographic clues.

This type of addressing is being phased out in many areas as more comprehensive addressing is applied. This is the case in most Wisconsin counties, although pre-existing city and village addresses are usually retained.

There are several ways the new addressing systems are set up. A common one uses either a west or north address where the num-

ber is derived from a grid that stretches over the entire county. (This is different than the common city addressing system where the north/south/east/west addresses start from a central point).

Where roads run primarily along property boundaries (east-west or north-south) the address numbers increase (or decrease) smoothly along any particular road. However, where roads wind (as in areas with numerous small lakes or wetlands) the addresses along a stretch of road can change back and forth between north and west.

The new addressing systems sometimes also cause changes in the names of roads. Since the systems typically cover entire counties, it can be confusing to have more than one road with the same name. To alleviate this problem, roads may be assigned unique names.

Q: *What kind of maps are useful for bicycling rural roads?*

A: A variety of products could be helpful to you. Which ones are the best choices depend on what kind of biking you have in mind.

First, there are a number of maps made specially to guide cyclists on recommended routes that are known for their scenery and/or low vehicular traffic. Check our web site for specific information:

www.geography.wisc.edu/sco/maps/biking.html

Another way to look at this is in terms of destinations. You might be interested in history, in which case the *Cultural Map of Wisconsin* would help you choose an area.

In a more general sense, you may want a clue as the amount of relief you will encounter. For this, you’ll need maps that show the terrain, such as one of the U.S. Geological Survey topographic map series; each map sheet depicts various amounts of land depending on the map’s scale. Not surprisingly, the more area depicted on a map sheet — i.e., the smaller the map’s scale — the less detail can be shown.

It can be far more than an inconvenience when a map sheet doesn’t show terrain detail that would differentiate a hilly route from a smoother one. Especially in glaciated parts of

Wisconsin, the terrain may undulate within a ten- or twenty-foot range. This variation may be only barely captured by topographic contour lines having an interval of 20 feet. You might think of this as a situation where the terrain variations are below the “radar” of the map, which makes the area appear quite flat.

From this standpoint, products like DeLorme’s *Wisconsin Atlas and Gazetteer* are not very helpful, although they do show all rural roads with their names.

Topographic maps also give a sense of where forest is located. You could be disappointed after pedaling up a long hill only to find that the view you were expecting is blocked completely by trees! On the other hand, on a windy day you might want the protection of a more forested route. For a more detailed indication of land cover (type of forest, wetland, etc.) you’ll need to view the WISCLAND data at www.dnr.state.wi.us/org/at/et/geo/data/wlc.htm.

Some consumer-oriented digital products such as DeLorme’s *TopoUSA* can produce a profile of any route you choose — whether straight or circuitous. The profile is your way to quickly see how hilly or steep a route is, although you shouldn’t expect the profile to show the smaller undulations in the landscape.

Bringing “Homeland Security” home: what you can do

William Holland, principal in the Madison firm Geo.Analytics, is both an economist and lawyer by original training. In the private sector since a six-year stint as the Wisconsin Land Information Program's first executive director, he has recently been thinking about how the information systems we all have contribute to our collective security.



Each of us has a September 11 story. How did that day hit you?

I happened to be working at home and watched the whole sordid matter unfold on TV. Although it now sounds trite, I knew that day our industry, IS/GIS, would need to change. Some of the discussion many of us have been having about privacy and related matters took on a whole new sense of urgency and reach.

In retrospect, it seems we have been pretty casual with our information and technology assets, too often leaving them unprotected and vulnerable. Like the WTC and the Pentagon, direct attack for political and military objectives seemed implausible. Very little seems implausible now, particularly where our enemies see the opportunity for a low-cost assault on high-value assets that can cause big-impact damage.

Failure of our own systems can have a cascading effect that compromises the Internet.

As individuals and groups in our work settings, what can we do to help?

Although we can't individually protect assets like the Internet, we can protect our piece of the Net and not leave our own systems open to attack and for attack on others. Our economy and our mechanisms of governance are dependent on the flow of information on the Internet and other private networks. Basic system security need not be excessively complicated or expensive—it is a matter of good office practice if not professional responsibility.

Threats exist at all levels: They are public and private; National, regional and local. The motivation of one of these “bad guys” can be any of a number of things: terrorism, political and eco-

nomics espionage, and thrill seeking. With effort and focus, hopefully we stop the bad guys before the damage is inflicted and, if not that, be in a position to respond quickly and effectively.

Your idea sounds fairly straightforward — ensuring firewalls, backing up data, that sort of thing?

That's the beginning. We can't predict how terrorism may evolve. There have been hackers doing mischief around the Internet since it was established—some with perceptible motives, some not. Those with motives obviously have become much more of a threat.

The Internet has amazing system-level resiliency. At the same time, compromise, degradation, and failure of our own systems can have a cascading effect that compromises the Internet and private networks. At risk are not only the networks, but also the information stores on them.

The days of innocence in the Information Age are over.

The national anxiety over our vulnerability following September 11 has led many people to simply hope that government will eventually figure out how to address the problems, but building defenses for our own individual information systems may be as important as any of that, and it's something we can all participate in.

This takes vigilance to stay contemporary on the tools and cognizant of the threats. It takes system-level redundancy to blunt vulnerabilities. This need not be all consuming or all that complicated. It can be as straightforward as keeping our computer virus definitions current. I think everyone who has a permanent presence on the Internet has a social obligation or responsibility to ensure that their “node” is secure and not used to launch destructive behavior.

Unfortunately, it seems the days of innocence in the Information Age are over. We have choices thrust upon us now. One unassailable choice is to take those prudent steps that protect our own systems and networks. Taken together, those measures will help protect our community resources as well.

We like to think that GIS is a critical component in dealing with larger security risks — say reducing the chance of damage to a nuclear power plant, or dealing with such an event in the surrounding area. Is this really the case?

To frustrate attack requires unprecedented levels of cooperation and collaboration.

As the response to the World Trade Center collapse has shown, GIS data and technology can be brought to bear in short order and can be very valuable for preparedness planning, response, crisis management and recovery. This is more remarkable because New York's GIS command center was in the WTC and was destroyed. GIS resources were brought in from the outside.

It is equally clear that GIS can be a powerful tool to detect and mitigate risks before harm is inflicted. Thwarting attacks before loss of life or property is optimal. An example would be the use of GIS for vehicle tracking and emergency alerts when a vehicle strays off its designated route. Integrating GIS with automated vehicle location (AVL) systems offers such capabilities.

I see this as a continuum of actions that are supported by GIS: deterrence, prevention, interdiction, response, crisis management, remediation, and restoration.

To frustrate attack requires effort and coordination that extend beyond our own communities, counties, and states. This demands unprecedented levels of cooperation and collaboration between jurisdictions and with non-traditional partners such as state and federal emergency management, law enforcement, military and intelligence agencies and the private sector.

Some people have expressed concerns about the easy access to public information relating to people (e.g., name, address, phone) that some publicly funded web sites are beginning to provide. How does privacy relate to homeland security?

The privacy debate we have engaged in over the last several years, parallels homeland security, but more on an individual basis. The threats in homeland security are societal, but many of sources of risk are the same as invasions of privacy.

People who know me are aware that I am a strong advocate of making public information accessible. However, in the post 9/11 era, a key point of vulnerability is the anonymous requestor, particularly in the case of Internet-based access. We as a society may need to re-think our approach to open records as it relates to any-

continued on next page...

Pace of future work uncertain

Height Modernization continues in 2002

by Bob Gurda

The Wisconsin Height Modernization Program’s activities in 2002 continue from prior years. However, uncertainty in funding for future work makes it difficult to predict progress with certainty. This article reflects work being finished and the most that can be expected in upcoming years provided funding materializes.

The HMP is being coordinated by the Wis. Dept. of Transportation’s state headquarters in Madison. In general, the goal is to establish a new array of vertical geodetic control points across the state to support various uses including RTK (real-time kinematic) GPS to establish additional elevation points quickly. The project also develops horizontal coordinates values on the monumented points, some of which are newly established.

East-central data to be submitted

In the HM-Phase 3 area, leveling and GPS operations have been completed (spring ‘01 - spring ‘02) on approximately 800 marks (new and existing). Phase 3 covers parts of Fond du Lac, Green Lake, Winnebago, Waushara, Waupaca, Outagamie, Brown, Calumet, Manitowoc, Sheboygan, Ozaukee, and Washington Counties. This data will be submitted to NGS by mid-June 2002 for publishing in the National Spatial Reference System.

South-east area to come next

The HM-Phase 4 area was completely planned and monumented earlier (summer-fall ‘01). This phase includes approximately 1000 marks (new and existing). These marks will be observed by leveling operations and/or GPS in 2002. All marks will have an elevations accurate to 2 cm or better and the GPS marks will also have horizontal positions accurate to 2 cm.

HM-Phase 4 leveling operations with consultants and WIDOT staff (Limited Term Employees) are currently planned to

begin in mid-June. This work will take place in Milwaukee, Waukesha, Racine and Kenosha Counties.

South-central beginning late 2002

Leveling surveys are planned in Walworth, Rock, Jefferson, Dodge, Green and Dane Counties as funding supports. GPS observations over this area is planned for the Late Fall/Winter of 2002 although the area covered will be limited those parts where conventional leveling has been finished.

South-west counties in 2003

Reconnaissance and planning operations in the Phase 5 area will be started in Summer ‘02 for monumentation in 2003. Phase 5 area includes parts of Dane, Green, Lafayette, Iowa, Grant, Crawford, Richland, Sauk, Vernon, Monroe and La Crosse Counties.

For further information on the Wis. HMP, contact Darin Henkel at 608/264-8710 or via e-mail at Darin.Henkel@dot.state.wi.us.

(source: Wis. Dept. of Transportation)

Guest Interview, continued

mous access. Open records laws do not require Internet publication, therefore we have more options as to what we make available in that anonymous media.

Open records laws typically create exceptions for public information that place a person’s safety at risk. With that in mind, we may also have to qualify the degree of openness depending on the need and credentials of the person making the request, in order to set a safer balance in the face of security threats. How many people really need to know within a few inches where all of the buried natural gas distributions lines are in a city?

Is it reasonable anymore not to provide information to those who defend, respond and protect us?

What other legal avenues might be available for someone to sue in the event of a security problem?

The common law principle of tort is what underlies liability for injury to person or property. Tort negligence is defined by that standard of care or conduct that is “reasonable” under the circumstances. One has to question what is reasonable

now in terms of providing access to sensitive information or providing it to the wrong people whether intentionally or unintentionally.

At the same time, I see potential liability for withholding data. Is it reasonable anymore not to provide information to those who defend, respond and protect us? Even in the last few months, I have talked to people who seem to be inclined to withhold data for market or cost recovery considerations. That is not only negligent, it is indefensible.

Things we have been aspiring to for years such as an effective clearinghouse with current metadata, and data sharing agreements established ahead of time, could mean all the difference in how government officials work to defuse threats and respond to incidents.

This issue may well go beyond access. The data needs to be reasonably accurate, current, and complete. We also need to “prepare to be prepared”. By that I mean taking the steps to assess existing circumstances, find our vulnerabilities and opportunities, and to plan and implement strategic measures that harden our soft spots and empower our defenders and responders.

An effective clearinghouse with current metadata, and data sharing agreements established ahead of time, could mean all the difference

Taken together, these things probably establish a standard of care that defines what is reasonable under the circumstances.

A final note: My view is that under the current circumstances the risk of liability is neither abstract nor theoretical. Somewhere, sometime public officials will be held accountable, in one form or another, for a homeland security or privacy compromise.

How does this all fit together?

Homeland security is no longer an abstraction. It is a social and moral imperative. Our community and our way of life are challenged. We all have opportunities to exercise the responsibilities of those imperatives. To do less is misfeasance, if not malfeasance. We can meet the threat, flourish, and prosper. It just takes effort and being mindful.

Collected from space shuttle in worldwide effort

U.S. terrain data to be released

NASA has announced the release of high-resolution topographic data of the continental U.S. gathered during the February 2000 Shuttle Radar Topography Mission (SRTM) — a mission that is creating the world’s best topographic information.

“The maps produced from the mission will be among the most valuable, universally beneficial data ever produced by a science mission. National and local government organizations, scientists, commercial enterprises and civilians alike will find the data useful for applications as diverse as earthquake studies, flood control, transportation and urban planning, enhanced ground-collision warning systems for aircraft and better placement of cell phone towers,” explains a SRTM project manager.

With this release, gigabytes of digital elevation model data, with 90-meter (295-foot) sample imagery is available to the general public. Processing and distribution of validated U.S. digital topographic data will continue on a regular basis, with completion expected this spring. A color-shaded relief elevation map of California is available online at at: www.jpl.nasa.gov/srtm/.

The mission collected 3-D measurements of Earth’s land surface using radar interferometry, which compares two radar images taken at slightly different locations to obtain elevation or surface-change information.

As processing of each continent is finished, data will be sent to NIMA for final quality checking and copies sent to the United State Geological Survey’s EROS Data Center, Sioux Falls, SD, for final archiving and distribution.

(source: USGS press release)

Editor’s note:

We should point out that while this new terrain data is the best yet available on a world-wide basis, it does not have as high a resolution or accuracy as DEM data derived from the contour lines on the USGS 7.5-minute topographic map series. So, over the United States and many other more developed parts of the earth, existing terrain information generally will not be eclipsed by this new data; however, there may be cases where the new data is superior because of changes in the landscape since the topo maps were produced.

Launched May 3rd

New SPOT satellite being set for operation

by Bob Gurda

The latest SPOT satellite was launched in early May. SPOT-5 will offer image resolutions as high as 2.5 meters in black and white. This is achieved by digital merging of two 5-meter (pixel size) images.

Improved instruments on SPOT-5 will deliver 10-meter color (compared to 20-meter previously) and 5-meter in black and white (10 previously). The image area covered will remain 60 x 60 kilometers (approx. 37 miles). For further details and sample images, see www.spotimage.com.



SPOT-5 image over Athens, Greece

Since the first SPOT satellite was put in orbit in 1986, successful launches have proceeded approximately every four years. SPOT is primarily a French operation with support from Sweden and Belgium.

(source: www.space.com, SPOT Image)

Contest winner writes geographic search routine

Geocoding application works with Google

by Bob Gurda

Most web surfers are aware of Google (as in www.google.com). It may be the most heavily used “search engine” web site.

The people behind Google decided to have a programming contest involving 900,000 raw web pages. The goal was to write a program to do “something interesting” with those pages (but be scalable to a web collection).

The winning program does geographic searches. It was written by Daniel Egnor, a former Microsoft employee. He took the raw pages and located addresses in them, then geocoded the addresses using TIGER and FIPS data. Finally he indexed the resulting coordinates, allowing for spatial queries (find the nearest bank to my house).

Google chose Egnor’s entry “because it combined an interesting and useful idea with a clean and robust implementation.” The source code is available under GNU Public License. www.google.com/programming-contest/winner.html of fb.net/~egnor/google.html.

(source: Adena Schutzb erg’s GIS Monitor)



Updated Navigation Charts

COE Releases Miss. River Charts

by David Handley

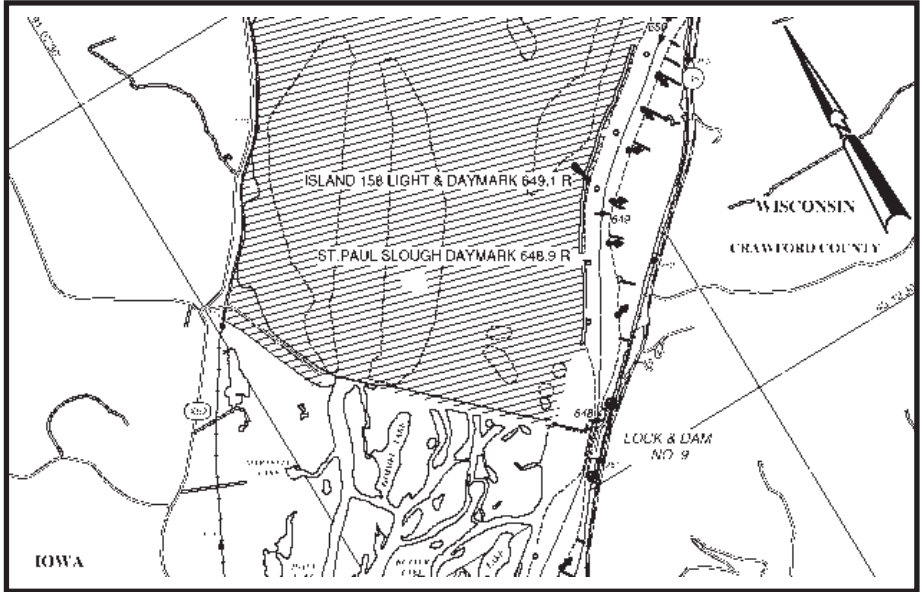
The U.S. Army Corps of Engineers has published an update to the Upper Mississippi River Navigational Charts for 2002, available for purchase as a 200-page book, or as a free download via the COE's website.

The 9 1/4" x 15 1/4" book consists of 130 charts at 1:31,680 scale, as well as bridge diagrams, facility descriptions, a nautical mileage chart, and river gage data. Beginning on both the Mississippi and St. Croix rivers upstream a modest distance above their junction, the charts progress southward to the Ohio River junction.

An included CD contains the entire book in a single PDF file.

The charts may be purchased from the COE for \$36.50.

See the Rock Island COE website for individual chart downloads, as well as content revisions www.mvr.usace.army.mil/NavCharts/UMRNavCharts.asp



A portion of a Mississippi River navigation chart for the area around Lock & Dam No. 9, about 10 miles north of Prairie du Chien.

In partnership with NNSA

USGS camera calibration lab to get upgrade

by Bob Gurda

The only aerial camera calibration facility in North America is going to be modernized this summer. The work is the result of an agreement between the U.S. Geological Survey (operator of the lab) and the National Security Administration.

The Optical Science Laboratory certifies and characterizes metric-quality aerial mapping cameras for public agencies and the private sector. The modernization of the OSL will focus on upgrading and replacing the light sources and electrical wiring in the 50-year-old system.

The retrofit of the lab is one of several recommendations that was made by an independent panel and the American Society of Photogrammetry and Remote Sensing as part of a review focusing on existing requirements for aerial mapping camera calibration and the future technical needs and direction of the OSL. For more information on the OSL visit mapping.usgs.gov/mac/tsb/osl/.

Covers county in 3 x 3-mile blocks

Magellan offers Dane County Atlas

by Bob Gurda

Rural or urban, the scale is the same in the latest atlas of Dane County to be published. *Magellan Mapping Company* of Verona has published 139 pages covering the county, each page showing an area approximately 3 x 3 miles (one quarter of a township).

The product is spiral-bound, measures 8.5 x 11 inches, and the maps are at scale of 1:25,000. Two ink colors, black and green, are used. All public roadways are labeled and address ranges are shown.

Each map page includes a keyed alphabetical list of road names for that page, and a 31-page index to all road names concludes the atlas. Other indices cover schools, medical facilities, parks, golf courses, etc.

Magellan sells the atlas for \$19.95. Quantity discounts are available. Contact Magellan by phone at 608/848-2459 or e-mail at crewnell@gdinet.com.



Two maps recently added

DNR online mapping covers the state

by David Handley

In meeting the goals set forth by the Wisconsin Land Information Program to integrate and make accessible land information, the Wisconsin Department of Natural Resources (DNR) has developed an on-line mapping infrastructure with GIS maps of dam safety, groundwater contamination sites, and a WISCLAND land cover browser.

The interactive maps share a similar, straightforward interface, with common tools such as zoom, pan, query, and layer toggle. Some of the frequently utilized GIS layers include topographic maps, orthophotos, and DNR regions.

Dam Safety a Concern

With approximately 3,700 dams in Wisconsin, and nearly half of those being privately owned, public awareness of dam safety is continually a major issue at the DNR. This data has long been available as a GIS layer and spreadsheet file, but these were just recently incorporated into an on-line map.

On the map itself, individual or groups of dams can be queried, revealing numerous details, including information on the owner, physical data, hazard potential, and date of last inspection. Layers such as regional topo maps, orthophotos, and water surface features can be toggled at smaller scales.

The data fields are not complete populated for every dam in the database, however the crucial information is provided for most. A note on hazard potential: The DNR defines a 'high hazard' dam to be one that would put lives at risk in the event of a failure, not necessarily pertaining to the structural characteristics of the dam itself. Future mapping applications in this area may include floodplain and shoreline delineation, as well as soil mapping.



Dam safety GIS; data on a highlighted dam is displayed below the map.

The closed remediation map has a slightly less complex interface than the dam GIS. The main image is a scalable dot map indicating sources of groundwater contamination exceeding DNR enforcement standards. Upon highlighting an area, a list of all contaminated sites at that selected point, city, or specific county will

be displayed. Each listing contains extensive information in a separate pdf file, detailing the specifics on documented contamination at each site.

Other online maps on the DNR site include a WISCLAND land cover browser and an orthophoto locator/viewer. DRG data is also available for download.



Groundwater contamination GIS; popup window displays information on selected site.

continued on next page...

Get stories as they break

SCO web news keeps it fresh

by Bob Gurda

Our news database pumps out stories each time you visit our web site. With this approach we can quickly enter and update information. Ultimately, this means you have access to key news far quicker than when you read it here in the *Bulletin*.

You can find this resource easily from our front page. Just click on “News” or “News Briefs”. We invite you to visit early and often.

Events, programs, people, and more

Our news topics run the gamut across a wide variety, similar to what we have carried for years here in printed form. Some stories say “live” only a few days or weeks and then enter the archives; others persist for several months if their content is appropriate.

Some of the recently posted news stories also appear here in the *Bulletin* in modified form. But, there’s not room for all of them, and some have already lost their news value when it comes time to produce another issue of the newsletter.

What might you have missed?

Here are the topics of stories posted to the news database so far this year that you will have missed by not visiting our web news page but instead relying solely on this printed newsletter:

- February 20: “Sunclock” web site helps you determine if Winter Olympics TV broadcasts are showing live action.
- March 7-8: News of Prof. Paul Wolf’s death and subsequent funeral arrangements updated as we received them.
- March 11: Announcement and Call for Presentations at a Public Participation GIS conference scheduled for this summer in New Jersey.
- April 24: Public TV show “When Wisconsin Was New France” uses early maps to help tell the story. Premier broadcast set for May 1.
- April 26: Disaster/Emergency Response Encourages Scrutiny of Public Access Policies — a commentary by AJ Wortley of the SCO staff.
- May 20: Robinson Map Library further curtails hours during InterSession (May 20 - June 14).

Do searches

You can also look through the news story archives and read any story that is not longer considered “fresh”. The listings are by category; some stories appear in several categories.

Soon we’ll be implementing a broader search mechanism specifically tailored to news stories. This will let you sift through not only the current news but also stories that are tagged as part of the archives.

Please contribute!!

Our news stories come from various sources. Some we glean from other web sites or press releases. Others are the product of a phone call or an e-mail sent our way.

You may have some information that others would benefit from reading. Please send news to us in any form you have, and if its not coming from the horse’s mouth, let us know your source. It doesn’t have to be polished for publication; we can take it from your format and make it ready.

www.geography.wisc.edu/sco

Featured Website, continued

Natural resource mapping is a major factor in the dissemination of land information, and the cooperation of the WLIP and Wisconsin DNR in making these on-line maps available is yet another example of their innovation.

See the Wisconsin DNR interactive web maps at www.dnr.state.wi.us/org/at/et/geo



WISLAND Land cover browser; data also available in TIF format.

To work with NWI

Huberty heads back to Minnesota

by Bob Gurda

Brian Huberty, GIS Coordinator for the Midwest Region of NRCS in Madison for a number of years, has taken a new job with another federal agency. He moved closer to his roots in Minnesota recently. His position is with the National Wetland Inventory out of Fort Snelling in the Twin Cities area. The NWI is managed under the U.S. Fish and Wildlife Service.

Prior to joining the NRCS regional office, Brian did GIS work with the NRCS state office in Madison. In the last year he has also been instrumental in revitalizing the Western Great Lakes chapter of the American Society for Photogrammetry and Remote Sensing (ASPRS) which was enlarged to include all members in Minnesota.



Chosen by UW peers in humanities

Woodward wins Hilldale Award

by Bob Gurda

David Woodward, Professor of Geography at UW-Madison, has been chosen as this year's recipient of the prestigious Hilldale Award from within the Humanities Division at the university. One person receives the award each year from each of the four divisions within the Graduate School.



The Hilldale Awards recognize achievement in research, teaching, and outreach. Woodward is a world-renowned authority on the history of cartography and with Brian Harley initiated the History of Cartography Project in 1977. Four of the project's 8 planned books are in print with the others in production. (www.geography.wisc.edu/histcart).

Woodward also conceived and directed the Cultural Map of Wisconsin project; the SCO is a sales outlet for the map that was published in 1996. He has also served as chair of the SCO's advisory committee for the last four years.

Will continue history work in retirement

Woodward has announced his plans to retire this summer. However, he expects to continue to lead work on the history series. The department has hired Mark Harrower, a recent graduate of Penn State University, to teach map design and other subjects covered by Woodward.

(source: www.news.wisc.edu/releases/view.html?id=7438)

Bluske chosen as president elect

WLIA selects new leaders

by Bob Gurda

The Wisconsin Land Information Association (WLIA) held its annual meeting earlier this spring and elected half of its board of directors and a president elect.

Jeff Bluske, the Real Property Lister for La Crosse County, is the new president elect and will succeed to a one-year position of president in the spring of 2003. Jane Licht, Register of Deeds for Dane County, became president and Jim Johnston, Land Information Director for Polk County, became past president.

Elected as directors were Jodi Helgeson (Adams County), Brian Braithwaite (Washington County), Christina Pearson (Iowa County), Jay Shambeau (Clark County), Tom Faella (East Central Wis. Regional Planning Commission), and Drew Heiden (City of Menasha).

Among major awards were Friend of Land Records (South-eastern Wis. Regional Planning Commission), Outstanding Contributor (Lynn Grube, Oneida County), Allen Miller Sustained Service (Nancy von Meyer, Fairview Industries), and Local Government Achievement (Clark and Fond du Lac Counties).

Upcoming meetings

Under its new three-meeting-per-year schedule, WLIA met in Racine in May and is scheduled for October 3-4. The 2003 annual conference will be in Milwaukee, February 11-14.

See www.wlia.org for details.



Fundraising goes into high gear

Paul Wolf Professorship becoming a reality

by Bob Gurda

The University of Wisconsin-Madison's effort to fund a new professorship honoring Prof. Paul Wolf year is moving forward. In addition to an attractive color brochure produced late in 2001, materials are now available for viewing on the web.

You can see the materials in HTML format at [At the same address you can also view a PDF version of the color brochure.](#)

Wolf, who was a highly acclaimed educator at UW-Madison, died earlier this year. The materials promoting the professorship (essentially a segregated endowment intended to full fund a faculty position for the long term) include numerous testimonials from former students.

2002

July 8-12, 2002, **22nd Annual ESRI International User Conference** will be held at the San Diego Convention Center, San Diego, CA. Call 909/793-2853, ext 1-1363 or visit www.esri.com/events/uc.

July 18, 2002, **Wisconsin Metadata Development Workshop** will be held at UW-Madison, Rm. 380 Science Hall, Madison, WI. Contact: Sheila Haskins at 608/265-8106 or visit www.wisclinc.state.wi.us

August 5-8, 2002, **GIS Standards Workshop - Continuing Education Program** will be held in the Dept. of Urban Planning, Univ. of Illinois, U-C Room 227. Contact: 217/333-3890 or visit www.urban.uiuc.edu

August 11-13, 2002, **4th Annual Street Smart & Address Savvy Conference** will be held at the Doubletree Hotel Jantzen Beach, Portland, OR. Visit www.urisa.org/address.htm

August 16-17, 2002, the **Wisconsin Society of Land Surveyors Summer Meeting** will be held in Wausau, WI. Visit www.wsls.org

September 9-12, 2002, **NSGIC 2002 Annual Conference** will be held at Prospector Square Lodging and Conference Center, Park City, UT. Contact: 859/514-9208 or visit www.nsgic.org

September 18-20, 2002, **50th Annual State Meeting of the Wisconsin Real Property Listers Association** will be held at the Best Western Marshfield Innkeeper, Marshfield, WI. Email: jerickson@co.wood.wi.us or visit www.co.ozaukee.wi.us/wrpla/index.htm

September 22-25, 2002, the **Wisconsin Counties Association 64th Annual Convention** will be held at the Milwaukee Hilton, Milwaukee, WI. Contact: WCA at 800/922-1993 or visit www.wicounties.org/Convention/convention.html.

October 2-4, 2002, **Minnesota GIS/LIS Consortium 12th Annual Conference** will be held at the Duluth Entertainment Convention Center. Contact: Sonia Dickerson at 651/284-3597 or visit www.mngislis.org/conf2002/conf2002.htm

October 3-4, 2002, **Wisconsin Land Information Association** will hold its membership meeting in Wausau, WI. Contact WLIA at 800/344-0421 or visit www.wlia.org

October 15, 2002, **Map Design Workshop** will be held at the Pyle Center, UW-Madison, Madison, WI. Contact either the State Cartographer's Office at 608/262-3065 or Tom McClintock at 608/263-5534.

October 26-30, 2002, **URISA 2002 Annual Conference and Exposition** will be held at the Hyatt Regency Chicago on the Riverwalk, Chicago, IL. Call 847/824-6300 or visit www.info@urisa.org

November 20, 2002, **GIS Day**. Visit www.gisday.com for registration and information.

2003

February 11-14, 2003, the **Wisconsin Land Information Association Annual Conference** will be held in Milwaukee, WI. Contact WLIA at 800/344-0421 or visit www.wlia.org

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

Six down, and two to go this summer

Metadata workshops to wind up

by Sheila Haskins

The State Cartographer's Office has just finished the spring leg of its 12-month Wisconsin Metadata Workshop tour across the state. Workshops were recently held at UW-River Falls, UW-Green Bay, and UW-Waukesha.

Workshops meeting needs

As this workshop series starts winding down we have begun assessing the usefulness of the training format. Overall reactions expressed in the participants' evaluation forms have been quite positive. Attendees have particularly enjoyed the opportunity to create metadata in the hands-on portion, the wide variety of on-line and hard-copy resources, and the strategies to use once back in the office.

Final pair scheduled

The last two workshops in this series will be held on June 14th at the UW-Eau Claire and July 18 at the UW-Madison. These training sessions are open to anyone; the fee is \$50.

Registration and details about the workshops are available on our website. Visit wisclinc.state.wi.us. If you have additional questions feel free to contact me at SCO at 608/265-8106.

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, IS Resource Support Technician (608/263-4371), and Ana Rumm, Financial Specialist (608/265-9368), plus several part-time graduate and undergraduate students.

The State Cartographer's position and mission is described in Wis. Statute 32.25 (12m). In addressing this role, the SCO functions in a number of ways.

- publishes the *Wisconsin Mapping Bulletin*, catalogs, guides, brochures, and other documents and maintains a web site to inform the mapping community.
- inventories mapping practices, methods, accomplishments, experience, and expertise, and further acts as a clearinghouse by providing information and advice in support of sound mapping practices and map use.
- participates on committees, task forces, boards, etc. The State Cartographer is one of the 13 voting members of the Wisconsin Land Information Board and one of 16 voting members on the Wisconsin Land Council.
- develops experimental and prototype products.
- serves as the state's affiliate for cartographic information in the U.S. Geological Survey's Earth Science Information Center (ESIC) network.

About our 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, visit:

www.geography.wisc.edu/sco

About WISCLINC Web site...

On the Wisconsin Land Information Clearinghouse (WISCLINC) 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, visit:

<http://wisclinc.state.wi.us>

Wisconsin Mapping Bulletin

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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 5, 2002.

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