

WISCONSIN MAPPING BULLETIN



Vol. 15 No. 2 April 1989

REPORTING ON LAND RESOURCES AND MAPPING
SCIENCES IN THE STATE OF WISCONSIN

WILL THE PLUG BE PULLED ON LANDSAT?

Public funding of the Landsat program has again come under intense scrutiny. Civilian remote sensing from U.S. satellites has always been up in the air--literally. But as recent events demonstrate, the future of the entire Landsat program may be in jeopardy. Successful technology, foreign competition, and problems of budgeting for public-private commercialization are all parts of this story.

EOSAT, the private consortium that holds the contract for operating the Landsat program for the U.S. Commerce Department's NOAA, announced earlier this year that the system might have to be shut down by this March 31 because funding provided by the Congress was about to be exhausted. This announcement triggered an outpouring of protest from the remote sensing community. In response, over 100 members of the House of Representatives sent a letter to the Vice President and President calling for action to rescue the program. Vice President Dan Quayle heads up the National Space Council (NSC).

As a result, a group of federal agencies pledged emergency funds which should allow continuation of Landsat service until at least this September 30. At the same time, the NSC will be conducting a review of Landsat data needs, of funding through fiscal years 1990 and 1991, and of federal agency responsibility and participation. There may be interim recommendations as early as May 15, with a final report expected by October of 1989.

At present, both Landsats 4 and 5 are in orbit, and continue to collect and transmit data. Each of these satellites has surpassed its expected lifetime. Plans for Landsat 6 have called for a launch in 1991. This new

satellite, which is under construction, is designed to operate much like Landsat 5. Its most significant difference is a new panchromatic channel, with 15 meter cell size, that senses energy in a .50-.90 micrometer wavelength band---covering current bands 2, 3, and 4 on the Thematic Mapper.

Coincident with the operations funding emergency, EOSAT has announced some price adjustments for Landsat data (see table on p. 8). Some prices are higher, others lower. These adjustments aside, the long term viability of the NOAA-EOSAT arrangement is in question. Pressure from competitors seems likely to increase. The French SPOT satellite is a proven performer, and its data is superior to Landsat in some respects while being inferior in others. Other countries may leap-frog the U.S. with even newer technologies, although no launches are known to be imminent.

...continued on page 2

Land Information Bill Introduced in Legislature

A Wisconsin Land Information Program would be created upon passage of a bill recently introduced in the Wisconsin Assembly. There will be a Public Hearing at the Capitol on May 9th.

See complete story... p. 3

from page 1 ...Future of Landsat

The Landsat program is one of the triumphs of the American space program. Begun by NASA as an experiment, the sensors and platforms have performed up to or beyond expectations, and have tended to last beyond their designed lifetimes. Facilities and staff to collect, store, adapt, and disseminate Landsat data have evolved into an established and expected service.

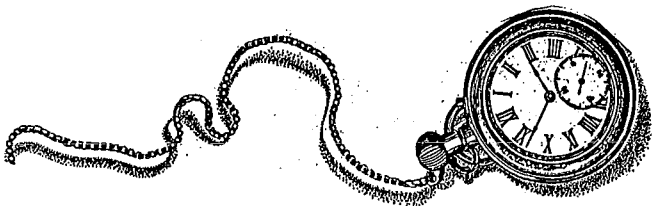
A multitude of uses for the data have been developed. Some long-term monitoring projects have come to depend on these data sources for periodic coverage. A very visible recent example is the vegetative recovery of Yellowstone National Park following last summer's fires. The successful marketing of commercial software that helps derive different types of useful information from this and other forms of imagery is another indicator of the demand for remote sensing/interpretation services.

The success of Landsat has attracted other countries into the field--some have planned their own sensors, and both the French and the Soviets have operating satellites from which imagery and/or data can be purchased.

With the launch of Landsat 6 at least two years away, the current U.S. program relies on old satellites using proven--but not state-of-the-art--technology. By contrast, other countries may have more advanced and better financed systems operating before Landsat 6 is even launched. All of the current systems, and probably all of the planned systems are supported by significant subsidies.

In the competitive international environment, it may be necessary to re-evaluate the arrangement which underlies the commercialization of Landsat. At the time that the federal government was initially considering the commercialization option, concerns were expressed by many in the remote sensing community that the future was too difficult to predict and the technology was insufficiently mature to guarantee success. The current evidence seems to have proven the critics right.

(sources: ACSM Bulletin, April 1989; NASA Technical Briefs, April 1989; Landsat World Update, various issues)



WISCONSIN DIGITAL GEOGRAPHIC DATA SHARING

Sharing of digital geographic data is a very appealing idea. But creating an environment in which it can operate is a complex process for a number of reasons. In several months, an interagency work group expects to unveil a recommended method for facilitating data sharing.

For the last 2 1/2 years, a group of state agency staff have been meeting monthly in Madison to work on geographic data sharing issues. Momentum has been maintained by a core group that represents the more active users and developers of Geographic Information Systems (GIS); the total list of attendees numbers several dozen. WisDOT has provided the primary logistical support for the group.

In addition to sharing general information and experiences, the group has been developing a recommended documentation format for digital geographic information files. Reports by several subcommittees of the Wisconsin Land Records Committee, and by the National Committee for Digital Cartographic Data Standards are being used for guidance. The documentation format is being designed to allow those who maintain digital geographic data to use a common form and set of terms to document their files. The format should be equally useful for those persons wanting to search for files maintained by others which might be available through sharing or some other arrangement.

The workgroup is also exploring issues surrounding liability, public access, copyright, and support for servicing of incoming data sharing requests.

The data documentation format has evolved into a two-tiered concept. At the basic level, enough information would be provided to allow a potential user to screen for available files, and to follow up with requests for further information from custodians. Custodians then might be prepared to provide more detail--particularly a quality report which would follow a format common across the group of custodians.

Testing of the proposed formats will be scheduled in Wisconsin in several months. Respondents to the earlier call for interest in data sharing (Wisconsin Mapping Bulletin, July 1987) will be involved in the review process. For more information, contact Bob Gurda at (608) 262-6850.

LAND INFORMATION BILL INTRODUCED IN LEGISLATURE

Assembly Bill 269 (AB 269) has been introduced by State Representative Joe Wineke of Verona. Enactment of AB 269 would create a land information board, a land information program, and would provide a mechanism for funding local projects to modernize land records.

This bill has been referred to the Assembly Committee on State Affairs, chaired by John Medinger of LaCrosse. Medinger is a co-sponsor of the bill. A Public Hearing has been scheduled for 1:00 p.m. on May 9th in Room 314 NW, State Capitol. WLIA will also hold a press conference at 11:30 a.m. in the Assembly Parlor on the same day.

AB 269 has been developed by the Wisconsin Land Information Association (WLIA). WLIA used many of the recommendations of the Wisconsin Land Records Committee (WLRC) in working up drafts of the bill. WLIA members further provided feedback in refining its provisions.

WLIA also has laid the groundwork for bipartisan support for the bill. There are 12 co-sponsors in the State Assembly (Welch, Holperin, Lorge, Young, Rohan, Huelsman,

Medinger, Zweck, Black, Gruszynski, Musser, and Lewis). Including Wineke, there are 8 Democrats and 5 Republicans in this group. Four Senators are also co-sponsors (Chvala, Moen, Risser, and Helbach).

Introduction and referral to committee are just two steps in the long process of a bill becoming law. Upon successful consideration in the Assembly committee, the entire Assembly would have to approve. Then the bill would go through a similar process in the State Senate. If successful there, a bill would normally be ready for the Governor's decision (sign or veto). However, this bill has fiscal impacts, so the Joint Finance Committee would have a role, too.

To get a copy of AB 269, contact your legislator. The Legislative Hotline (1-800-362-9696) can direct you to your Representative or Senator if you are uncertain whom or how to call or write.

WLIA Past President Al Miller is coordinating support for AB 269. Miller can be reached at (608) 262-0644.

WHAT'S IN AB 269

Reprinted below is an analysis of AB 269 prepared by the Legislative Reference Bureau, slightly edited. It provides a description of the major features and impacts of the bill. Estimates of the fiscal effects on state and local government, to be prepared by the Legislative Fiscal Bureau, are not available at this time.

This bill creates a land information board (board), attached to the department of administration. The board consists of 13 members from state and local governmental units, public utilities and private businesses.

The board directs the state land information program (program) which replaces the land resource data coordination functions of the department of administration. ("Land information" is any physical, legal, economic or environmental information relating to land, water, subsurface resources or air. "Land records" are maps, documents or other records used to record land information.) The program is administered by a director appointed by the board.

Through its staff which is funded by GPR, the board provides technical assistance and advice to state agencies and local governmental units with land information responsibilities. It serves as a clearing house, providing information about acquiring, organizing, or maintaining land information and land records systems. The board may also promulgate rules on the collection and storage of land information by state agencies and local governmental units.

The board may also award grants to local governmental units. The grants, in amounts not to exceed \$100,000, must be used to

modernize land information systems or for the preparation of maps for use by local governmental units with land records responsibilities. Grants require 25% local match.

For local governmental units to be eligible for grants, a county must establish a land information office. This office coordinates land information projects within the county and recommends grant proposals for funding by the board. The office must also develop a countywide plan for land records modernization.

The bill increases the real estate transfer fee to fund both the state land information grant program and land information efforts at the local level. County registers of deeds collect the transfer fee, which is paid by the seller when property is conveyed. The current fee is charged at a rate of 30 cents for each \$100 of value conveyed. The bill increases this rate by 10 cents, to 40 cents. One-half of this increase, or 5 cents is used to fund the land information board's grants to local governments. The other half of the increase may be retained by counties establishing land information offices to fund land records modernization and to administer the office. If a county does not establish a land information office, the state land information board receives the entire increase.

HISTORY OF GEOLOGIC MAPPING AT WGNHS

Before statehood in 1848, Wisconsin's leaders expressed strong interest in the potential value of geologic maps as guides in the exploration for mineral deposits. They saw development of resources as one way to attract more people and industry to Wisconsin and in 1853 commissioned a geological survey of the state. With the passage of time, geologic maps were recognized by a wider audience for their potential to help make decisions and guide policy on a host of land-use, water-resource, and environmental problems and issues.

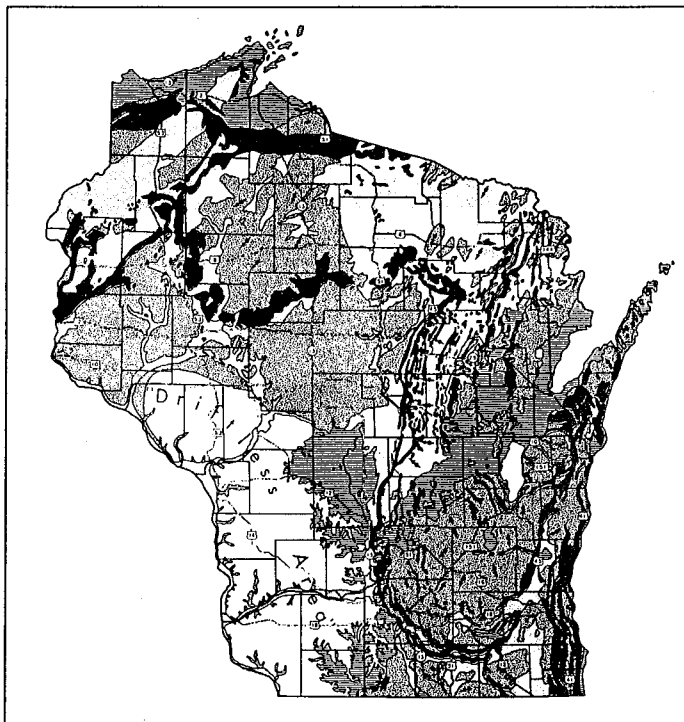
Upon completion of the Chamberlin Survey in 1882, the Legislature--not realizing that availability of new information, changing concepts, and new technology require frequent updates of maps--considered the job completed and made no provisions for a continuing program.

Increased awareness of environmental and land-use concerns, and the potential of geologic maps to help address these concerns, were contributing factors that led the Wisconsin Academy of Sciences, Arts and Letters to recommend creation of a permanent survey, which the Legislature approved in 1897. This survey, which has persisted since then, is named the Wisconsin Geological and Natural History Survey (WG&NHS)--affiliated with University of Wisconsin-Extension. It was charged to assist all segments of society in the gathering, analysis, storage, and presentation of reliable and readily accessible information about the state's resources with special emphasis on earth resources.

The new survey initially focussed on specific mineral producing localities. However, the most notable geologic mapping initiative began in 1913 under the Mineral Lands Classification program. The intent of this program was to classify the lands of the northern part of the state according to their potential for discovery of iron. About half the maps and reports that came out of

this work were published; the rest of the data are maintained in WGNHS files. The results of this comprehensive reconnaissance provide the basis for much of the work that WGNHS staff conduct in the northern part of the state.

In 1976 the WGNHS, with new funding for geologic mapping keyed to state and local interest in mineral and water resources issues, began a program to produce maps in three formats: at a small scale in state format; at an intermediate scale in regional format; and at a large scale in county format. An updated small-scale state map was published in 1982. With minor exceptions, reconnaissance mapping of the bedrock geology of the northern three-fifths of the state, begun in 1976, has been completed at the intermediate scale. Publication of all but the east-central sheet is expected by fall of 1989. (See article on p. 5 on the latest sheet: northwest).



In the late 1970's, the Survey's geologic mapping efforts were directed to preparation of maps of bedrock and overlying surficial materials in county format. This program, begun in response to county and state agency needs for larger scale maps, has been enhanced by completion in 1986 of 1:100,000-scale topographic maps for all Wisconsin counties. A report on the status of county format geologic mapping will be featured in a forthcoming issue of the Bulletin.

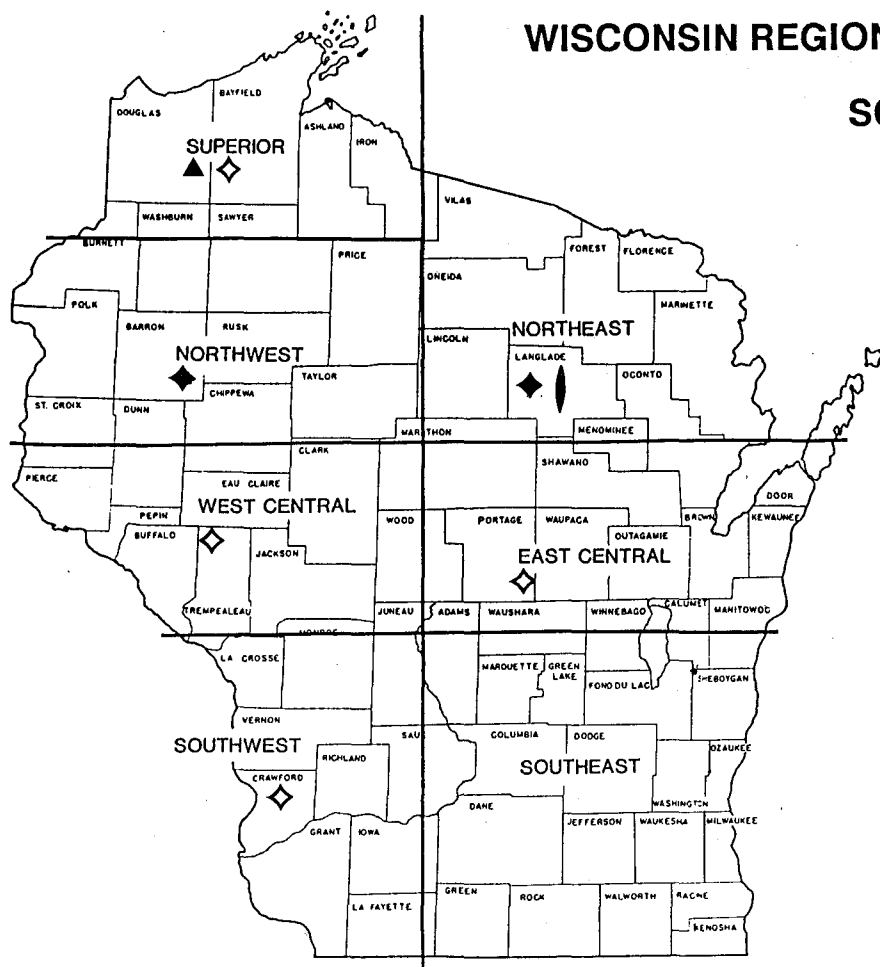
The need for geologic maps will increase as human activities exert increased pressure on a limited land and water resource base for

agriculture, industry, and recreation as the competition for resources between these activities increase. Geologic maps provide a critical link in making decisions and setting policy to help guard against resource and environmental misuse, waste, and pollution.

(source: M.E. Ostrom, State Geologist and Director of WG&NHS, in SurView, Vol. 9, No. 1, 1988)

WISCONSIN REGIONAL GEOLOGICAL MAP SERIES

SCALE 1:250,000



REGION	DATE	DESCRIPTION
◆ BEDROCK GEOLOGY		
Northeast	1984	full color
Northwest	1987	full color
East Central	in work	full color
West Central	in work	full color
Southwest	in work	full color
Superior	in work*	full color
* expected 1990		
◆ SIMPLE BOUGUER GRAVITY MAP		
Northeast	1983	black/white
▲ PLEISTOCENE GEOLOGY		
Superior	1985	full color
◆ An unfilled symbol indicates mapping in progress.		

NORTHWEST SHEET OF BEDROCK GEOLOGY SERIES AVAILABLE

The Wisconsin Geological and Natural History Survey (WG&NHS) has released another sheet in their Regional Geological Map Series. The Northwest Region now has bedrock map coverage.

This sheet includes all the counties of Polk, Barron, Rusk, Taylor and Price, and various portions of adjacent counties. The area is bounded by the parallels of 45° and 46° North latitude, the 90° West meridian, and the St. Croix River. (See graphic above). The base for the map is two sheets of the 1:250,000 USGS quadrangle series: Rice Lake (Wis.) and Stillwater (Minn.)

The mapped area is printed on a sheet measuring 22 3/4" x 38". A slightly smaller sheet (20 1/4" x 38") carries a full key and description of map units, references to sources of information, a generalized map of depth to bedrock at 1:1,000,000-scale, and one cross section diagram. The straight-line "slice" for this cross section extends east from the St. Croix River, through New Richmond and Bloomer, to the Chippewa River.

This new map is available from WG&NHS Map and Publication Sales for \$4.00 plus tax and shipping. Contact WG&NHS, 3817 Mineral Point Road, Madison, WI 53705 (or call 608/263-7389) for ordering information and/or a catalog of all available documents and maps.

CONFERENCES AND TECHNICAL MEETINGS

1989

April 17-19, **Developing Geographic Mapping and Analysis Systems**, UW-Madison. For more information contact: Dept. of Engineering Professional Development, 432 N. Lake St., Madison, WI 53706, 608/262-2061.

April 25-27, **Managing the Risks and Recovering the Costs of Geographic Facilities Management Systems**. UW-Madison. For more information contact: Dept. of Engineering Professional Development, 432 N. Lake St., Madison, WI 53706, 608/262-2061.

April 29-May 3, **The American Planning Association/American Institute of Certified Planners' Conference** will be at the Atlanta Hilton. Contact: Mary Pintar, 312/955-9100.

May 14-19, **42nd Annual Conference of the SPSE**, will be held in Boston, MA. Contact: the Society for Imaging Science and Technology, 703/642-9090.

May 15-19, **Computer Assisted Assessment Systems**, (course 303) will be sponsored by the International Association of Assessing Officers. Contact: IAAO Education Dept., 312/947-2068.

May 18-20, **Managing New Technologies**, ASCE Surveying Engineering '89, will be held in Denver, CO. Contact: Jerome C. Ives, 303/980-8624.

May 23-26, **12th Biennial Workshop on Color Aerial Photography and Videography in the Plant Sciences**, ASPRS, Reno, NV. Contact: Paul T. Tueller, Dept. of Range, Wildlife and Forestry, University of Nevada, Reno, NV 89512, 702/784-4053.

May 23-26, **Image Processing '89**, ASPRS, Reno, NV. Contact: Christopher Elvidge, Desert Research Institute, University of Nevada system, P.O. Box 60220, Reno, NV 89506-0220, 702/673-7324.

June 4-6, **GIS Applications of Nuclear Facilities**, The American Nuclear Society is hosting a Special Session. Contact: Joe G. Stephan, Battelle Pacific Northwest Lab, 509/375-6829.

June 6-8, **A/E/C/ Systems '89**, will be held at the Anaheim Convention Center. A one-day seminar will be held June 6th, "Integrating CADD into Engineering." Contact Pat Johnson, 301/926-7070.

June 6-8, **Intelligent Mapping '89**, including Desktop Mapping, Advanced Information Management Group, Inc., Anaheim, CA. Contact: Anne Stewart, AIM Group, Inc., 11956 Bernardo Plaza Dr., Suite 425, San Diego, CA 92128-1123, 1-800-882-2058.

June 6-8, **GIS Conference**, Towson State University, Towson, MD. Contact: John M. Morgan, III, Towson State University, College of Liberal Arts, Geography and Environmental Planning, Towson, MD 21204-7097, 301/321-2964.

June 6-9, **The Canadian Institute of Surveying and Mapping (CISM)** will hold its annual meeting in Halifax, Nova Scotia. Contact: CISM, Box 5378, Station F, Ottawa, Ontario, Canada K2C 3J1.

June 10-11, **Workshop on Geographic Information Systems in Higher Education**, sponsored by The Ohio State University, IGU, and AAG to be held in Columbus, OH. Contact: GIS Education Meeting, Dept. of Geography, The Ohio State University, 190 North Oval Mall, Columbus, OH 43210.

June 18-23, **Building Officials and Code Administrators International** are meeting at the Hyatt Regency Woodfield in Schaumburg, IL. Contact: Clarence Bechtel, 312/799-2300.

July 10-12, **AM/FM International's Executive Conference** will be held at the Westin Hotel and Conference Complex in Vail, CO. Contact: Keith McDaniel 303/799-8320.

July 10-14, **The International Geoscience and Remote Sensing Symposium (IGARSS '89)** will be held in Vancouver, B.C., Canada. Contact: IEEE at 345 East 47th St., New York, NY 10017, or the IGARSS '89, 604/681-5226.

July 30 - August 2, **Making Conservation Happen Together**, 44th Annual Meeting, Soil and Water Conservation Society, Edmonton, Alberta, Canada. Contact: Alfred Birch, Program Committee Chair, Soil and Water Conservation Society, 7515 NE Ankeny Rd., Ankeny, IA 50021.

July 30 - August 2, **International Computers in Engineering Conference and Exhibition**, ASME, Anaheim, CA. Contact: Jeff Lenard, ASME, 345 East 47th Street, New York, NY 10017, 212/705-7740.

July 31 - August 1, **Siggraph '89** will be held in Boston, MA. Contact: SIGGRAPH, 111 E. Walker Dr., Chicago, IL 60601, 312/644-6610.

August 6-10, **Charting the 90's: New Visions for Urban Technology**, URISA'S 27th annual conference will be held at the Boston Marriott, MA. Contact: Tom Palmerlee at 202/543-7141.

August 17-24, **XIV International Cartographic Conference** will be held in Budapest, Hungary. Contact: Jon Kimerling at 503/754-3131.

August 21-23, **The Appraisal Uses of Spreadsheet Software Workshop**, sponsored by the International Association of Assessing Officers, will be held in Chicago, IL. Contact: IAAO Education Dept. at 312/947-2068.

August 22-25, **The International Conference on Computers in Urban Planning and Urban Management** will be held at the Centre of Urban Studies and Urban Planning, University of Hong Kong. Contact: Conference Secretariat, Centre of Urban Studies and Urban Planning, University of Hong Kong, Pokfulam Rd., Hong Kong.

September 17-22, **ASPRS/ACSM's fall conference** will be held in Cleveland, OH. Contact ACSM/ASPRS, 703/534-6617.

October 11-14, **North American Cartographic Information Society, (NACIS IX)**, will hold its Ninth Annual Meeting in Ann Arbor, MI at the Ann Arbor Inn. Contact: Diana Rivera, NACIS Program Chair, University Libraries, Michigan State University, East Lansing, MI 48824-1048, phone 517/353-4593.

October 17-19, **Third Annual Midwest/Great Lakes ARC/INFO Users Conference** to be held in Madison, WI. Contact: Mike Bohn or Mindy James at 608/262-1705.

November 6-9, **GSA 1989 Annual Meeting**, held in St. Louis, MO. Contact: GSA Meeting Department, P.O. Box 9140, Boulder, CO 80301, 303/447-2020.

November 26-30, 1989, **GIS/LIS '89** will be held at the Marriott Orlando World Center, Orlando, FL.

1990

March 19-24, **ACSM/ASPRS Annual Convention**, Denver, CO. Contact: Ronald Wolbach, 10420 Glennon Dr., Lakewood, CO 80226, 303/236-5812.

September 23-28, **ACSM/ASPRS Fall Convention**, Atlantic City, NJ.

WLIA CONFERENCE DRAWS 300 TO OSHKOSH

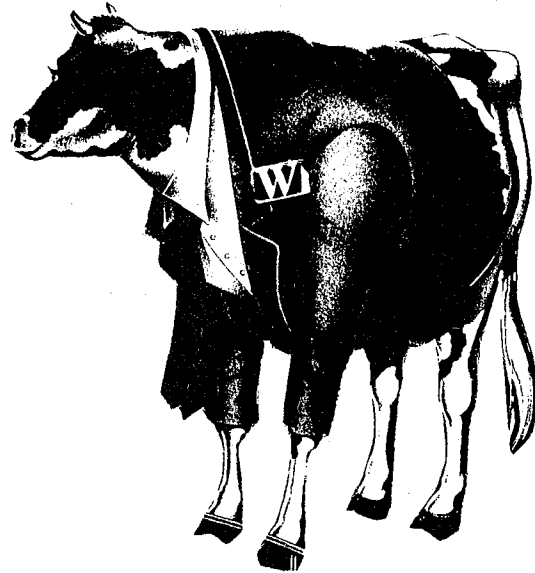
For two days in February, land information professionals gathered in Oshkosh for the 2nd annual conference of the Wisconsin Land Information Association (WLIA). The attendance of over 300 represented an increase of almost 50% compared to the 1988 conference.

In his opening remarks to the attendees, outgoing WLIA President Allen Miller cited the need to "bring Wisconsin's systems of maintaining land records into the 21st Century". He noted that the state has over 2,000,000 parcels of land administered by 2,952 local and special units of government; that the present systems are costly --Wisconsin units of government and public utilities collectively invested \$135,000,000 in 1987 to maintain land information; that they are duplicative--private and public collection of data is tailored to individual programs, resulting in the inability to integrate various types of information or to share data between different users; and that they are incompatible--independent actions to collect and maintain land information results in a wide variety of scales, accuracies, formats and methods of storage and access.

One particularly timely topic was WLIA's proposal for legislation to create a land information program for Wisconsin (*see story on p.3*). Throughout the conference there was discussion on how to muster support for this proposal which is modelled on the 1987 recommendations of the Wisconsin Land Records Committee. Indicative of the non-partisan nature of the proposal, both Republican Assemblyman Robert Welch (Redgranite) and Democratic State Senator Charles Chvala (Madison) spoke enthusiastically in support of WLIA's legislative goals. Incoming WLIA President, Ben Niemann, said that passing the legislation is the organization's current top priority. "This would be a giant step forward, arising from the hard work of hundreds of persons over the last decade," Niemann said.

The conference was sponsored by 38 organizations--11 associations, 12 institutions, and 15 corporations. WLIA hopes to expand even further the list of organizational sponsors prior to the 1990 Conference. The list of individual attendees also demonstrated a balance of the diverse interests the WLIA has sought to involve. These professionals, who share a commitment to modern land information management, include: registers of deeds, real property listers, surveyors, attorneys, educators, resource managers, cartographers, assessors, zoning administrators, planners, highway administrators, engineers, computer programmers, vendors of computer hardware and software, and others.

The highlight of the conference may have been the presentations on local government modernization activities. Wisconsin has a rich mix of activities ongoing. Where a broad constituency (particularly, supportive County Board members) has been involved from the early stages, the most stable progress seems to occur. In this regard, many attendees hoped that they would be able to emulate in their home settings the progress of Oneida County. In less than two years, Oneida has developed a major cooperative program and has funded an aerial photography acquisition for this spring. Hundreds of PLSS corners are to be panelled so that coordinates based on GPS control can be derived by analytical aero-triangulation. The project will develop a digital base map for the county.



Upcoming Meetings of WLIA

At the next WLIA meeting, May 16th in Madison, members will be briefed on the status of the legislation and will have an opportunity to visit offices of legislators at the State Capitol. Two other meetings of the WLIA General Membership have been scheduled for 1989: Madison (Tues., May 16th), Fox River Valley (Wed., Sept. 6th), and Milwaukee area (Wed., Nov. 8th). The 1990 WLIA Annual Conference is scheduled for February 19-20, 1990 in Stevens Point. .

For more information contact: WLIA Secretary Bob Gurda at 608/262-6850 or WLIA President Ben Niemann at 608/263-5534.

NEW LANDSAT PRICE SCHEDULE

EOSAT has announced new prices for selected Landsat products beginning January 1, 1989 (some prices are higher; others are lower). The adjustments are the first changes since EOSAT began marketing Landsat products in September 1985. For general information on available imagery and its use, contact the State Cartographer's Office. For specific information, contact the applicable vendor: EOSAT (for LANDSAT) phone (800)367-2801, SPOT Image Corporation (703) 620-2200.

PRODUCT	Prices in US. \$			
	(Pre-1989)		Post -1988	
	MSS	TM	MSS	TM
Microfiche Subscription (Annual basis only)	\$500	\$100	\$250	\$250
Color Composite Generation	\$200	\$300	\$0	\$0

Standard Color Composite Images:

1:1,000,000 film positive	\$150	\$360	\$350	\$660
1:1,000,000 paper	\$100	\$300	\$300	\$600
1:500,000 paper	\$200	\$400	\$400	\$700
1:250,000 paper	\$350	\$500	\$550	\$800
Custom Lab Fee on non-standard photo products	\$100		\$0	

Standard Black-and-White Images:

1:1,000,000 film positive/negative, or paper	<i>Production Suspended until further notice</i>			
1:250,000 and 1:500,000 paper				

Digital Geocoded TM Data:

Full Scene	\$5200	\$4900
Quarter Scene	\$3200	\$2900
Map Sheet	\$2400	\$2300

Standard Digital TM Data:

Full Scene	\$3300	\$3600
Quarter Scene	\$1650	\$1800

WISCONSIN GEODETIC REFERENCE SYSTEM (WGRS)

(completion of article in January 1989 issue)

In order to carry out the proposed GPS reference system in an efficient manner, a cooperative agreement between the Wisconsin Dept. of Transportation (DOT) and the National Geodetic Survey (NGS) has been signed. This agreement allows NGS resources, allocated for the FAA Airport Datum Tie (ADAM) Program, to be combined with the proposed WGRS survey. It is anticipated that the mark setting and GPS survey will be completed by October of 1989. NGS will evaluate, adjust and publish the results of the combined GPS surveys.

As of this writing, the surveys will cover 94 points: 76 new points (19 ADAM, 47 non-airports, 10 non-ADAM airports) plus 18 points in the current NGRS. The number and location of stations in a few areas in northern Wisconsin have changed slightly from the map included in the January *Bulletin*; reconnaissance of the original sites showed that some were not adequate, and there were no local substitute sites which were suitable.

DOT has completed its site reconnaissance, and expects to set monuments and have its GPS observations done by a contractor by late summer. Adjustments of the data, descriptions of the sites, and publication of final coordinates is planned to be finished by spring of 1990.

Installation of this system will provide Wisconsin with an accessible network of control points, the positions of which will be known with extreme accuracy. Densification of control, based on this system, will bring improved mapping accuracy to the state. In some places, errors of up to 10 feet are known to exist where the current network is particularly sparse. DOT will benefit enough to justify its costs in installing the new system. Others who work with land information --utilities, land surveyors, counties, etc.-- will be beneficiaries also.

The impacts on use of digital map data will be especially significant. Well controlled data will register and edge-match over large areas better. However, data already controlled to the existing NGRS will have to be converted to the more accurate network. Because the old and new networks will have a limited number of points in common, making a good coordinate transformation will require special considerations and techniques for each situation. Research at UW-Madison is expected to pursue answers to this problem.

GEODETIC MARK MAINTENANCE

The American Congress on Surveying and Mapping (ACSM) has formed an ad hoc Committee for the Reestablishment of the NGS Network Revitalization Program. This action was taken in response to a recommendation from one of ACSM's constituent organizations, the American Association for Geodetic Surveying (AAGS). In recent years, federal budget cuts have forced a curtailment of maintenance of the monuments that mark the positions of thousands of vertical and horizontal control points across the country. There is a large historical investment in these monuments and the measurements between them. Due to lack of maintenance of the monument sites, the ability to derive value from utilization of published geodetic control information on these points is compromised.

(source: AAGS Newsletter, Spring 1989)



INDUSTRY EXPERTS "FOCUS ON DESKTOP MAPPING"

Desktop Mapping is the fastest growing segment of the \$1 billion Geographic Information Systems (GIS) industry. While GIS has been around for 20 years, Desktop Mapping is less than five years old. On June 7, 1989, the industry's leading experts will gather at the Anaheim Marriott for the annual conference on Intelligent Mapping. This year's theme is "Focus on Desktop Mapping."

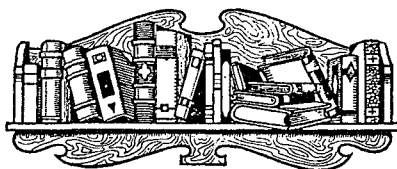
Industry experts will explain the advantages and disadvantages of Desktop Mapping. The panel is drawn from a cross section users, vendors and consultants: Jack Dangermond (ESRI), Marv White (ETAK), Cesar Melgoza (Apple), Fred Mills (Oregon Transportation Dept.), Malcolm Davies (AutoDesk), Dan Hinkle (Generation 5), Mike Manin (Map Dept.), and John Antenucci (Plan Graphics).

This conference will be in conjunction with A/E/C SYSTEMS '89 with over 450 vendors displaying products and services for the engineering drawing room. 30,000 attendees are expected.

For more information, see listing on page 6.

(source: URISA News, March 1989)

PUBLICATIONS



USGS PUBLICATIONS

The following map is again available:

HUM. (Hydrologic Unit Map) 1974. State of Wisconsin. Latitude about 42° 30' to 47°, longitude about 87° to about 93°. Scale 1:500,000 (1 inch = about 8 miles). Sheet 44 by 46 inches. (Reprint) \$2.40.

For ordering information contact: Map Distribution, U.S. Geological Survey, Bldg. 41, Federal Center, Box 25286, Denver, CO 80225. Price is subject to change.

NEW JOURNAL FROM URISA

The Urban and Regional Information Systems Association (URISA) has chosen UW-Madison as the operations base for its new professional journal. *URISA Journal*, will be managed and edited at the Center for Land Information Studies and printed by UW Press. Overall direction for the publication will come from Ben Niemann and David Moyer of UW-Madison, and Ken Dueker of Portland (Oregon) State University.

URISA Journal will be issued twice each year, with the first issue scheduled for October, 1989. URISA members will receive the new publication automatically. Nonmembers can subscribe for \$20 per year.

The journal will be divided into three sections: Referred articles, feature articles, and reviews. Managing editor Bill Keenan can be reached at (608) 263-6843. For general information on URISA, write to 319 C Street SE, Washington, DC 20003.

(source: *IES News*, March 1989)

COUNTY PLAT BOOKS

The following Wisconsin County Land Atlas and Plat Books are now available for 1989: Barron, Chippewa, Florence, Iron, Juneau, Langlade Monroe, Oconto, Outagamie, and Polk Counties. These Plat Books sell for \$22.50 plus tax and shipping. For ordering details contact: Rockford Map Publishers, Inc., P.O. Box 6126, Rockford, IL 61125, phone (orders only) 800/435-0712 or for customer service information call 815/399-4614.

ONLINE AUTOCAD SUPPORT

Official technical support for AutoCad is available through Compuserve's Auto DeskForum (GO ADESK). In addition to providing access to Autodesk staff, there are thousands of other AutoCad users nationwide who are more than willing to answer questions and share experiences. The Auto DeskForum also provides access to a large database of lisp routines, AutoCad utilities, 3rd party software support and new product information. To find out more call Compuserve Information Service 603/883-5551.

(source: *ACSM Bulletin*, February 1989)



WASHINGTON STATE CARTOGRAPHER

Christine Reinhard has assumed the chair of the Washington State Mapping Advisory Committee (SMAC). Reinhard, the Washington State Cartographer since September 1987, hopes to work through the SMAC to address current problems such as duplicative mapping programs and data incompatibility.

(source: *ACSM Bulletin*, February 1989)

Editor's Note: many of our readers are familiar with Christine as the former editor of the Wisconsin Mapping Bulletin, while she was the Assistant State Cartographer.

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 welcomed.

Editors: Bob Gurda
Desktop Publishing: Brenda Hemstead
Map Graphics: SCO Production Staff
Mailing: SCO Production Staff

Please send all comments, corrections, and news items to: State Cartographer's Office, 155 Science Hall, Madison, WI 53706-1404, phone 608/262-3065.

GIS CONFERENCE SCHEDULED FOR OCTOBER IN MADISON

Planning has been underway for several months for a 3-day meeting on Geographic Information Systems (GIS), to be held at the Inn on the Park in Madison, October 17-19. The event is the 3rd Annual Midwest/Great Lakes ARC/INFO Users Conference. ARC/INFO, produced by ESRI of Redlands, CA, is a leading brand of software in the GIS arena.

The conference will have a significant focus on ARC/INFO software, applications, adaptations, and related hardware. However, the planning group has made a decision to include general and basic GIS content. In addition, there will be specific sessions on applications areas that do not rely on particular software.

We will report further details as they become available. A Call for Presentations has been issued. For more information, contact Mike Bohn or Mindy James at 608/262-1705.

SIGGRAPH '89

SIGGRAPH '89 will be held July 31-August 4 at the Hynes Convention Center in downtown Boston, immediately before the URISA '89 Conference. SIGGRAPH '89 (Special Interest Group on Computer Graphics and Interactive Techniques) is ACM's (Association for Computing Machinery) 16th annual conference. The conference is divided into several areas with registration priced depending on programs or sessions attended.

The Technical Program includes the presentation of unpublished papers focusing on computer graphics techniques. Several panel sessions have been organized to discuss the future of computer graphics, emerging concepts, and controversial topics and trends. Available the first two days of the conference are 28 computer graphics courses. Structured at the beginning, intermediate, and advanced levels, each course is a full day.

The Exposition portion of the conference will include exhibits where over 200 vendors will demonstrate the latest in computer graphic technology. 2-D, 3-D, animated, and interactive works by will be on display at the Art Show. The Computer Graphics Theatre will have several showings of specially designed computer graphic films and videos during the conference.

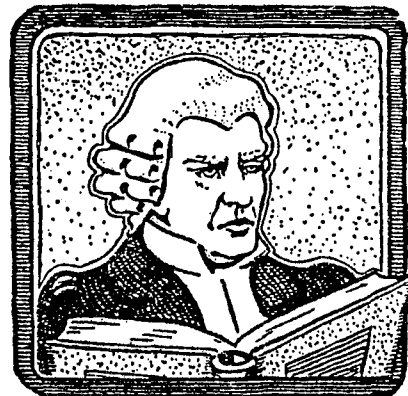
For further information see the listings on page 6.

(source: *URISA News*, March 1989)

ACSM/ASPRS 1989 CONVENTION

Automation trends in mapping sciences continued to be the big story at this year's annual joint convention of the American Congress on Surveying and Mapping (ACSM) and the American Society for Photogrammetry and Remote Sensing (ARPRS). At the recent meeting in Baltimore, ACSM decided to change the names of its journals from *The American Cartographer* to *Cartography* and *GIS*, and from *Surveying and Mapping* to *Surveying* and *LIS*.

On the exhibit floor, most vendors were showing products that were integrations of several automated technologies. Of particular note was Intergraph's unveiling of their long awaited TIGRIS software for GIS. This sets the stage for increasing (and probably healthy) competition over the coming months and years amongst Intergraph, ESRI, Prime/Wild, Synercom, and other vendors of GIS software.

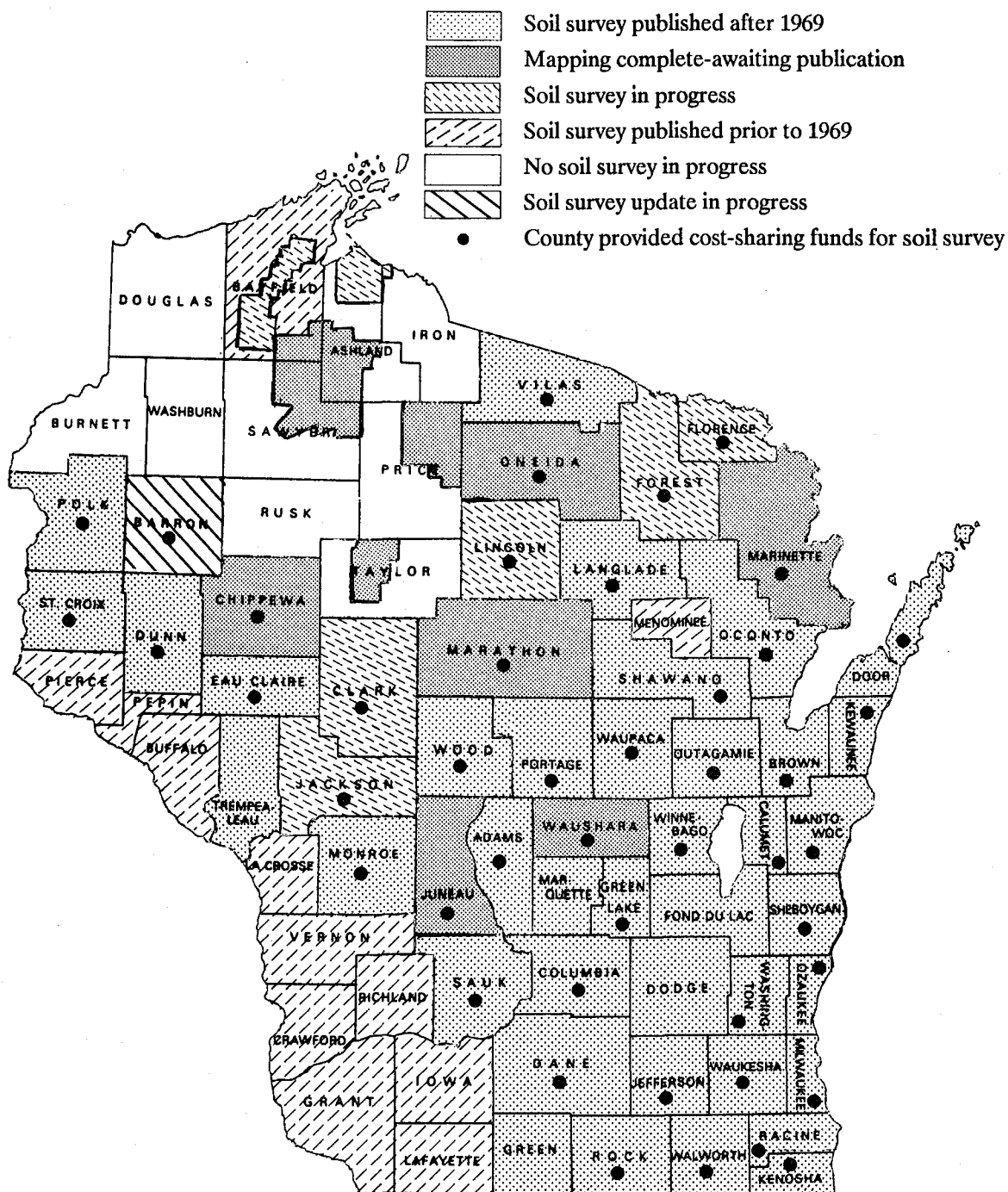


SUPREME COURT RULES ON ELECTED COUNTY SURVEYORS

In a unanimous decision, the Wisconsin Supreme Court has held that the position of County Surveyor is not required to be filled by election. (reference: *Ripley vs. Brown* [143 Wis. 2d 686, 422 N.W. 2d 608 (1988)]). By this decision, the court resolved an apparent conflict between the statutes and the State Constitution. The case was brought by an individual who had attempted to have his name placed on the election ballot, in a county that had chosen to have a non-elected county surveyor. Across the state, there is a mixture of elected and non-elected county surveyors. Several counties have no explicitly identified individual in this role.

(source: *Wisconsin Counties*, March 1989)

STATUS OF SOIL SURVEYS FOR WISCONSIN AS OF OCTOBER, 1988



source: Soil Conservation Service