State Cartographer's Office

Reporting on Mapping and Land Information in Wisconsin

Wisconsin MAPPING BULLETIN

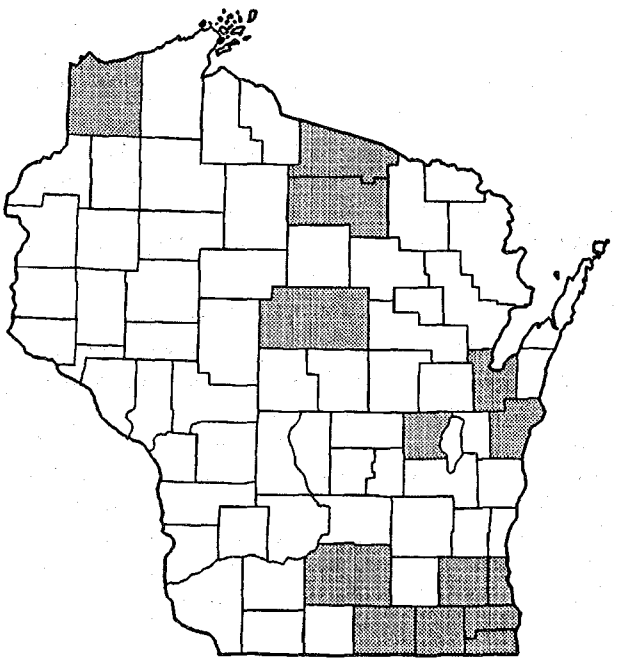
Vol. 18, No. 1 January 1992

COUNTYWIDE PLANNING ACTIVITIES PROCEED

By Bob Gurda

Most Wisconsin counties are on track to meet a summer deadline for approval of their countywide plans for land records modernization. This encouraging information was collected by the State Cartographer's Office through telephone contacts with county land information offices between mid-December and early January. The survey was requested by the Wisconsin Land Information Board (WLIB) in early December.

Approval of plans by the WLIB is a necessary step to continuing and expanding local governments' participation in the Board's program. This approval must be granted by June 30, 1992 or within two years of the county's establishment of a land information office, whichever is later.



Counties with Approved Plans as of January, 1992

Upon approval, the county can both continue to retain a share of user fee revenue and can apply for grant funds from the Board.

Through January 13, the WLIB had approved plans from 14 of the state's 72 counties. Most counties (40) indicated that they expected to be on schedule for consideration of their plans by the Board in April, May, or June. The Board has scheduled extra meetings in June to accommodate this demand (see page 2). Ten counties established their offices after June 30, 1990 (between mid-July and mid-November).

Seven counties reported that they are somewhat behind schedule. To help these and any other counties produce an approvable plan, the WLIB has scheduled a workshop on February 25th in Madison. See page 2 for details.

Any county that misses the two-year deadline for plan approval must begin to forward the full amount of its user fee receipts to the WLIB until such time as its plan is approved. The amount of fees collected varies greatly among counties, since document filings at the Register of Deeds office are the source of the revenue.

An interesting by-product of the telephone survey was the information that almost half of the state's 71 counties in the program were making (or had made) use of consulting services in preparing their plans. About half of the consultants were from the private sector, and about half were regional planning commissions.

Highlights of this issue.....

WLIB NEWS

By Bob Gurda

Meetings

Since our last issue, the Wisconsin Land Information Board (WLIB) has held three meetings—November 4, December 9, and January 13. The board will continue to meet in Madison on the second Monday of each month, except that there will be an extra meeting on June 29 (and possibly the 30th as well) and there will be no meeting in July. The extra June meeting(s) have been scheduled to accommodate the large number of plans that are expected to be submitted in May. Most counties have a June 30 deadline for receiving WLIB approval of their plans.

February Workshops

The WLIB's Education Committee has developed three workshops to support effective participation in the Wisconsin Land Information Program. These will be offered in Madison during the first part of the last week of February, immediately prior to the Annual Conference of the Wisconsin Land Information Association.

The topics are "Preparing Successful County-wide Plans for Land Records Modernization", "Unraveling Parcel Identification Numbering", and "Geographic Frameworks". The first two will be held from mid-morning until late afternoon on Tuesday, February 25, and have a fee of $25 including lunch. The third workshop will begin at 10am on Monday, February 24 and conclude at 5pm the next day; its fee is $50 including lunch each day. Handout materials will be provided to registrants. Pre-registration is strongly advised.

The workshop site is the Holiday Inn-Madison West, in Middleton. This is also the site for the WLIA Conference that begins Wednesday morning the same week. Conference lodging rates will be available for workshop attendees.

For information including workshop outlines and registration forms, contact Sue Simons at (608) 267-3369.

Countywide Plans Considered

At the last three meetings, the WLIB has considered and approved countywide land records modernization plans for the following counties: Douglas, Manitowoc, Marathon, Vilas, and Walworth. Kewaunee County's plan was considered on January 13 and deferred for one month. Oconto County's plan is scheduled for consideration in February.

Grants

The first application period for grants was the month of October. Eligibility was limited to applications forwarded by land information offices in those counties with approved plans. Seven grant applications, each for the maximum amount of $100,000, were received from six counties: Brown, Kenosha, Milwaukee, Oneida (2), Racine, and Winnebago. These applications were referred to a confidential advisory Grant Scoring Committee; this group of 7 persons was appointed by the WLIB's Executive Committee and the Chair of its Grant Oversight Committee to whom it then forwarded a report on each application.

The full Board has final authority to award grants, and makes such decisions in open public session. At the December meeting, preliminary approval was given to all but the second grant from Oneida County. Prior to the January meeting, the Board's staff negotiated various specific terms and conditions of Grant Agreements with the counties involved, and on January 13 the six grant awards were given final approval.

The second grant application period was the month of December. Twenty grants were received from 10 counties or cities/villages within those counties, for a total of $1,892,085. These will be considered by committees and the Board over the next several months.

In the future, application periods will be standardized as the months of June and December.

Hearings on Rules for Grants Program

The WLIB will hold public hearings to consider the adoption of Chapter Adm 47 as the permanent rules relating to the Wisconsin Land Information Program.

This rule implements the grants component of the Wisconsin Land Information Program set forth in s. 16.967(7), Stats. The WLIB, an attached board to the Department of Administration, is required by statute to administer this grants program. This rule also interprets various statutory definitions in the Land Information Program statutes.

continued on p. 3....

WLIB NEWS, continued

The public hearings are scheduled as follows:

January 27, 1992 (Monday) at 1:00 p.m.	Sawyer County Courthouse Assembly Room, 406 Main Street Hayward, WI
January 28, 1992 (Tuesday) at 1:00 p.m.	LaCrosse County Office Building Auditorium, 300 North 4th Street LaCrosse, WI
January 30, 1992 (Thursday) at 1:00 p.m.	Heidel House Resort Mitchell's Glen, Illinois Ave. Green Lake, WI
February 4, 1992 (Tuesday) at 1:00 p.m.	Walworth Co. Courthouse Auditorium Courthouse Square, Room 112 East Elkhorn, WI

Each hearing will be preceded by a workshop, "Preparing Quality Grant Applications", from 10am until noon. Registration is not necessary for the workshops.

Copies of the proposed permanent rules may be obtained from the Wisconsin Land Information Board, 101 South Webster Street, 6th Floor, P.O. Box 7868, Madison, WI 53707-7868, (608) 267-3369, or at the appointed time and place of the hearing. Copies of the fiscal estimate may be obtained as well.

Interested persons are invited to appear at the hearing and will be afforded the opportunity of making an oral presentation of their positions. Persons making oral presentations are requested to submit their facts, views and suggested rewording in writing. Written comments may be submitted to the department at the above address no later than Friday, February 7, 1992, for inclusion in the summary of public comments to the Legislature.

Staff

Sue Simons began working for the WLIB in December. She will be providing general support as well as working with some of the Board's committees. Sue can be reached at (608) 267-3369. Her hiring allows Georgia Hopf to assume primary responsibility for grants administration.

West Central Area Planning

Dozens of land records users have attended six recent meetings in the Eau Claire area. People attended from a 12-county area, with the goal of developing integrated and cooperative efforts. Both public and private sectors were well represented. Initial meetings were held in November and December.

The group has decided to form itself as the Western Wisconsin Land Information Network.

This initiative was co-sponsored by the West Central Wisconsin Regional Planning Commission and the River Country RC&D. For further information, contact Jay Tappen, Associate Planner on the Commission staff, at (715) 836-2918.

State Cartographer's Commentary

By Ted Koch

GPS, geodetic control, remonumentation, map accuracy, parcel identification numbering, preparing land records modernization plans, grant applications, GIS/LIS systems, hardware, software.... If you are involved with any of the broad components of collecting, storing, retrieving, and analyzing information about the land, are you comfortable and confident with your understanding of the above terms, concepts and programs?

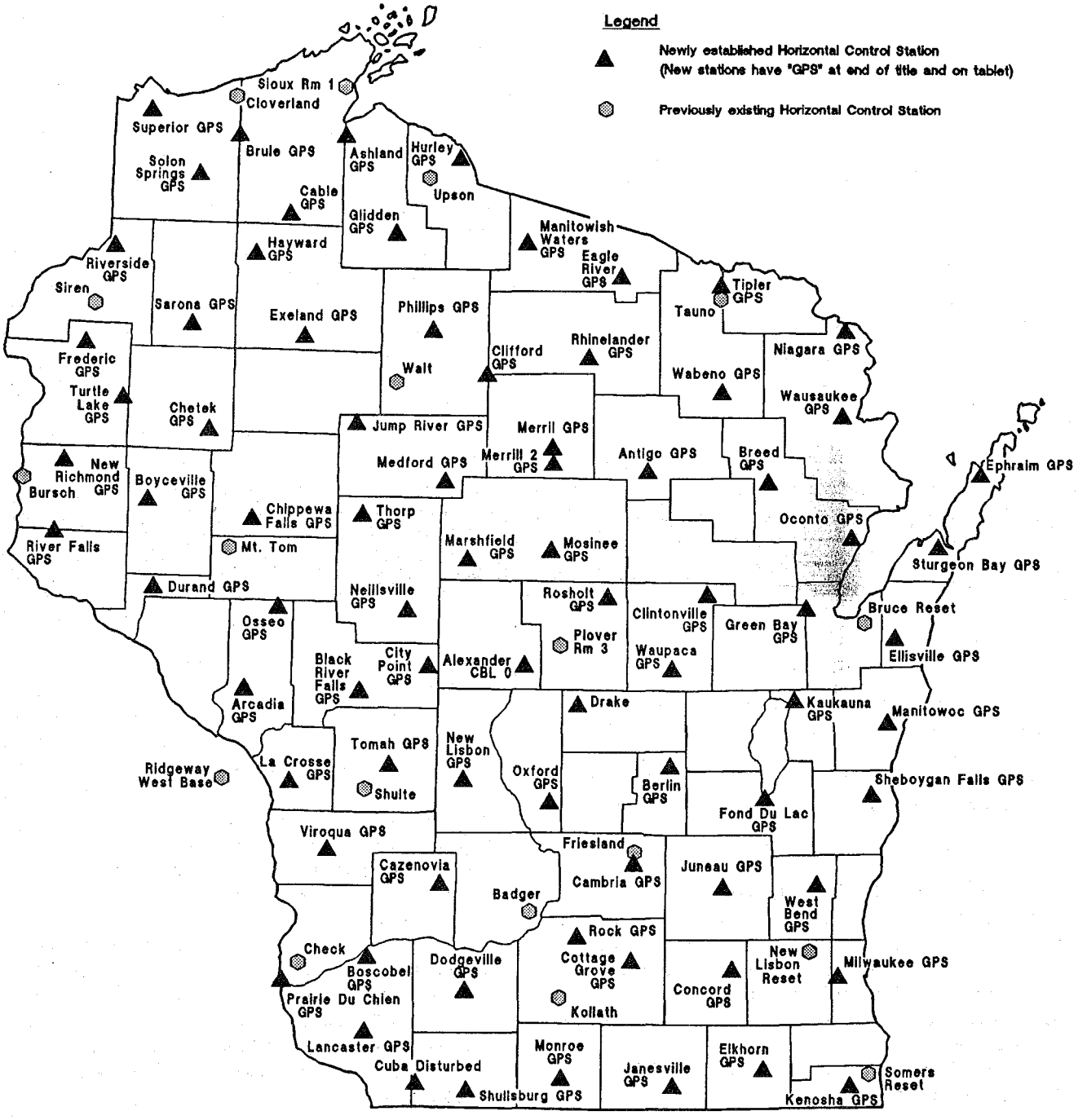
The issues, problems and new methods involved with understanding, developing and implementing a modern land information system are often complex, confusing and, at times, downright intimidating. The rate of change and application of new technological tools and the associated institutional impacts, particularly at the local government level, can often seem dizzying. For many people, the struggle to understand new methods, systems and approaches has been difficult. Along with these frustrations, questions often asked have been, "How do I learn about and keep up with all the new ideas and methods? How and when can I find the time to learn about this?"

The best answer and most realistic solution to solving these problems, and meeting the challenges ahead is **education**. And even though many of you have already recognized this to be a most obvious answer, questions on the how, when, where, and affordability have remained a barrier to pursuing any type of educational offerings.

Some good news in 1992 is that many of the barriers to effectively learning about land information systems development are being eliminated. One of the best educational opportunities available early this year are three late-February workshops sponsored by the Wisconsin Land Information Board. All three workshops are being held in Middleton, prior to the Wisconsin Land Information Association conference. They will cover geographic frameworks, land records modernization plan writing, and parcel identification numbering. All sessions will have expert instructors, in all instances individuals who are directly involved with LIS programs, projects and developments related to Wisconsin. The workshops are excellent educational opportunities, and by-the-way, the price is extremely reasonable for each one.

If you haven't seen the announcements on these workshops, there is more information about them listed under the "WLIB News" on page 2 of this issue. Check them out, and call the Land Information Board for more information and registration procedures. To get some much needed information and education, they are sessions you shouldn't miss!

STATIONS IN THE WISCONSIN HIGH PRECISION GEODETIC NETWORK



WHPGN COORDINATES NOW AVAILABLE!

By Diann Danielsen

The initial set of adjusted NAD 83 (1991) coordinates for the Wisconsin High Precision Geodetic Network (WHPGN) has been issued by the National Geodetic Survey (NGS). The set is comprised of 98 stations observed with global positioning system (GPS) methods: 80 newly established GPS stations and 18 previously existing horizontal control points. The 18 existing network points were included to help relate the remaining 2200 stations in the existing network to the new high precision network. Some of the stations also have precise vertical elevations.

Data recently issued contains newly written station descriptions for the GPS points. New items on the NGS data sheet include the station history (a brief chronological record of monumentation and recovery), observed or computed ellipsoid and geoid data, and 7.5-minute quadrangle and county references. Note that the data sheets are continually being updated. For example, values for the horizontal datum shifts are expected to be added soon.

DEPARTMENT OF COMMERCE
NOAA - NOS - C&GS
NATIONAL GEODETIC SURVEY

PUBLICATION DATE: NOVEMBER 26, 1991
USGS QUAD SHEET: BLACK RIVER FALLS

BLACK RIVER FALLS GPS
PID: PO0770

HORIZONTAL DATUM: NAD 83 (1991)
VERTICAL DATUM: NGVD 29

STATE: WISCONSIN
COUNTY: JACKSON

LATITUDE:	44° 15' 12.00646" N	±0.00080	SECONDS
LONGITUDE:	090° 50' 39.46747" W	±0.00080	SECONDS

ORTHOMETRIC HEIGHT: 255.3 METERS / 838. FEET

DEFLECTIONS: ξ= -2.59	η= 8.26		SECONDS
LAPLACE CORRECTION:	-8.05		SECONDS
GEOID HEIGHT:	-32		METERS
ELLIPSOIDAL HEIGHT:	222.385	±0.019	METERS
X:	-67428.913		METERS
Y:	-4575540.003		METERS
Z:	4428452.387		METERS

HORIZONTAL NETWORK ORDER/CLASS: B

THE HORIZONTAL COORDINATES WERE ESTABLISHED BY GPS OBSERVATIONS AND ADJUSTED BY THE NATIONAL GEODETIC SURVEY IN JUNE 1991
THE ORTHOMETRIC HEIGHT WAS DETERMINED BY GPS OBSERVATIONS.

PLANE COORDINATES

GRID	ZONE	NORTHING METERS	EASTING METERS	POINT SCALE FACTOR	CONVERGENCE DEG MIN SEC	*GRID AZIMUTH TO BLACK RIVER FALLS GPS AZ MK DEG MIN SEC
SPC	WI C	47,020.456	532,572.251	0.99999937	- 0 35 44.8	252 24 09.1
UTM	15	4,902,270.598	672,095.837	0.99996425	+ 1 30 16.9	250 18 07.8

(*ARC-TO-CHORD CORRECTION NOT APPLIED)

STATION MARKS AND REFERENCE OBJECTS

PID	REFERENCE OBJECT	DISTANCE	GEODETIC AZIMUTH
PO0777	BLACK RIVER FALLS GPS AZ MK	APPROX. 1.2 KM	251 48 24.5

STATION MARK IS A .... HORIZONTAL CONTROL DISK
WITH SETTING ..... SET IN TOP OF CONCRETE MONUMENT (ROUND)
THE MARK IS STAMPED ... BLACK RIVER FALLS GPS 1989

STATION MARK HISTORY

YEAR MONUMENTED OR RECOVERED	CONDITION OF MARK	RECOVERED OR DESCRIBED BY
1989	STATION MONUMENTED	WI DEPT OF TRANSP

(Continued on Next Page)

NGS made significant effort to note the referenced horizontal and vertical datums, the method of establishment and adjustment of coordinates, the source of the orthometric height, and the vertical/horizontal network order attained. Coordinates are provided in meters for both UTM and state plane systems. State plane coordinate values for multiple zones are listed for stations near zone boundaries.

Orthometric heights established by GPS observation are given to the nearest foot. If the station was a known benchmark, the elevation is given to a greater precision. Both NAVD 29 and NAVD 88 are used as reference datums! NAVD 88 is used when available, otherwise NAVD 29 elevation is referenced. **Be aware of these varied vertical datums, and take care not to mix them.**

GPS observations allow a higher precision of geodetic control, and the new stations are classified according to the Federal Geodetic Control Committee document "Geometric Geodetic Accuracy Standards and Specifications for Using Relative Positioning Techniques". The GPS horizontal network orders used for WHPGN are: Class A - 1 part in 10,000,000; and Class B - 1 part in 1,000,000.

The GPS stations are located on public or otherwise easily accessible land such as airports or highway rights-of-way. The monuments, set in 1989, are typically brass disks set in concrete and stamped as NGS GPS stations.

Azimuth marks and their measurements are not yet available for all of the new GPS points but are given for the older geodetic stations. This data will be incorporated into the datasheets by NGS as it is received from the Wisconsin Department of Transportation (WDOT).

In addition to the WHPGN points, data on approximately 100 additional Federal Aviation Administration stations has been received. These points are available for public use, but vary in accessibility due to their airport location. They also tend to be at a slightly lower accuracy level than the WHPGN stations.

Wisconsin's remaining 2200 NGS control points have been adjusted to the NAD 83 (1991) datum, and are now being incorporated into NGS' database. It is expected that this data will be released very soon, completing a nearly four-year joint effort by the state of Wisconsin and NGS.

NADCON software to convert between NAD 27 and NAD 83 (1986) as previously distributed and recently incorporated into CORPSCON software does not yet accommodate NAD 83 (1991). This is expected soon.

The SCO will continue to be the Wisconsin point of access for coordinate information and station descriptions. Individual station information can be requested by station name, county, or reference to the 7.5-minute quadrangle.

For questions regarding the WHPGN network, and for coordinate and station information, contact the Wisconsin State Cartographer's Office at (608) 262-3065.

DEPARTMENT OF COMMERCE
NOAA - NOS - C&GS
NATIONAL GEODETIC SURVEY

PUBLICATION DATE: NOVEMBER 26, 1991
USGS QUAD SHEET: BLACK RIVER FALLS

BLACK RIVER FALLS GPS
PID: PO0770

STATION DESCRIPTION

DESCRIBED BY WI DEPT OF TRANSP 1989
THE STATION IS LOCATED ABOUT 19.4 KM (12.05 MI) SOUTH OF MERRILLAN, 40.5 KM (25.15 MI) NORTHWEST OF TOMAH, 29.2 KM (18.15 MI) EAST OF BLAIR AT THE BLACK RIVER FALLS AIRPORT. OWNERSHIP--BLACK RIVER FALLS AIRPORT PROPERTY. AIRPORT MANAGER PHILLIP KAIL, PH. 715-284-5673.
TO REACH FROM THE INTERSECTION OF STATE HIGHWAY 54 AND STATE HIGHWAY 27 IN BLACK RIVER FALLS, GO SOUTH FOR 4.5 KM (2.80 MI) ON STATE HIGHWAY 27 TO THE BLACK RIVER AIRPORT ENTRANCE ROAD ON THE RIGHT. TURN RIGHT AND GO WEST FOR 0.16 KM (0.10 MI) ON THE AIRPORT ENTRANCE ROAD TO THE STATION ON THE LEFT IN A LARGE GRASSY FIELD.
STATION IS A STANDARD NGS HORIZONTAL CONTROL DISK STAMPED--BLACK RIVER FALLS GPS 1989--, SET INTO THE TOP OF A 40 CM DIAMETER CONCRETE MONUMENT SET FLUSH WITH GROUND. LOCATED 0.78 M (2.6 FT) NORTH FROM A CARSONITE WITNESS POST, 34.14 M (112.0 FT) SOUTH FROM THE CENTER-LINE OF THE AIRPORT ENTRANCE ROAD AND ABOUT 160 M (524.9 FT) WEST OF STATE HIGHWAY 27.

USGS PUBLICATIONS

The following intermediate-scale (1:100,000) maps with contours are now available. They are prepared on a 30 x 60-minute quadrangle format using feature-separation drawings and symbolization suitable for digitizing. This series is printed on sheets that are 24" x 40" to 46" and costs $4.00 per sheet.

Map Name	Year Surveyed
Grantsburg	1983-85
Manitowoc	1982-84
Stillwater	1980-85

The following intermediate-scale (1:100,000) revised maps with contours are also available. This series is printed and distributed the same as above.

Map Name	Year Surveyed
LaCrosse	1986-90
Madison	1986-91
Merrill	1986-90
Oconomowoc	1986-91
Wabeno	1988-90
Washington Island	1981-84

To order, contact the U.S. Geological Survey, Map Distribution, Federal Center, Box 25286, Denver, CO 80225, phone 303/236-7477.

Note: For all USGS orders, make checks payable to "Dept. of the Interior - USGS". For all map orders less than $10, include an additional $1 for postage &handling.

Water-Resources Investigations Reports (WRI) are of an interpretative nature and are made available to the public outside the formal USGS publications series. To order, contact the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, Denver, CO 80225, phone 303/236-7476. When ordering, use the WRI number preceding the item.

WRI 89-4129. Ground-water levels and quality at Crex Meadows Wildlife Area, Burnett County, Wisconsin, by G. L. Patterson. Prepared in cooperation with the Wisconsin Dept. of Natural Resources. 1990. 19p. Microfiche $4; paper copy $3.50.

New GIS Text

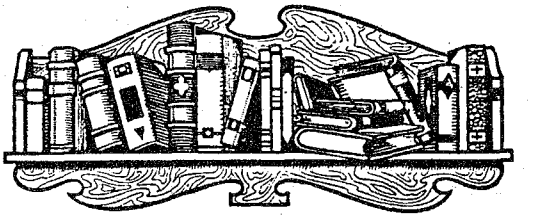
Since the compilation of texts and guidebooks in Appendix F of the handbook *Introduction to Local Land Information Systems for Wisconsin's Future*, published by the SCO, another textbook has appeared on the scene.

Seventy-one international authorities and three editors have produced *Geographic Information Systems: Principles and Applications*. By far the most ambitious such text to date, this is a two-volume set totalling over 1,000 pages. The set contains 56 chapters plus 480 illustrations of which 150 are in color.

According to product information from the publisher, the volumes provide a solid base for those new to the field, while offering experienced GIS users a rich sourcebook of innovative ideas and good practice

The editors are David Maguire (University of Leicester, U.K.), Michael Goodchild (University of California-Santa Barbara), and David Rhind (Birkbeck College, University of London, U.K.)

There is an introductory price of $250 until March 31, 1992, after which the price will be $295. Postage, handling, and sales tax are extra. For more information, contact the publisher, John Wiley & Sons, Inc., ATTN: Sheila Aronson, 605 Third Avenue, New York, NY 10158-0012.



Demand Continues for Handbooks

Since the SCO published two handbooks on land information systems last fall, over 2,000 copies have been distributed. Orders have primarily come from within Wisconsin, but a good number of national and even international orders have come in, too.

The books are *Introduction to Land Information Systems for Wisconsin's Future*, and *Implementation of Land Information Systems in Local Government—Steps Toward Land Records Modernization in Wisconsin.*

A second printing of each book has refilled our supply. The Wisconsin Land Information Board provided a copy of each book for all county land information offices. The Wisconsin Land Information Association purchased a copy of each book for its entire membership last year, and the Wisconsin Society of Land Surveyors recently decided to provide a copy of the Vonderohe et al book to all of its 1992 members. We are continuing to publicize the books as widely as possible.

The books each sell for $5.00 plus tax and shipping. Contact the SCO at (608) 262-3065 for order forms.

Editor's Note: With this issue we are beginning a series of invited commentaries. These are designed to provoke thoughts and actions of you, our readers. We are interested in your reactions, and encourage you to submit written comments which we will publish in the Bulletin as appropriate.

FROM LASCAUX[1] TO CYBERSPACE[2]: Some Observations

*By David Fletcher**

A short history:

1987 - The Wisconsin Land Records Committee proposes a blueprint for land records modernization.

1989 - The Legislature adopts this model, creating the Wisconsin Land Information Program.

1992 - Widespread exhaustion, confusion, frustration and panic exists, fueled by pressures to demonstrate results of the Program.

A longer history:

20,000 B.C. - Cave painting is invented.
7,000 B.C. - Written language is invented.
1450 A.D. - The printing press is invented.
1946 A.D. - The digital computer is invented.
1975 A.D. - Commercial Geographic Information System (GIS) software is available.

I have been amazed over the past year or so at the changes that I see happening in the GIS/LIS community in Wisconsin. People who had never heard of GIS four years ago are now talking about GPS, topological data structures, digital base maps and a myriad of other incredibly technical topics. This is a positive sign of how far we have come in such a very, very short period of time.

I have also seen much confusion, frustration, ignorance and pressure emerging in our community. This is not good. My suspicion is that many of us feel that we are in over our heads. We know we don't have all of the answers and we suspect that no one else has either. We do know that some of the brave (foolish) promises which we made are coming back to haunt us.

DON'T PANIC. Maybe a little perspective (and advice) will help.

To begin with, you cannot buy a GIS; one doesn't exist! Instead GISs are painstakingly created from the same inspiration as that responsible for language itself. The process of creating a Geographic Information System can be viewed as the latest of mankind's attempts to produce ideograms representing and communicating the reality of experience. We are truly evolving a digital, symbolic language, rich in its content and structure.

Participating in this heritage is perhaps the single most difficult professional endeavor that any of us will ever undertake. In fact, I propose that it is as difficult as the invention of writing itself and will prove to be as revolutionary as the printing press. The impacts of GIS will not be limited to land records modernization any more than writing was limited to keeping grain inventories for Sumerian merchants or printing was limited to producing Gutenberg Bibles.

In order to be successful, however, each of us must first develop a comprehensive and coherent world view containing not only geographic understanding, but additional knowledge about society's history, laws, customs, traditions and institutions. We must then further be able to articulate and transform that view into data, functional, technological and organizational architectures. These architectures themselves become agents of change, forcing us to continually re-evaluate our directions. This is very hard! It is important to accept the fact that there is NO correct solution.

There are, however, many opportunities for false starts, backtracking and failure. Some of these are inevitable given the enormous complexity of the task which we have set out for ourselves. I submit to you that the many of these, however, will be caused by needless ignorance, both of technology and the institutional contexts to which we apply the technology. There are careers, public resources and credibility at risk now and in the future.

Think of the process of creating a GIS as a very long marathon. In order to complete it, we must first train before we can run. Quite frankly, I don't see the kinds of training commitment necessary for success and I fear that we will see quite a few exhausted bodies piled up at the 10k post. Running a marathon for which one has trained can be a rewarding and fruitful experience; without the proper preparation, you are a danger to yourself and others.

I'm not sure we can avoid this, but I would like to offer three bits of advice in closing:

1. People are the single most important ingredient for success. Make your greatest investment in educating, training and communicating with them. Take no other action until you have the right people involved.
2. Beware of short-term opportunists, fast-buck artists and bandwagon riders. There are a lot of "experts" out there who have never accomplished much. Learn to recognize the difference between professional conversations and geogossip.
3. BE PATIENT. We're all in this for the long run.

I appreciate the opportunity to have this forum to share some insights with you. My hope is that these thoughts will encourage and challenge you in your efforts. Good Luck.

*David Fletcher is Chief, Geographic Information Services, Wisconsin Department of Transportation, and President of the Wisconsin Land Information Association.

[1] *Lascaux, France is the site where numerous examples of Cro-Magnon cave art have been discovered.*

[2] *Cyberspace is a metaphor for a futuristic global network of interconnected information systems. The concept was reated by the cyberpunk genre of Science Fiction writers in the mid-1980's.*

Pearl Harbor Maps on Display

A small exhibit of maps related to Pearl Harbor has been mounted by The Library of Congress's Geography and Map Division in commemoration of the 50th anniversary of the Japanese attack on Pearl Harbor.

The exhibit, "Pearl Harbor: A Cartographic Retrospective," is located just outside the Geography and Map Reading Room in the central core of the "B" level of the James Madison Memorial Building, 101 Independence Avenue, S.E. It may be viewed from 8:30 a.m. to 6 p.m. Monday-Friday, and from 8:30 a.m. to 12:30 p.m. on Saturday.

Other 19th centural maps in the exhibit are a preliminary sketch showing a reduced version of a larger and more detailed survey of the area now known as Pearl Harbor (1873), and a naval chart of the Pacific and Western Atlantic (1893).

Finally, a small map showing the position of the major vessels at Pearl Harbor at the time of attack, which has been autographed by Minoru Genda, the deputy chief of staff to Admiral Kusaka, is on view. Genda was charged with preparing the tactical implementation of the master plan for the attack.

"Pearl Harbor: A Cartographic Retrospective," will remain on display for the next few months.

(source: Library of Congress)

From the Editor's Desk

By Bob Gurda

Happy New Year!! 1992 could well turn out to be an eventful year for mapping in Wisconsin. A number of developments reported in this issue offer hope: countywide planning for land records modernization is proceeding toward a summertime conclusion over most of the state; WLIB grant awards have just begun; NAPP photography statewide may become a reality; educational opportunities are flourishing.

At the SCO, 1992 will be a year of continuing change. With this issue, the Bulletin reverts to being published quarterly. Several years ago we moved up to a bimonthly frequency, but have now decided to balance the slightly longer period between issues with some of our other publication initiatives such as the brochures previewed on page 9. While the Bulletin will be appearing less frequently than it was scheduled previously, it will average more pages per issue. We have also redesigned the masthead and added color.

Part of the additional content will be our new feature: The Guest Opinion column. We will invite a respected authority in the field to state his or her opinion in editorial style. We are happy that David Fletcher, surely a GIS visionary in our midst, has consented to initiate this feature.

Boundary Review Now With DOA

The state Boundary Review function, formerly called the Land Use Services Section, has moved from the Dept. of Development to the Dept. of Administration (DOA).

Municipal annexation petitions and questions, along with questions on related municipal incorporation, land use planning and regulatory issues, can continue to be addressed to the Division of Energy and Intergovernmental Relations, P.O. Box 7868, Madison, WI 53707-7868.

In addition to the transfer of Boundary Review to the DOA, St. Croix County has been added to the list of metropolitan counties wherein all municipal annexations receive an advisory review by the state. The DOA asks that all municipal officials, attorneys, planners, engineers, surveyors and others engaged in municipal planning and land development, communicate these changes to their clients.

(source: Wisconsin Counties, January 1992)

Wisconsin Winnebagos Use GIS

The Wisconsin Winnebago Business Committee has formed a GIS Division in Black River Falls. Its purpose is to support preservation of historical sites and culture, and to promote economic development and land management of the Wisconsin Winnebago Nation. The division also serves as a cultural and environmental education tool, and an economically viable business entity within the tribe. Initial direction of this effort has been carried out by He Ping, a Ph.D. candidate at UW-Madison.

The GIS Division has begun a number of projects. One involves surveying and mapping of Indian Burial Mound sites. This information will be transferred into a GIS database. Initial work was done in Dane County this last summer under the tutelage of Larry Johns of Dane County Parks and Prof. James Scherz of the UW-Madison. Work will continue in Rock County this spring with the goal of developing a preservation-oriented database. The project has attracted interest from Rock County, the Wisconsin Historical Society, and the National Geographic Society.

Currently, a multi-layered database for all tribal lands is under development. These lands are scattered over fourteen counties in central Wisconsin. Plans for the next three years call for county by county mound preservation, local land information system implementation projects, and an internship program for tribal members and members of other tribes and cultures. The Business Committee anticipates that the division will be able to act as a unit to help develop wider use of GIS in municipalities and counties.

For more information, call 1-800-722-8497.

(source: Wis. Winnebago Business Committee)

SCO NEWS AND UPDATES

Staff Comings and Goings

William Kyngesburye is leaving our staff after 14-months of employment while getting his Bachelor's Degree in Cartography. We have hired Matt Allen, an undergraduate student in Civil and Environmental Engineering.

Fax Number Instituted

The SCO has joined the Fax world. Our Fax capabilities are based on a pc computer "fax board" coupled with a flatbed scanner. We have a dedicated telephone line for receiving and sending Fax documents: 608/262-5205. Calls coming in through this number will access our Fax receiving capabilities between the hours of 8:30 am and 4:00 pm on business days.

Topical Brochures Planned

SCO resources that have in the past been devoted to production of county cartographic catalogs are being shifted to development of a set of brochures. Each brochure will contain statewide information and will have more of an educational and advisory focus than did the county cartographic catalogs.

Initial brochure topics include topographic mapping, geodetic control, and aerial phtography. Eventually there may be over twenty such brochures covering a wide variety of topics.

County Catalog Developments

The following is an update on County Cartographic Catalog production at the SCO.

SHAWANO & WAUPACA: Printed in December, 1991 and distributed in early January, 1992.

Copies of these catalogs are for sale from Map Sales, Wisconsin Geological & Natural History Survey (WG&NHS), 3817 Mineral Point Road, Madison, WI 53705, 608/263-7389; the cost is $7.00 at the counter or $8.00 by mail.

After the distribution of the Shawano and Waupaca County Catalogs, production of the County Cartographic Catalog series will be discontinued. This decision was based on the series' lack of demand, its costly production, the difficulty in updating the series, the lack of evidence of its wide use, and the fact that a majority of the catalogs are now out-of-date.

The County Cartographic Catalog series covers 60 of Wisconsin's 72 counties. Publication dates range from 1979-1991. The counties not included in the series are: Barron, Buffalo, Grant, Iowa, Lafayette, Milwaukee, Polk, Price, Sawyer, Trempealeau, Walworth, and Waukesha. Copies of the Cartographic Catalogs will continue to be available for purchase from the WG&NHS.

Aerial Photography Survey Slated

By Ben Sherman

Work has begun on the fourth edition of the SCO's Wisconsin Catalog of Aerial Photography. Over the next several months, the Office will conduct a survey to collect information about publicly available aerial photography acquired over Wisconsin.

As many of you realize, aerial photography is extremely useful for numerous aspects of environmental or landscape evaluation, terrain alteration, and cartographic analysis. Not only does it provide an improved vantage point for understanding change over time, but also in special cases can be used for monitoring event based phenomenon such as forest fires.

It's not news to those who contract out for photography that it can be extremely expensive to acquire new coverage. Often the cost is so prohibitive that agencies are unable to use the best and most optimal information (recent aerial photos) in meeting their mandates. Thus, in conjunction with the our photography and imagery survey, the SCO will attempt to facilitate communication and coordination of planned aerial photography projects.

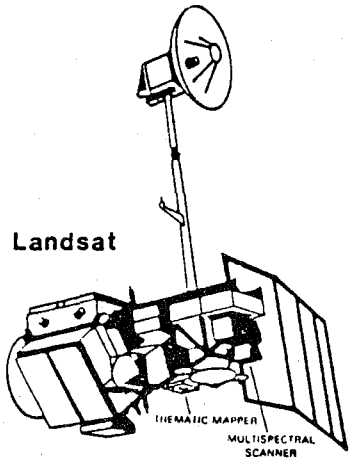
There are many benefits to be had from collaborative photographic planning. Redundancy of coverage will be curtailed. Better end-product services will be obtained from the pooling of agency resources. Cost sharing, even in this era of constrained budgets, will enable more complete coverage, not to mention, significant savings for all participants. By utilizing the Office's resources, agencies, private organizations, and the general public will have access to the most up-to-date information available on planned or desired aerial photography.

To better manage the Office's aerial photographic information, we will be developing a computerized database capable of accessing both historical and current air-photo data. Our system will be compatible with the National Aerial Photography Summary Record System (APSRS), but tailored for Wisconsin's needs.

Future projects may include integration with a Geographic Information System (GIS), and an interactive query system designed for the public. If you have any questions or comments about our Aerial Photography Survey and/or planned informational products, don't hesitate to contact Ben Sherman (608-262-8776) or Brenda Hemstead (608-262-3065) at the State Cartographer's Office 160 Science Hall, Madison, WI 53706.

SCO Offices Move!

Don't be alarmed, we only moved our main office across the hall, from Room 155 to Room 160 of Science Hall. All of our telephone numbers remain unchanged.



Landsat News

By Ben Sherman

The National Land Remote Sensing Policy Act of 1991 (H.R.3614) has been introduced by Rep. George Brown (D-California). Brown's bill addresses Landsat 7's budget, remote sensing program oversight, and data distribution to nonprofit users.

The proposal calls for Landsat administration to be split between the Department of Defense and NASA. NASA is to oversee the civilian use of Landsat data. The program was initially managed by the National Aeronautics and Space Administration (NASA), then by the Dept. of Interior, and most recently by NOAA in the Department of Commerce in conjunction with the private corporation EOSAT.

Landsat 6 construction is on schedule for a launch in mid-1992. It is designed to replace Landsat 4 and 5 which currently acquire Thematic Mapping images for the Earth Observation Satellite Company (EOSAT) which makes them available for public purchase. Features of Landsat 6 will include all of the features of the previous satellites thereby retaining continuity, but also will add more thermal bands and a new 15-meter resolution panchromatic band.

EOSAT has announced a new 3-band digital product for those who request their imagery in digital (fasttrack) form. Also, EOSAT has introduced a State Coverage Program which allows state governments the option of purchasing complete Landsat coverage of their state with the authorization to disseminate that data internally to any state agency or organization for use in state authorized programs. Twelve states have already purchased statewide thematic mapper coverage under this program.

A copy of EOSAT's International Directory of Remote Sensing Products and Services 1991-1992 can be ordered by calling 1-800-344-9933.

(sources: Landsat Data User's Notes, Fall 1991, Science, Vol. 254; December 13, 1991, and LANDSAT WORLD UPDATE, Dec. 1991)

Current Updates in Wisconsin's 7.5-Minute Topographic Map Series

By Martha Berry

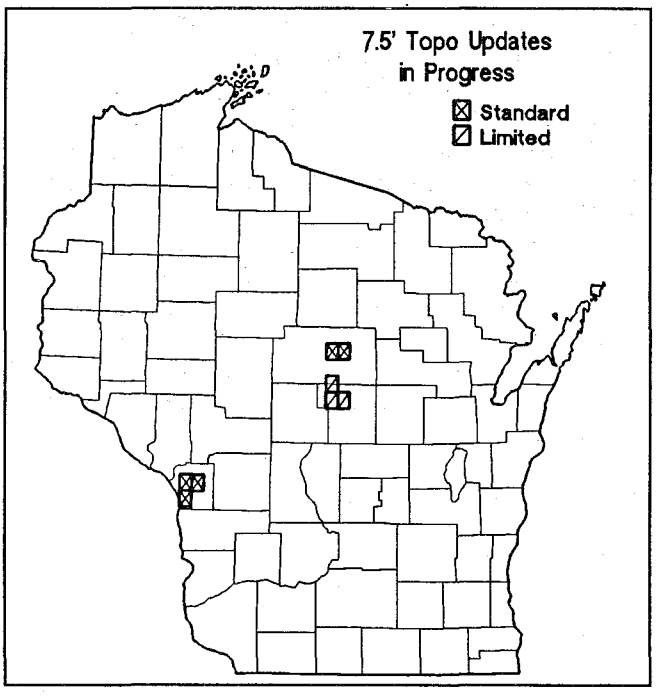
In 1985, the last of the large-scale topographic maps that make up Wisconsin's 7.5-minute topographic map series were completed. This map series, which provides the state of Wisconsin with a standard base coverage at common scale and comparable style, has undergone minimal updating since its completion and is quickly becoming out-dated.

Although the USGS is currently in the process of completing its second small updating project on Wisconsin's 7.5-minute topographic map series, progress has been slow. Upon this project's completion, only 8 of the series' 1154 topographic maps will have been updated. (See the index map for the location of the USGS updates.)

The USGS' first updating project, the Stevens Point Project, involved the limited updating (formerly interim revision) of the topographic maps covering the Dancy, Rocky Run, and Stevens Point quadrangles. These updated topographic maps were sent for printing in September, 1991 and are now available for distribution.

The current activity, the Wausau Project, entails the standard updating of the topographic maps covering the La Crosse, Onalaska, West Salem, Wausau East, and Wausau West quadrangles. The photogrammetry for the project is nearly complete and the resulting updated topographic maps are scheduled for printing in June, 1993.

The funding for the two updating projects was provided by a Joint Funding Agreement (previously called the State Cooperative Project) between the federal government and the Wisconsin Geological and Natural History Survey. With remaining funds, the USGS is hoping to update an additional ten to fourteen quadrangles in Wisconsin's 7.5-minute topographic map series. Several quadrangles in the Racine area have already been photo inspected and will most likely comprise the next updating project.



Digital Orthophoto Imagery Diskettes Still Available Free From The SCO

By Bob Gurda

Sample digital orthophoto demonstration diskettes are still available free from the SCO. The diskettes contains four computer file types that can be used easily on a PC-compatible microcomputer:

- a 1 MB digital orthophoto image covering about 6 square miles at a pixel size of 4 meters
- several additional smaller images
- a free public domain software display program for viewing the image on a graphics monitor (EGA will work, but VGA is recommended)
- documentation files explaining both the images and the software, which can be viewed or printed
- an interactive demo program that explains digital orthophotography and automatically displays the image in a number of ways
- a second demo program that illustrates the effect of various pixel resolutions.

These demonstrations provide a view into a map image product that could be developed over the entire state. The sample file is from the area around Black Earth, Wisconsin (Dane County—just west of Madison). It was produced by the U.S. Geological Survey in conjunction with the CONSOIL research project.

Commercial software already exists that can display digital orthophoto images on a computer monitor and simultaneously show other information in vector format such as property parcels, soil types, utility locations, and well locations. Some products allow interactive analysis of the image information based on the vector information.

An orthophoto is derived from an aerial photograph, but the distortions (found to varying degrees in all such photographs) have been removed to create a image map with uniform scale.

U.S. Geological Survey and the Soil Conservation Service are interested in developing digital orthophotography as a standard product across most of the U.S. Their model is based on NAPP (National Aerial Photography Program) photographs, which are 1:40,000-scale. This acquisition scale could be used to create hard-copy ortho-corrected products at an enlarged scale of 1:12,000 (1"=1,000 feet). Digital files would depict visible objects as small as about 2 meters.

To receive a copy of the sample digital files, send 2 blank, formatted, high-density diskettes (either 1.2 MB 5.25", or 1.44 MB 3.5") in a sturdy mailer to the State Cartographer's Office. We will copy the files onto the diskettes, and return them along with background information and instructions for getting started.

NAPP Photography Still Possible

By Ted Koch

As of our printing deadline for this issue, the inclusion of Wisconsin in the 1992 National Aerial Photography Program (NAPP) appears to be a distinct possibility. This is a reversal of the bleak situation of the past five months where the chances of our state's inclusion were slim.

Last August, state funding for Wisconsin's NAPP flight was vetoed from the state budget bill by Governor Thompson. At the time, this veto seemed to severely limit the possibility of Wisconsin becoming one of the states for which NAPP would acquire 1992 photo coverage. However, within the past two months a group of five state and federal agencies and one utility have quickly agreed to make significant individual organizational contributions to NAPP. Together these contributions amount to more than 70% of the total contribution needed from Wisconsin to assure that statewide coverage will be flown in 1992.

NAPP is a cooperative federal-state program, where a state that commits 50% of the cost of photography acquisition is guaranteed to be flown when its scheduled year arrives. Based on actual low bids from the private contractors who acquire the photographs, Wisconsin's 50% share has been set at $194,000. As we have detailed on these pages previously, NAPP photography is obtained when leaves are off the trees, usually in the spring. Acquired at a flying height of almost 4 miles, NAPP photographs are most useful for natural resource and agriculture inventories, and general planning purposes.

The amount currently pledged by the five agencies and one utility totals $140,000. By far the largest contributor to this amount is the Wisconsin Department of Natural Resources, which has committed more than half of the total.

Through the coordinating efforts of the State Cartographer's Office, other state agency commitments have been made by the Departments of Transportation; and Agriculture, Trade and Consumer Protection. The two federal agency contributions will be made through the state office of the Soil Conservation Service and the National Park Service's Trails Project Office in Madison. The contributing utility is Wisconsin Power and Light.

Due to the NAPP funding policy of requiring a full 50% contribution, it is unclear at this time whether Wisconsin's amount will insure that the entire state will be flown. Presently, the possibility remains that the agencies contributing the 50% federal share may make up the needed difference.

Another possibility is that less than the entire state will be flown. If this occurs it is not known what areas will or will not be covered. An outside chance also exists that additional funding may be made by other agencies in the state, which will close the gap between the $140,000 pledged and the $194,000 required. A decision on the Wisconsin situation, which will determine what coverage is acquired in 1992, is expected from the NAPP administrator in Reston, VA by the end of January.

CONFERENCES AND TECHNICAL MEETINGS

February 9-14, **GIS '92—6th Annual Symposium** will be held in Vancouver, British Columbia, Canada. Contact: GIS '92 Symposium Office, 720-845 Cambie St., Vancouver, BC, Canada V6B 4Z9 (604/688-0188.

February 10-14, **GIS/Grass**, Soil Conservation Service, Fort Worth, TX. Contact: Dave Drennan, 817/334-5451.

February 13-14, **GIS Spreadsheet and Database Management for Land Use Decisions** will be held at the Inn at McCormick Ranch, Scottsdale, AZ. Contact: Lincoln Institute of Land Policy, Attn: Ann Long, Registrar, 113 Brattle Street, Cambridge, MA 02138, 800/LAND-USE.

February 17-18, **Using GIS to Manage Urban Growth and Change** will be held at the Inn at McCormick Ranch, Scottsdale, AZ. Contact: Lincoln Institute of Land Policy, Attn: Ann Long, Registrar, 113 Brattle Street, Cambridge, MA 02138, 800/LAND-USE.

February 24-25, **The Basics of Geographic Frameworks Obtaining Survey Control and Mapping** will be held at the Holiday Inn West, Madison, Middleton, WI. Contact: Sue Simons, P.O. Box 7868, Madison, WI 53707-7868, 608/267-3369.

February 25, **Unraveling Parcel Identification Numbering: Making The Standard Work Throughout Wisconsin** will be held at the Holiday Inn West, Madison, Middleton, WI. Contact: Sue Simons, P.O. Box 7868, Madison, WI 53707, 608/267-3369.

February 25, **Preparing Successful County-wide Plans for Land Records Modernization** will be held at the Holiday Inn West, Madison, Middleton, WI. Contact: Sue Simons at 608/267-3369 (see address above).

February 25-28, **Microcomputer Mapping DLG Users' Group Annual Meeting** will be held in New Orleans, LA. Contact Billy Tolar, USGS, Applications Assistance Facility, Bldg. 3101, Stennis Space Center, MS 39529, 601/688-3541.

February 26-28, **Wisconsin Land Information Association Annual Conference** will be held in Madison, WI at the Holiday Inn (West), 1313 John Q. Hammon Drive, Middleton, WI. Contact: WLIA at 800/344-0421.

February 26-29, **NCGIA Initiative #9, "Institutions Sharing Geographic Information"** will be held in San Diego, CA. Contact: Harlan J. Onsrud at 207/581-2149.

February 29-March 5, **1992 ASPRS/ACSM Annual Convention** will be held in Albuquerque, N.M. Contact: Mary Cullen, ASPRS/ACSM '92, 5410 Grosvenor Lane, Bethesda, MD 20814-2122, 301/493-9199.

March 2-4, **1992 GIS for Transportation Symposium** will be held at the Hilton in Portland, OR. Contact: Jim Dolson, GIS-T '92 Symposium Chair, Florida DOT, 605 Suwannee St., MS43, Tallahassee, FL 32399, 904/488-1954.

March 9-12. **From CAD to Computer-Aided Designing** will be held in Anaheim, CA. Contact: NCGA, 2722 Merrilee Drive, Ste. 200, Fairfax, VA 22031-449 or call 800/225-NCGA, ext. 310.

March 12, **AM/FM Wisconsin Chapter Membership Meeting** will be held in the Winnebago area. Contact: Gary Miller, Intelligraphics at 414/784-9200.

March 16-19, **1992 Annual GRASS Users Conference** will be held in Lakewood, CO . Contact: Gary Waggoner, GIS Division, National Park Service, P.O. Box 25287, Denver, CO 80225-0287, 303/969-2590.

March 17-19, **NHAP-NAPP-NASA Color Infrared Aerial Photography (CIR) and (CAD) Computer Mapping Workshop**, USGS-NMD, Bldg. 3101, Stennis Space Center, MS 39529. Contact: 601/688-3541.

March 17-20, **Sixth International Geodetic Symposium on Satellite Positioning** will be held in Columbus, OH. Contact: Julie E. Mills, Conferences & Institutes, The Ohio State Unv., 175 Mount HJall, Columbus, OH 43210, 614/292-8571.

March 18-19, **5th Annual GIS Conference**, Towson State University, Towson, MD. Contact: 301/830-2964.

March 23-26, **Canadian Conference on GIS** will be held in Ottawa, Ontario, Canada. Contact: Jean R.R. Gauthier, The Canadian Institute of Surveying and Mapping, P.O. Box 5378, Station F, Ottawa, Ontario, Canada K2C 3J1, 613/224-9851.

March 27-30, **AM/FM International Annual Conference XV** will be held in San Antonio, TX. Contact: Paula Delie, AM/FM International, 14456 E. Evans Ave., Aurora, CO 80014, 303/337-0513.

April 6-9, **Introduction to Global Positioning Systems (GPS)** will be held at the Union South, 227 North Randall Ave., Madison, WI. Contact: Engineering Registration, The Wisconsin Center, 702 Langdon St., Madison, WI 53706, 800/462-0876 or 608/262-1299.

April 7-8, **Managing the Risks and Recovering the Costs and Geographic and Facilities Management Systems** will be held at the Hanalei Hotel, 2270 Hotel Circle North, San Diego, CA. Contact: The Wisconsin Center, 702 Langdon St., Madison, WI 53706, 800/462-0876 or 608/262-1299.

April 18-21, **AAG Annual Meeting** will be held in San Diego, CA. Contact: Devin Klug at 202/234-1450.

May 4-7, **MidAmerica GIS Symposium** will be held in Kansas City, MO. Contact: Karl Kappelman, The University of Kansas, Div. of Continuing Education, 1246 Mississippi St., Lawrence, KS 60045-2607, 913/864-3284.

May 14, **AM/FM Wisconsin Chapter Membership Meeting** will be held in the Milwaukee area. Contact: Gary Miller, Intelligraphics at 414/784-9200.

June 1-6, **GPS/GIS Conference and Training Program** will be held in Newport Beach, CA. Contact: Conference Coordinator, c/o GeoResearch, Inc., 115 N. Broadway, Billings, MT 59101, 406/248-6771.

June 8-12, **Introduction to GIS**, Central Washington University, Ellensburg, WA. Contact: Claudia Van Ausdal, 509/963-1504.

June 12, **WLIA Quarterly Membership Meeting** will be held in Eau Claire, WI. Contact: WLIA at 800/344-0421.

July 12-16, **URISA '92 Annual Conference** will be held in Washington, D.C. Contact: Urban & Regional Information Systems Association, 900 Second St., N.E., Ste. 302, Washington, D.C. 20002, 202/289-1685.

August 2-14, **International Society for Photogrammetry and Remote Sensing VXII Congress**, Washington, DC. Contact: XVII ISPRS Congress Secretariat, P.O. Box 7147, Reston, VA 22091.

August 3-7, **International Symposium on Spatial Data Handling** will be held at the Mills House Hotel in Charleston, SC. Contact: David J. Cowen, Humanities & Social Sciences Computering Lab, Univ. of South Carolina, Columbia, SC 29208, 803/777-6803.

September 11, **WLIA Quarterly Membership Meeting** will be held in Rhinelander, WI. Contact: WLIA at 800/344-0421.

October 6-9, **GISDEX '92**, will be held at the Washington Hilton, Washington, DC. Contact: GISDEX '92, 1734 Elton Road, Suite 221, Silver Spring, MD 20903-1724, 301/445-4400.

November 6-12, **GIS/LIS '92** will be held in San Jose, CA. Contact: GIS/LIS '92, 5410 Grosvenor Lane, Suite 100, Bethesda, MD 20814-2122, 301/493-0200.

WLIA Conference Nears

By Bob Gurda

The Wisconsin Land Information Association's Fifth Annual Conference is just around the corner. The dates are February 26-28 in Middleton at the new Holiday Inn-Madison West.

The schedule includes numerous diverse workshops, reports from WLIA working groups and committees, a poster session, and a large trade show.

A popular feature initiated last year will return—the "Town Meeting". This Friday morning event allows the entire membership to participate in setting the tone for WLIA's approach to critically important data issues: sharing, distribution, and exchange. Last year's town meeting on grant evaluation criteria produced recommendations that the Wisconsin Land Information Board relied upon in formulating administrative rules for its grants program.

An intriguing new offering will be Nancy von Meyer and Pat Eagan's "Data Exchange Game", which will start the first morning and run throughout the conference.

For more information, call 1-800-344-0421.

EPD Offers GPS Class Again

Global Positioning Systems (GPS) will again be featured in a course offered by the Engineering Professional Development (EPD) Program at UW-Madison. This intensive, 3-1/2 day course will be held April 6-9 in Madison, and costs $825. There will be six expert instructors. A hands-on session is included. See the listings on the facing page for contact information.

USGS & EPA To Host Forum on Land Use and Land Cover Mapping

A land use and land cover forum is scheduled for February 25-26 in Reston, VA. Its goal is to improve the coordination, sharing, and transfer of national Land Use and Land Cover (LULC) data between producers and users.

The forum is co-sponsored by the U.S. Geological Survey and the Environmental Protection Agency. A long-term objective, in support of the goals of the Federal Geographic Data Committee, is the eventual development of guidelines and procedures for optimizing the exchange of LULC data.

Attendees will hear several formal presentations, to be followed by discussion and special small group sessions. This activity will help define the scope of a User Needs Assessment. Persons who cannot attend the forum can participate in the follow-on assessment.

The forum is targeted to managers of federal or state programs using or producing LULC data. For more information, contact the USGS via fax at (703) 648-5585.

Report from GIS/LIS '91

By Ted Koch

Once again the GIS/LIS annual conference, held last November in Atlanta, was a highly successful event. The conference hosting a record number of attendees (4220) and exhibitors (148) proved to be an excellent place to see and hear about the latest in GIS/LIS technology and applications developments. Wisconsin was well represented with a diverse group from academia, local government, utilities, and private firms.

The conference included a wide variety of individual and panel discussions covering just about all continuing developments in GIS/LIS application and theory. Panel discussions drawing a wide range of interest covered a range of topics from data transfer standards, raster/vector integration technology, to barriers to GIS/LIS use and acceptance. Several presentations were made on the development and growth of Wisconsin's land information program.

New to the week-long list of GIS/LIS events was a 3-day National States Meeting that preceded the start of the conference. Thirty-nine states, including Wisconsin, were represented at this meeting which focused on the states' use of GIS/LIS technology. Attendees identified three primary areas of concern for states in the future:

1. The relationship between the state and the federal governments.
2. The relationship between the state and local governments.
3. The development of data standards that deal with both quality and interchange.

Of major interest at this meeting was the realization that, in comparison to other states, Wisconsin has taken a lead role in the development to adopt GIS/LIS technology. Although most other states have and are using the technology, they lack the institutional arrangements to make the technology useful across the broad range of public and private users.

In the exhibit hall, interest focussed on a number of technological innovations that are providing heated competition among companies. These include integration of raster and vector data with GIS software; user-friendly interfaces to GIS data; merger of CAD and GIS; softcopy (digital) photogrammetric workstations; and enhanced digital data products derived from federal data sets.

GIS/LIS '92 is scheduled for November in San Jose, CA. A year later it will make its first midwest appearance in Minneapolis.

Try Your Hand at Redistricting by Computer

The Wisconsin Legislative Reference Bureau (LRB) is making it possible for any interested person to try out the computer-based system developed to support the redrawing of state political district boundaries. This free opportunity can be had at ten sites across the state.

The system uses a geographic information system with a customized look and feel to do analyses for legislative and congressional districts and draw maps of the results. Data behind the system comes from the 1990 Census, results of elections, and related items. The geographic framework which supports analysis and map creation is based on the "TIGER files" from the Census Bureau. The 1990 Census was the first to use computerized maps and related database technology.

Lawrence Barish, Director of Reference and Library for the LRB, believes that Wisconsin has gone further than any other state in decentralizing this information. Interested parties can reserve up to four hours of time at a computer terminal and have help from a state employee versed in the system.

To make use of the system, contact the LRB at (608) 266-0341. A scheduled user will receive paper documents in the mail with election and demographic data and ward maps for the areas of interest. The maps can be used to roughly design a redistricting plan that can then be tried on the computer.

Access dates are as follows:

Center Street Library—Milwaukee
2727 W. Fond du Lac Ave
Feb. 10-11, 13-15
Mar. 9-10, 12-14

Forest Home Library—Milwaukee
1432 W. Forest Home Avenue
Feb. 17, 19, 21-22
Mar. 16-18, 20-21

DNR Building—Milwaukee
2300 N. King Drive
Feb. 24-25, 27-29
Mar. 23-27

United Community Center—Milwaukee
1028 S. 9th St.
Feb. 4-8
Mar. 2-3, 5-6

Madison Area
Jan. 6 to Mar. 27

Appleton Area
Feb. 14-15

Eau Claire Area
Feb. 21-22

Wausau Area
Feb. 28-29

La Crosse Area
Jan. 29-30

Superior Area
Jan. 31
Feb. 1

(source: The Milwaukee Journal)

TIGER Workshop Scheduled

UW-Madison's Applied Population Laboratory has scheduled a workshop on the Census Bureau's digital map database known as TIGER. The workshop is scheduled for May 26 and 27 in Madison and will include an overview of the TIGER system, its limitations and potential; hardware and software packages available to operate with the system; and demonstrations of TIGER capabilities. More information will be printed in a future issue of WSDC NEWS and a brochure with complete program information will be distributed in the early part of next year. If you would like to be placed on the mailing list call Nancy Hurley at 608/262-0141.

(source: WSDC NEWS, Fall 1991)

INDEX TO VOLUME 17: 1991

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 staff presently consists of two full-time academic staff—Ted Koch, State Cartographer (608/262-6852), Bob Gurda, Assistant State Cartographer (608/262-6850), and one full-time classified staff—Brenda Hemstead, Program Assistant (608/262-3065), plus several part-time graduate and undergraduate students.

The State Cartographer's position and mission is described in Wis. Statute 36.25 (12m). In addressing this role, the SCO functions in a number of ways:

- publishes a series of documents which guide users of mapping resources.
- inventories mapping practices, methods, accomplishments, experience, and expertise.
- develops experimental and prototype products.
- publishes the *Wisconsin Mapping Bulletin* and other documents to inform the mapping community.
- participates on committees, task forces, boards, etc.
- serves as the state's affiliate for cartographic information in the U.S. Geological Survey's Earth Science Information Center (ESIC) network.
- provides information and advice in support of sound mapping practices and map use.

The Office answers a wide range of inquiries ranging from simple to complex, in the following general categories:

1. **Geodetic Control**—Requests for surveying information which as been established by some office or agency, and upon which the requestor wishes to base a survey or map.
2. **Aerial Photographic Coverage**—These are requests for information about existing or planned aerial photographic coverage which can be utilized for a variety of projects. These requests, in many instances, are motivated by the desire to avoid the exceedingly more costly route of acquiring specifically flown photography.
3. **General Map Coverage**—The requestor is seeking map coverage to fulfill a specific need, from utilization as a base map upon which other information can be compiled, to determination of location or extent of a resource such as wetlands, to use as a recreation guide.
4. **Specific Unique Data**—These types of requests change as various programs are implemented. Examples include Magnetic Declination (for land surveying), and Latitude/Longitude (federal requirement for placement of sending satellite dishes or radio towers).
5. **General Requests**—Such as size of an area, height of a particular feature, location of a named feature, explaining contours, digital methods, software, hardware, etc.
6. **Activities of Others**—This provides access to publications, news, anecdotal information, and referrals to appropriate agencies, programs, organizations, or individuals who may be able to provide the information being sought.

In each issue of the *Bulletin*, we will discuss an area of SCO activity in more detail. By this means we will help you better understand and more effectively utilize the SCO's services. If you have any questions concerning these topics, please contact the Office at 608/262-3065 for a detailed explanation.

Wisconsin
Mapping Bulletin

Published quarterly by the 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, conferences/workshops. Local and regional information is especially encouraged. The Editor makes all decisions on content. Deadline for the next issue is March 27, 1992.

Editor: Bob Gurda
Desktop publishing: Brenda Hemstead
Mailing: SCO Production Staff

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

State Cartographer's Office
160 Science Hall
Madison, WI 53706-1404
phone 608/262-3065
fax 608/262-5205

State Cartographer's Office
Univ. of Wisconsin-Madison
550 N. Park Street
Rm. 160 Science Hall
Madison, WI 53706-1404