

WISCONSIN LAND INFORMATION ASSOCIATION

Professionals from city, county, state and federal government, private companies, land-related associations, and utilities have attended the first three meetings of the newly formed Wisconsin Land Information Association. The diverse attendants have begun to think of themselves as a cohesive group as they discuss possible educational and legislative actions. They have agreed on a mission statement (given below) and have endorsed, in principle, the recommendations of the Wisconsin Land Records Committee. The general consensus of the group is that there is little time to waste in developing proactive land information modernization activities. They intend to build on the momentum created by the Wisconsin Land Records Committee and carry on some of the Committee's activities when it wraps up its commitments at the end of this fiscal year.

The next meetings are May 6th and June 25th. (see Events). WisURISA (the Wisconsin Chapter of the Urban & Regional Information Systems Association) is enthusiastic in its sponsorship of this unique land records group. For more information contact Christine Reinhard, acting president, 143 Science Hall, Madison, WI 53706-1404, 608/262-6850.

WLIA MISSION STATEMENT

The mission of the Wisconsin Land Information Association (WLIA) is to foster the development, operation, and maintenance of a network of statewide land information systems. These multipurpose land information systems require the spatial registration of various layers of land data which are maintained independently in various offices, agencies, and organizations. The registration of data from separate, but coordinated, information systems will provide the opportunity for all cooperating parties to exchange and use these valuable land data. Specifically, WLIA's mission is focussed on the following four areas:

POLICY/POLITICAL ACTION

- To actively promote modern land information development.
- To provide a unified professional voice on land information issues.
- To review legislative action and, when appropriate:

WLIA, continued

To promote positive legislative actions regarding land information system issues. To provide advice on land information issues to public and private decision makers.

TECHNICAL/RESEARCH

- To establish task forces to study land information issues.
- To provide a forum for examining new land information ideas.
- To provide resources to facilitate the research and testing of land information ideas, components, and systems.

LIAISON/NETWORKING

- To promote interaction and cooperation between WLIA members, professional associations, and public and private sector groups.
- To facilitate networking among local governments, state agencies, utilities, and private sector involved in land information system management.
- To foster a climate of information sharing among land information professionals and users.

EDUCATION/PUBLIC RELATIONS

- To develop, and help others develop, a variety of educational programs and materials on land information issues.
- To promote public understanding of the Association, its members and activities through a variety of media.



NACIS VII CALL FOR PAPERS

The North American Cartographic Information Society will hold its seventh conference in Atlanta, GA on October 28-31, 1987.

The NACIS Program Committee invites papers on various aspects of cartographic information and, in particular, those papers which relate to the theme of this year's meeting - "New Dimensions in Cartography". Suggested topics include: Cartographic Education, Legal Aspects of Cartography (Copyright/Liabilities), Historical Cartography, Maps for Children, Maps from Remotely Sensed Images, Navigational Mapping and Charting, Map Library Management, Cartographic Lab Management, Census Data and Cartography, Marketing Cartographic Products, Latin American Cartography, Computer Mapping Programs, Geographic Information Systems, Atlas Production, State Information Networks, Perception in Cartography, User Fees and Cartography.

Those interested in presenting a paper should submit the title and an abstract, not to exceed 300 words, no later than July 1, 1987. Student participation is encouraged. Presentation time for selected papers is limited to 20 minutes.

The Program Committee also encourages poster sessions as a means of displaying current work, especially that of public agencies and cartographic labs. A poster should stand alone to make a unified, coherent statement. An organized visual portrayal of procedures, techniques, or results (maps) is recommended. Materials should be professional quality and be legible at a distance of three to four feet. Displays composed predominantly of text are more appropriate as paper presentations. Proposals for poster sessions should include the title, a summary of the display, and the appropriate dimensions of space required.

Papers and poster displays will be selected by the Program Committee on the basis of significance to the cartographic community, amount of new information, and broad interest. Abstracts and proposals should include the author's name, address, telephone number, professional affiliation, and position. Please mail abstracts and proposals before July 1, 1987 to: John Sutherland, NACIS Program Chair, Map Collection, Science Library, Univ. of Georgia, Athens, Georgia 30602, 404/542-0690. Program participants will be notified by July 20th of acceptance of their abstracts or proposals.



NGS SCHOLAR IN RESIDENCE

David Woodward, Professor of geography and former director of the Cartographic Laboratory at the University of Wisconsin-Madison, is the first visiting scholar in residence at the National Geographic Society (NGS) Washington, D.C.

On 'loan' from the University, Woodward will spend a total of six weeks in the Cartographic Division three weeks during this past February and three more in June. The residency is an experiment to more closely align academic programs with professional cartographic needs. Says Woodward "I'm (at NGS) getting 'real-world' expertise for the cartography department back in Madison."

While at NGS Cartographic, Woodward has worked as an advisor on several projects, including the <u>Historical</u> <u>Atlas of the United States</u>. During a series of brown-bag lunches with NGS staff, he discussed typographic design, different projections used in map design, and the 17-map "The Making of America" series.

According to John Garver, director of Cartographic, "We're fortunate to have David as the first visiting scholar. He's one of the premier scholars in his field, and we've been delighted to have him work with us." In addition to his work with NGS, he continues his research on a six-volume <u>History of Cartography</u>, a project partly funded by the Society, of which the first volume has been published.

(source: National Geographic Society "News & Views", March 1987)

G P S AND D O T

The Global Positioning System (GPS) continuous, worldwide, swellite-based radio navigation system currently in full-scale development by the Department of Defense (DOD). The system will provide, to properly-equipped users, the capability to obtain navigation and geodetic positions in three dimensions, velocity in three dimensions, plus highly accurate time. It will be unaffected by weather and will provide a worldwide common grid reference system. GPS was designed primarily for real time, dynamic, point positions to an accuracy of several meters. Accuracies of one centimeter or less can be, and presently are being, obtained through relative positioning techniques utilizing GPS. This high degree of precision has allowed GPS to be used for surveying and mapping applications since 1983.

GPS users are somewhat constrained by only having six (out of an intended 18) NAVSTAR (NAVigation System with Timing And Ranging) satellites in two orbital planes available. The GPS antenna and receiver selects appropriate signals i four, "in view" satellites

d on optimum satellite-to-user geometry. It then solves time-ofarrival difference quantities to obtain distance between user and satellites. This information establishes the user position with respect to the satellite system.

A GPS offers several advantages over conventional survey methods. Users can select virtually any site since GPS equipment is compact and portable. No line-of-sight between sites is needed so intervisibility is not a limitation. Satellite signals are not affected by weather conditions and continue day and night. Only the stamina of the survey crew limits data collection.

The Wisconsin Department of Transportation (WisDOT) contracted with Geophysical Service Inc. (GSI), Dallas, Texas, to establish horizontal and vertical control using Differential GPS Techniques for 216 control stations on eight projects in Wisconsin. Seven projects were surveyed in December 1985 and the Milwaukee Freeway System was surveyed in May/June

S. Most projects were of high Jrity due to extreme problems of conventionally establishing survey control to the Wisconsin Coordinate System for aerial mapping and transportation design applications. WisDOT also wanted to test the GPS productivity on typical projects on a statewide bases.

GSI used four TI 4100 Receivers, the Magnet-4100 GPS Differential Survey Program, and five persons, who observed data each day during the contract period. WisDOT provided four vehicles for the survey and one person to assist each GPS operator on all projects. GPS data was recorded for 30 minutes per site simultaneously. The satellite coverage period for December 1985, was 5:30 A.M. to 10:00 A.M., and for May 1986, was 7:00 P.M. to 11:30 P.M. During these periods, four to five separate observation sessions were made with 30 to 50 minutes travel and setup time between each session. With one GPS receiver on the master National Geodetic Survey station and three receivers used at remote or unknown stations, 12 to 15 stations could be observed each day. On-site results were provided each day, and the final report was available one month after completion of the GPS survey.

WisDOT found GPS to be very productive and cost effective on the eight projects surveyed in 1985-86. The cost of the two GPS survey contracts was \$131,660, or \$610 per station. A comparison of total resources and costs between conventional (estimate) and GPS (actual) for all survey activities for eight projects is as follows: staff days: 2110 conventional vs. 700 GPS; cost: \$499,000 conventional vs. \$259,000 GPS.

WisDOT plans to purchase GPS equipment for statewide transportation survey applications. Contact Bob Holdridge, Technical Services, WisDOT, P.O. Box 7916, Madison, WI 53707, phone 608/267-9639.



GIS/REMOTE SENSING WORKSHOP

In January, University of Wisconsin-Stevens Point (UWSP) Professor Clarence Milfred and Keith Rice, Director of the UWSP Cartography Lab, presented a two-day short course on Geographic Information Systems (GIS) and Remote Sensing Digital Image Processing. The course introduced resource technicians, agents, and managers to a concise overview of GIS and digital image processing principles and applications.

The first day was devoted to the explanation of digital image processing fundamentals and its potential employment as a resource management tool. During the second day, the instructors formulated a generic GIS model and outlined its various components, operations and applications. Participants actively engaged in discussions, demonstrations, and "hands-on" work using both a microcomputer-based LANDSAT image processing software package and a GIS pc-based program. The instructors concluded the course with a review of available commercial GIS and digital image processing software, and with a discussion of GIS implementation and management pitfalls.

Participants included resource professionals from the Soil Conservation Service, the Wisconsin Department of Natural Resources, UW-Extension, UWSP, Jackson and Burnett Counties, and two engineering firms. Rice and Milfred received very favorable comments and anticipate that a similar short-course will be offered in the future. An intermediate or advanced GIS shortcourse is presently in the preliminary planning stage. Suggestions and evaluations on these courses are welcome.

The short-course was jointly sponsored by the Division of Continuing Education/Outreach, the UWSP College of Natural Resources and the Geography/Geology Department. For more information about the short-course or future GIS workshops at UWSP contact either Prof. Clarence Milfred, 715/346-2629 or Keith Rice, 715/346-4454, Department of Geography/Geology, University of Wisconsin, Stevens Point, WI 54481.

NAD 83 AT THE NMD

The National Geodetic Survey (NGS) has completed the readjustment of the horizontal control net, creating the new North American Datum 1983 (NAD 83) to replace the present North American Datum 1927 (NAD 27). The present NAD 27 is based on the Clarke 1866 ellipsoid, while NAD 83 is an Earth centered datum based on the newly adopted Geodetic Reference System 1980 (GRS 80) ellipsoid. The State Plane Coordinate Systems (SPCS) are being redefined in conjunction with the establishment of NAD 83. Also, the Universal Transverse Mercator (UTM) grid is affected by the change to a new ellipsoid. Therefore, the location of both grids will be changed with respect to the geographic coordinates and with each other.

The U.S. Geological Survey, National Mapping Division (NMD) is faced with the problem of converting nearly 55,000 of its primary series maps to the new NAD 83. Conversion to NAD 83 will be of increased importance as use is made of the Global Positioning System (GPS) and other satellite-derived data that are referenced to the center of mass of the Earth. Conversion to NAD 83 will also remove known existing anomalies in the horizontal network. The USGS has evaluated many options ranging from continuing on NAD 27 to recompiling the maps on NAD 83. Complete recompilation of the mapped detail on NAD 83 was determined to be impractical considering the timeframe and funds that would be required to completely remap the country. Therefore, a cartographic adjustment holding the existing map detail limits was determined to be the most feasible approach.

A pilot project consisting of 36 7.5-minute maps covering the State of Rhode Island was initiated to develop the technical aspects of the conversion and to enable the USGS to assess the impact on the map-user community. The mapped area is positioned on NAD 83 on one side and the existing map originally produced on NAD 27 is on the reverse side. This will enable users to graphically compare the resulting differences between NAD 27 and NAD 83. The differences are not constant but vary with each quadrangle.

To position the quads on NAD 83, USGS NMD recast the map graticule, UTM grid, and the SPCS ticks on NAD 83, scaled to fit the current sheet corners. This results in geographic values of the map corners that are not on standard 7.5-minute divisions of a degree. Any questions or comments regarding the conversion to NAD 83 or the pilot project should be addressed to: Chief, National Mapping Division, U.S. Geological Survey, 510 National Center, Reston, VA 22092. The National Cartographic Information Center has a very limited supply of free map samples. Make your requests to NCIC, USGS, 507 National Center, Reston, VA 22092, phone 703/860-6045.



WISCONSIN SPELEOLOGICAL SOCIETY

Interested in spelunking, 'Hodag Hunts'? How about the geology, biology, anthropology, history and speleology of caves in Wisconsin and worldwide? The Wisconsin Speleological Society (WSS) has been engaged in exploring, studying, and securing the protection and preservation of Wisconsin caves since its founding in 1960. A chapter of the National Speleological Society, WSS is sponsored by the Wisconsin Geological and Natural History Survey and the University Extension in Madison. It is also an affiliate of the Wisconsin Academy of Sciences, Arts and Letters.

Among other activities, the WSS undertakes the following missions: discovering and/or rediscovering cave sites in Wisconsin; exploring, protecting and preserving Wisconsin caves; systematically collecting and recording information on Wisconsin caves; publishing trip reports, articles by WSS members, and features by contributors at large; exchanging information with other speleological organizations; and expanding members' knowledge through discussions, lectures and visual media.

WSS maintains a library of cave information, maps and exchange publications in an office of the Wisconsin Academy of Sciences, Art, and Letters in Madison. Members may use the library for research, education and pleasure. Some of the Society's other activities include monthly cave trips, a county by county Wisconsin cave survey, and its annual 3-day convention, the 'Hodag Hunt', for cavers from Wisconsin and surrounding states. The convention includes cave and field trips, vertical cave sessions, camp fire bull sessions, a banquet, and a speleologist of renown as a featured speaker.

WSS publishes a monthly newsletter for its members as well as a triannual journal, <u>The Wisconsin</u> <u>Speleologist</u>. The latter, while included with membership, is available for purchase; it includes articles on scientific and technical subjects, cave history, exceptional cave trips, and caving activities in the US and abroad. WSS sends copies of its journal to the State Historical Society, the Milwaukee Public Library, and the University of Wisconsin-Green Bay Library.

On the first Wednesday of each month at 7:30 p.m., the WSS meets at the University of Wisconsin-Green Bay. All interested in caves or caving are welcome. For further information or a membership application contact: George Zachariasen, 3264 S. New York Ave. Milwaukee, WI 53207.



JIM FLANNERY MOURNED

UW-Milwaukee and the geography profession mourn the loss of James Flannery, Sr., Associate Professor of geography and cartography. Prof. Flannery died at 65 of heart failure following a long illness.

He was born in Winona, MN and earned his doctorate at UW-Madison in 1956. He was best known in cartography for his work on graduated circles. Prof. Flannery began teaching at UW-Milwaukee in 1963 and received their Distinguished Teaching Award in 1974.

Friends have established the James. Flannery Memorial Fund to offer scholarships in his honor. Anyone wishing to contribute should send a check to: Dr. Ludwig Holzner, Chairman, Dept. of Geography, P.O. Box 413, UW-Milwaukee, Milwaukee, WI 53201.

STATUS OF GEOLOGIC MAPPING WISCONSIN GEOLOGICAL AND NATURAL HISTORY SURVEY



MAPS OF INDIAN MOUNDS

For more than a decade UW-Madison Professor James Scherz and students in the Department of Civil and Environmental Engineering have surveyed Wisconsin Indian mounds using modern surveying technology. The results of their work are accurate, detailed maps that show for the first time the precise geometry in the layout of various mounds. Previous maps, produced by early surveyors in the Tate 1800's and early 1900's, while of historical and artistic merit, may be described as "just sketches."

The modern maps are noteworthy in the following respect. First, while Wisconsin has the largest collection of effigy mounds in the world, Scherz notes that many mounds (mounds refer to round burial mounds and temple mounds as well as effigy mounds) were being destroyed even while they mapped them. Because many people are immediately interested in the geometry of the mounds the surveying group felt a need to make their maps part of the public domain.

Secondly, the maps indicate sophisticated geometry akin to that of ceremonial centers the world over. The angle of 51.5°, relating to the golden section known as Phi, is found in the geometry of the Aztalan site. This angle is associated with such diverse sites as Chartres Cathedral, the Cheops pyramid in Egypt, and the prehistorical center of Cahokia near St. Louis, MO. The latitude of the Viking center at L'Anse aux Meadows, Newfoundland and of Stonehenge is 51.5°. Thus the mounds are an invaluable historical and cultural record.

At present the surveying group has files on more than 40 Wisconsin sites and has completed Survey Reports, consisting of a series of maps and a brief explanatory survey report, for 11 sites. The following Survey Reports (coded SR1, SR2, etc.) are on file at the Arthur Robinson Map Library in Science Hall:

<u>Number</u>	Topic	Remarks
SR1	Observatory Hill	Madison
SR2	Mendota Site	Madison
SR3	Eagle Heights	Madison
SR4	Nagel-Randant	Poynette
SR5	Aztalan Site	Lake Mills
SR6	Lake Koshkonong	Lake Mills
SR7	Bass Rock Bar #1	Stone
		Structure
		in Rock
		Lake
SR8	Hornung Site	Roxbury
SR9	Necedah Report #1	Necedah
SR10	Mud Lake	Lake Mills
SR11	Eagle Island	Lake Mills
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Where the geometry of a site appears to be related to other sites, an Area Report is produced which points out this possible interrelationship. These Area Reports are also at the Map Library:

Number	Area	<u>Remarks</u>
AR1	Madison	Mendota, Eagle
		Hts., Observatory
		Hill
AR2	Fishtraps	No. of Aztalan
	on Crawfish	1
	River	
AR3	Mud Lake &	Lake Mills
	Eagle Lake	

The researchers' goal is to create a survey report on each site to draw attention to the area for possible preservation and input from interested people. A more formal, condensed "Site Report" for each site, in which a few pertinent maps at reduced scale will be included with historical and other important data, is planned as a further step. Requests for copies of Survey or Area Reports can be sent to Lee Linehan, 6701 Schroeder Road. Madison, WI 53711. Linehan is acting librarian of the Ancient Earthworks Society, whose mailing address is P.O. Box 56082, Madison, WI 53705. An article by James Scherz on the Aztalan mounds site appears in the March 1987 Wisconsin Academy Review.

DIGITAL WETLANDS INVENTORY

Last January, the State Department of Natural Resources completed its "Digital Inventory of Wisconsin; Wetlands". The digital database coverage is statewide and at a scale of 1:24,000. The wetland linework and classifications were obtained from the original "Wisconsin Wetland Inventory" maps and reflect information gathered from 1978/79 1:20,000-scale photography.

Existing uses of the data include the production of township wetland regulatory maps, various area classification summaries and detailed reports by township and county, conversion and use of the data in ARC/Info applications, watershed field compilation bases using USGS 7 1/2' map formats, and Purple loostrife research.

Future applications include the development of an IBMpc-based program to convert the inventory linework and point formats into Auto Cad DXF compatible files. DNR also hopes to develop a pc-based graphics data entry and display system capable of using this data directly.

For information on this inventory please contact: Bill Shaw, Wisconsin Dept. of Natural Resources, P.O. 7921, Madison, WI 53701 or phone 608/266-2432.

NAME SEARCH ANSWER

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PAST AND COMING EVENTS



INTRODUCTION TO THE SOVIET UNION

March 25, Milwaukee, WI. University of Chicago Professor Emeritus Chauncy D. Harris recently presented "A Geographical Introduction to the Soviet Union" as part of the Florence and Harold Mayer Distinguished Geographers Series. A preeminent U.S. geographer and a leading specialist on the Soviet Union, Professor Harris's talk explored one avenue toward a better understanding of the Soviet Union. he UW-Milwaukee Geography

colloquium, co-sponsored by the American Geographical Society of the Golda Meir Library, was free and open to the public. For additional information about future Distinguished Geographers Series lectures contact: the UW-Milwaukee Dept. of Geography at 414/963-4866.

WOMEN'S INFLUENCE ON CARTOGRAPHY

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April 11, Chicago, IL. Mary McMichael Ritzlin presented a talk entitled "Women's Influence on Cartography during the Sixteenth, Seventeenth, and Eighteenth Centuries" to the Chicago Area Women's History Conference Group. CAWHC Programs meet 2:00-4:00 p.m. at The Newberry Library, 60 West Walton Street, Chicago, IL 60610. For further information about CAWHC Programs contact Lisa Wagner of The Newberry Library at 312/943-9090, ext. 482.

JOEL MORRISON LECTURES

April 21, Madison, WI. Joel L. Morrison, former UW-Madison Department of Geography Chair and recently appointed assistant division chief for research at the '.S. Geological Survey's National fapping Division, gave a talk on "Conceptual and Technological Change in the Mapping Sciences" at the University of Wisconsin-Madison. The talk was the first in the Robinson-Wagner Lecture Series sponsored by the Student Chapter of the American Congress on Surveying and Mapping. Morrison's "kick off" lecture was appropriate; he did his graduate work under the guidance of Arthur Robinson.

AGS CARTOGRAPHIC HISTORY LECTURE

April 29, Milwaukee, WI. Professor John Brian Harley, co-editor, with Professor David Woodward, of <u>The</u> <u>History of Cartography, Volume I</u> will present an illustrated lecture about the foundations of European cartography from prehistoric to late medieval times. His talk, entitled "Knowledge and Power in the Early History of European Cartography," will take place at 3:30 p.m. at the American Geographical Society Collection, the Golda Meir Library, at the University of Wisconsin-Milwaukee. The program is free and open to the public.

PECORA XI SYMPOSIUM

May 5-7, Sioux Falls, SD. "Satellite Land Remote Sensing-Current Programs and a Look to the Future" will open with discussions of satellite remote sensing policy by representatives from the White House, Congress, the Departments of State and of the Interior, the United Nations, private remote sensing companies, and universities. U.S. scientists and scientists from international organizations will present remote sensing applications during a poster session and plenary sessions held on the second day. Representatives from leading research, development, and commercial organizations from Canada, Europe, India, Japan, the People's Republic of China, the U.S., and the USSR have been invited to discuss future system plans and programs. Transportation Secretary, Elizabeth Dole will address the symposium at the Pecora Award Banquet on May 6th. Pecora XI will close with a discussion on user perspectives on current programs.

You can obtain registration information from Pecora XI Symposium, Pecora XI Registration, USGS EROS Data Center, Sioux Falls, SD 57198. For further information contact Phyllis G. Wiepking, Pecora XI Committee, at the above address, phone 605/594-6551.

UW-OSHKOSH LECTURE

May 6, Oshkosh, WI. State Cartographer, Art Ziegler, will deliver a lecture at the eleventh annual meeting of the Warner J. Geiger Memorial Lecture Series sponsored by the UW-Oshkosh Geography Department. His talk will focus on unusual aspects of mapping the state. The public lecture is at 2:00 p.m. in 268 Halsey Science Building on campus. For more information contact Don Bruyers, 414/424-4105.

ART AND CARTOGRAPHY

May 6, Milwaukee, WI. Prof. David Woodward, UW-Madison, will address the Friends of the Milwaukee Public Library on <u>Art and Cartography</u> his recent book. His presentation at 12:45 follows a luncheon at Centennial Hall, 733 North 8th Street, Milwaukee. Reservations are required. Call Peggy Taylor at 414/332-9560 for more information.

WLIA MEETING

May 6, Madison, WI. The fourth Wisconsin Land Information Association meeting will focus on legislative activities and conference planning. Kevin Conners, Dane Co. Ag. Ext., and Robert Martin, Soil Conservation Service, will discuss automated natural resource projects, with an emphasis on the Central Sands Geographic Information Program. The Dane County Agriculture-Extension Center at the Fairgrounds is the site. The time is 4:00-6:00.

The next WLIA meeting will be held on June 25th at the Gobbler in Johnson Creek. The evening will begin with a social hour at 6:00, dinner at 7:00, and at 8:00, a program on the current political climate for a land information system in Wisconsin. Reservations will be required. The Wisconsin Chapter of URISA sponsors the WLIA meetings. Call Christine Reinhard for more information, 608/262-6850.

EFFECTIVE ZONING ADMINISTRATION SESSIONS

May 6-8, Madison, WI. The Department of Engineering Professional Development (UW-Madison) in cooperation with the Association of Code Enforcement Officials of Colorado will offer a 3-day program entitled "Effective Zoning Administration Techniques." The program is designed to address the educational needs of zoning administrators, planners, building officials, city managers, attorneys, municipal administrators, public officials, legal staff and citizens interested in zoning and its administration.

The program will examine: legal and administrative responsibilities; working with enforceable ordinances; zoning ordinance

(continued next page)



enforcement techniques; effective inspection and case preparation; dealing with "special" ordinances; enforcement style; and computers in zoning administration.

Advance registration is required. A fee of \$195 covers instruction, handout materials, noon lunches, one evening dinner and break refreshments. For more information contact Philip M. Bennett, Program Director, Dept. of Engineering Professional Development, University of Wisconsin-Madison, 432 North Lake Street, Madison, WI 53706, phone 608/262-1299 (program enrollment), 608/263-4705 (program information).

AH/FM MEETING

May 14, 1987, Milwaukee, WI. The local Automated Mapping/Facilities Management (AM/FM) group will hold its next meeting at the Brookfield Marriott on Moorland Road beginning at 5:30. Wayne Staats of Advanced Computer Graphics of Milwaukee, will address the group on the topic of "Facility Data Conversion". The meeting also features a cocktail hour and dinner prior to the talk. Dinner reservations should be made by May 11th. For more information, to make reservations, or to be included on the AM/FM mailing list, contact Ed Hedges, 608/252-5764.

EFFECTIVE DRAFTING MANAGEMENT SEMINAR June 8-9, Milwaukee, WI. The Center for Continuing Engineering Education, College of Engineering and Applied Science, at the University of Wisconsin-Milwaukee is sponsoring this 2-day seminar, entitled "Systems and Procedures of Effective Drafting Management". In recognition of the growing importance of effective techniques and good management to cost effective preparation and control of engineering drawings, the seminar will define proven methods of modern drafting management. The seminar will devote considerable emphasis to management using CAD (Computer Aided Design) and other computer systems. The program is designed to benefit drafting managers and key personnel in product and machine design from small and medium size companies.

Course enrollment is limited. A fee of \$525 covers program materials, break refreshments, lunches, and one dinner. The program will be held in the South Hall at the UW-Milwaukee Civic Center Campus, 929 North 6th Street. For more information call John M. Leaman, P.E., Program Director at 414/2273110. To enroll write Engineering Registration, 929 North Sixth Street, Milwaukee, WI 53203 or call 800/222-4643 (in Wisconsin) or 800/222-3623 (outside Wisconsin).

COURSES FOR MAPPING EDUCATORS July 8. The XIIth National Surveying Teachers Conference will offer two four-hour courses to provide educators with basic information to update their own courses. Enrollment priority will be given to those who attend the conference. However, a wait list will hold your name until the registration deadline has passed (June 20th). The conference coordinators will contact those on the list in order of their postmarks until all spaces are filled. To be considered, send your name and phone number to Pat Giatan, The Wisconsin Center, 702 Langdon Street, Madison, WI 53706. Send no money until you have been notified.

NON-EDUCATORS ARE WELCOME! Each course will be given twice, 1:00-5:00 p.m. and 6:00-10:00 p.m. Please specify which time you are interested in. The two courses are:

Geographic Information Systems, Instructor: Joseph K. Berry, Yale University. The course focuses on fundamental operations used in computer-aided map analysis. In the lecture/exercise format, participants will learn resourceanalysis methods and then apply these methods to real problems. Along with a workbook and "homework" materials, participants will receive a special instructions version of the Professional Map Analysis Package (pMAP) software which runs on any personal computer using MS/PC-DOS operating systems. Fee: \$50:

The Global Positioning System, Instructor: Larry Hothem, National Geodetic Survey. Course topics include signal structure characteristics, satellite system operation, receiver design, equipment descriptions, precise relative positioning, project planning, field operations, data processing, analysis of results, network adjustments, applications, and costs. Fee: \$50.

More conference information appeared in the July 1986 and January 1987 <u>Bulletins</u>. Prof. Paul Wolf, Conference Director, can answer specific questions, 608/262-1978. AM/FM INTERNATIONAL CONFERENCE X July 21-23, Snowmass, CO. The

Automated Mapping/Facilities Automated Mapping/Facilities Management Conference X, "Applying AM/FM to Real-World Problems", will focus on defining AM/FM technology and its application to informati processing in utilities, governme, and the private sector. Topic highlights include successful project overviews and various technology trends. For complete conference information and registration materials contact AM/FM International, 8775 East Orchard Road Suite 820, Englewood, CO 80111, phone 303/779-8320.

IAAO MAPPING SEMINAR

July 27-28, St. Louis, MO. "Mapping Main Street" is the theme of the 1987 Mapping Seminar of the International Association of Assessing Officers. In this two-day seminar the IAAO will examine the basic elements of a complete, current, and accurate set of cadastral maps, their significance, what purchasers need to know when acquiring them, and how to compile them into a cadastre.

Speakers include senior cadastral mapping specialists, and experts in the fields of surveying, aerial photography, land records, map production, and cartography. IAAO has designed the seminars for everyone who wants to improve the quality of property ownership map. in rural, suburban, and metropolitan areas alike.

Seminar fees are \$210 for IAA0 members and \$250 for non-members. Registration deadline is June 26. For seminar information and registration, contact: IAA0 Mapping Seminar, P.O. Box 88874, Chicago, IL 60680-1874, phone 312/947-2057.

URISA 25TH ANNUAL CONFERENCE August 1-6, Fort Lauderdale, FL. The 25th Annual Conference of the Urban and Regional Information Systems Association (URISA) will feature over 160 professional papers, 60 exhibitors, 9 preconference workshops, plenary sessions, publications, free software, and educational and recreational tours. Major topics include: geographic information systems; facilities management and mapping; land records/assessor parcel databases; remote sensing and photogrammetric systems; advanced microcomputer applications; and artificial intelligence/expert systems. URI/ will hold its conference at the Marriott Harbor Beach Resort Hotel. For more information or to request a conference flyer, write: URISA, 319 C. Street S.E., Washington D.C. 20003.

> (continued next page) April 1987

EVENTS, continued

WSLA SUMMER MEETING August 14-15, La Crosse, WI. The 1987 Wisconsin Society of Land reveyors Summer Meeting will compass a variety of recreational events in addition to program presentations, exhibits, and board and general membership meetings. The WSLS has reserved a block of rooms at the Holiday Inn. For more information contact William C. Jung, Secretary/Treasurer, Western Chapter-WSLS, N5416 Abbey Road, Onalaska, WI 54650, phone 608/785-9722.

INTERNATIONAL CARTOGRAPHIC ASSOCIATION CONFERENCE, MEXICO

October 12-21, Morelia, Mexico. "Choices for Technological Changes in Cartographic Production" is the theme of this 8th General Assembly of the International Cartographic Association (and its 13th International Conference). For detailed information about papers, programs, registration fees, accommodations, excursions, social events, etc., request a copy of the Second Circular by writing to: Mr. Manuel Gonzalez, Conference Director, XIII ICA Conference, Apdo. Postal 25-549, Mexico.

89TH MUNICIPALITIES LEAGUE CONFERENCE

`^tober 21-23, Milwaukee, WI. The ague of Municipalities will hold its 89th Annual League Conference at the Hyatt Regency. The conference will address important issues facing municipal government executives and officials. Normally the three-day conference features talks by an invited guest speaker, an official from the National League of Cities, and the Governor; a day of workshops; and panel discussions with legislative leaders. The League's program committee will meet in late April to decide on the program format and to choose guest speakers. For more information contact Bob Tevik at 608/267-2386.

GIS '87 SAN FRANCISCO

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October 26-30, San Francisco, CA. The American Society for Photogrammetry and Remote Sensing and the University of California, Berkeley will convene the 2nd Geographic Information Systems Conference and Workshops. The American Congress on Surveying and Mapping is sponsoring this workshop as well. The conference will focus on methods and management techniques which place reographic information systems ito the Hands of the Decision

special interest to new and potential users of GIS technology as well as to GIS professionals. For more information contact: GIS '87 - San Francisco, c/o Dr. Russell Congalton, Dept. of Forestry and Resource Management, University of California, Berkeley, CA 94720, phone 415/642-5170.

REMOTE SENSING SYMPOSIUM CALL FOR PAPERS

October 26-30, Ann Arbor, MI. The Environmental Research Institute of Michigan has issued a call for papers for the 21st International Symposium on Remote Sensing and the Environment. The symposium will provide an indepth look at the latest technology for earth resource survey and environmental monitoring, stressing topics related to land, oceans and ice, and atmosphere and climate. A number of plenary sessions will explore international global science programs and a variety of national and international initiatives.

Papers will be considered for conventional oral presentations, as well as for multidisciplinary poster sessions. Suggested submissions include recent results or innovative concepts based upon current or future sensors or sensor systems, as well as new or improved techniques for data collection, handling, processing, and utilization.

Interested persons should submit a comprehensive summary of their proposed presentation (200 to 500 words containing no figures or references) no later than May 29. Twenty copies, in English, should be submitted to: Dr. Jerald J. Cook, Environmental Research Institute of Michigan, P.O. Box 8618, Ann Arbor, MI 48107-8618, phone 303/994-1200, ext. 2290. For registration information contact Conference Services at the same address.

NACIS VII

October 28-31, Atlanta, GA. NEW DIMENSIONS IN CARTOGRAPHY. NACIS will hold its convention at the Radisson Inn and Conference Center. Highlights of the meeting will include visits to local cartographic centers, historic sites, and local points of interest. NACIS VII will include a variety of paper and poster sessions, exhibits, cartographic field trips, and panel discussions with recognized authorities from government, private, and academic organizations. USGS National Cartographic Information Center Affiliates will meet at the same time. For more information contact: North American Cartographic Information Society, 6010 Executive Boulevard, Suite 100,

Rockville, MD 20852, phone 301/443-8075, or John Sutherland, NACIS Program Chair, Map Collection, Science Library, University of Georgia, Athens, GA 30602, phone 404/542-0690.

IMDA MEETING AND TRADE SHOW October 28 - November 1, Reno, NV. The International Map Dealers Association will hold its Seventh Annual Meeting and Trade Show at The Nugget. For information about the convention's program write: Norman Strasma, Executive Secretary, P.O. Box 1789, Kankakee, IL 60901.

IGIS CALL FOR PAPERS

November 15~18, Arlington, VA. The Association of American Geographers has issued a call for papers for the International Geographic Information Systems (IGIS) Symposium "The Research Agenda". The conference committee will select papers on the following topics: land resource management; cadastral systems; urban systems; mineral and geological appraisal: environmental analysis; global systems; data acquisition; education and training; cartography; storage and retrieval; hydrology and water resources; spatial analysis; park and wildlife monitoring; artificial intelligence; cognition and display; standards; transportation and energy; data base management; display and computer systems, remote sensing; and terminal based technology. The committee encourages presenters to use computer-driven digital display systems and video tape.

For information about the November IGIS Symposium write: E.H. Pechan and Associates, Inc., 5537 Hempstead Way, Springfield, VA 22151, ATTN: IGIS '87. Send abstracts to the same address by June 1; papers are due September 15.





MAILING LIST UPDATE

Don't get zapped! The SCO is now verifying its mailing list and compiling a useful database on our readership in one fell swoop. In order to remain on our mailing list please see the instructions on the inside of this issue's cover. We ask you to correct your address label, if necessary, and mail the cover back to the SCO. We also request your cooperation in completing the survey/checklist also on the inside cover. BE SURE TO MAIL US THE COVER, WHETHER OR NOT YOUR ADDRESS NEEDS CORRECTIONS. TO ENSURE THAT YOU REMAIN ON OUR MAILING LIST.

ENVIRONMENTAL MONITORING AND WISCONSIN

Fourteen graduate students in the Environmental Monitoring Program of the Institute for Environmental Studies at the University of Wisconsin-Madison are engaged in thesis research on an array of topics relating to Wisconsin. The following is a list of the students and their research topics:

Robert Best's work will use satellite data (Thematic Mapper or TM and Advanced High Resolution Radiometry or AVHRR) to monitor parameters related to food habits and physical conditions of Canadian geese in Wisconsin during spring migrations;

James Blohm will apply remote sensing (SPOT) to make forestry inventory assessments of Wisconsin;

Martin Buchheim and Witold Fraczek will use TM imagery in making a landcover inventory of Wisconsin's driftless area;

He Ping's research involves the integration of remote sensing data and geographical information systems (GIS) in an assessment of water quality in Green Bay;

Richard Lathrop is working towards an operational monitoring system of Great Lakes water quality (including Green Bay) using SPOT, TM, and AVHRR.

Kyoo-Seock Lee is investigating soil feature extraction methods by using TM data for southern Wisconsin; Ann Maclean is researching the use of TM imagery with hazard-rating systems (Wisconsin);

Robert Maki is investigating soil erosion modeling with geographic information systems (Wisconsin);

Skip Maselli's topic, automated photointerpretation/stereoscopic workstation, involves sites throughout the U.S. including Wisconsin;

Jerome Sullivan is working on data models for defensible landscape planning (Wisconsin);

Daniel Toomey's research includes sites throughout the U.S. as well as Wisconsin in an analysis of potential hazardous waste sites;

Carol Wessman is estimating key forest ecosystem parameters for Wisconsin using remote sensing;

and

James Valiga is working on photo enhancement of Indian pictographs in Wisconsin.

If you'd like more information on these research topics, contact the graduate student through the IES, Environmental Monitoring Program, 64 Science Hall, Madison, WI 53706, phone 608/262-0651.

IOWA CARTOGRAPHIC INFORMATION CENTER Iowa has become the 46th state to establish a cartographic · information center linked to the National Cartographic Information Center (NCIC) of the U.S. Geological Survey.

The state NCIC affiliate was established in the Iowa Geological Survey Bureau (IGSB) of the Department of Natural Resources in Iowa City.

Under the agreement between the USGS and the Iowa Geological Survey Bureau, NCIC will supply catalogs, indexes, microfilm, and microfiche of cartographic reference aids. The IGSB will make this information available to the public. Iowa's cartographic records will, in turn, be incorporated into NCIC information systems to make them nationally available.

The IGSB facility is located at 123 North Capitol Street, Iowa City, Iowa 52242, phone 319/335-1575.

NEW SHS MAP CURATOR

Gerry Strey is the State Historical Society's (SHS) new map curator. She joined the SHS in 1983 as the Wisconsin history and genealogical reference librarian and assumed the map curatorship in February 1987 on a half-time basis. Taking on the curatorship while remaining on the general reference staff allows her interesting possibilities for coordinating patron information needs using both the map and library collections. The resources often complement each other, according to the new curator, but few library patrons think of the map collection as an information source and map users tend to neglect library resources.

The State Historical Society's map and atlas collection concentrates principally on documenting the discovery and early exploration of the Americas, the history of Wisconsin, and the history of the Great Lakes region - a parallel to the manuscript collection's holdings on the Old Northwest. Other resources include a collection of 1,700 plat maps and plat books, and over 100 original "bird's eye view" maps of Wisconsin communities, drawn in the latter part of the nineteenth century. Sanborn Insurance maps provide detailed information for 323 Wisconsin communities dating from about 1880 to 1950. The collection includes several thousand general maps of cities, counties, and states in the United States and other countries, as well as USGS maps for Wisconsin dating from 1888.

Patrons can search for items in the map and atlas collection by using a separate dictionary catalog located in the Archives-Manuscripts Reading Room. References to periodicals and supplementary cartobibliographical materials are also included in the catalog.

The State Historical Society is located on the Library Mall of the University of Wisconsin-Madison campus at 816 State Street. Gerry can be reached at 608/262-5867.

INTERNATIONAL ORIENTEERING

The International Orienteering Federation publishes a free bibliography of orienteering Titerature. Contact Helga Kolb, A-(1190 Vienna, Heiligenstadterstrasse 131/5/18 Austria.

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Wisconsin Mapping Bulletin

POINTS, continued

NATIONAL LIBRARY WEEK In case you missed it, April 5-11 was National Library Week. Why would the Mapping Bulletin make note of such an event? Because your Editor learned that John Cotton Dana, an eminent turn-ofthe-century librarian and cofounder of the Special Libraries Association, received his real training for librarianship and museum administration during a surveying job in the mountains of Colorado. He filled the off-duty hours with omnivorous reading and prolific writing. The reading served as the philosophical foundation of his profession, and the writing brought him to the attention of Denver's leaders. At age thirty-three, he was launched in his profession with an appointment as Public and High School librarian. It just proves what a well grounded person can do.

FANTASY MAPS

Dorothy Huang, a Cedarburg High School student, designed a fantasy map in Marsha Roselle's water color class that now decorates the hall adjoining the Governor's office. The map, rendered in India ink and watercolor in an Egyptian motif won first prize in a statewide high school art competition. In a March 6 ceremony at the capitol, Ms. Roselle presented the map to Governor Thompson.

Marsha Roselle said a project on fantasy maps truly inspired her students. Introducing the project with copies of ornate 15th and 16th century maps and with aerial photographs, she told students to expand their cartographic imaginations with visions of sea monsters, ships, angels, and wind roses. She used Howard Deller as a resource person. Mr. Deller is the literary advisor for the American Geographic Society Collection at the University of Wisconsin-Milwaukee.

Students "responded with pride" to the project, which she described as an "interdisciplinary assignment." In addition to their artistic skills, students used their knowledge of geography, geometry, history, social studies, cartography, and library science. It enjoyed such success that Ms. Roselle and Mr. Deller will coauthor a descriptive article about the project to be published in the National Art Education Association Journal. CADASTRAL MAPPERS ASSOCIATION Members recently formed the Florida Association of Cadastral Mappers. The organization will strive to bring together individuals in the public and private sectors who are involved in the preparation of property ownership maps. It will devote special attention to the education and certification of those in the public sector. For further information about the association, contact: Florida Association of Cadastral Mappers, c/o Kathy Welby, Acting Secretary/Treasurer, Pinellas County Property Appraiser's Office, 315 Court Street, Clearwater, FL 33516, phone 813/462-3282.

OMNISEAL COURIER

Top Flite Industries, Inc. has manufactured a new storage and transport tube for maps, documents, blueprints, charts, and architectural drawings. The Omniseal Courier has a hexagonal shape that resists rolling and which allows for more filing space and finger room for grasping contents. Removable end caps offer a tight seal. The Courier is available in a wide assortment of colors and sizes. For ordering information contact: Top Flite Industries, Inc., Attn: Garth Jackson, 1516 Second Avenue, Suite 410, Seattle, WA 98101, phone 206/587-3755.

COUNTY OFFICER SELECTION

Senate Joint Resolution 3 introduces a constitutional amendment which would permit the legislature, by law, to specify the procedures and terms by which county boards may fill office appointments. Based on established procedures, the county board may then decide to replace some of its elected county officers with appointed county officers. If the county board decides to appoint officers, the people can petition for a referendum on the decision to change an office from elective to appointive.

Senators Plewa, Lee, Czarnezki, Risser and Leean and Representatives Notestein, Barrett, Shoemaker, Medinger, Wineke, Krug, Paulson and Johnsrud are cosponsoring the bill. It remains in the Committee on Urban Affairs, Energy, Environmental Resources and Elections. You can obtain a copy of the bill from the Legislative Reference Bureau, 201 N. Capitol, Mdison, WI 53702, phone 608/266-0341.

USGS GEOGRAPHIC INFORMATION CHIEF

John C. Houghton has been named chief of the National Mapping Division's Geographic and Cartographic Applications Laboratory at the U.S. Geological Survey National Center in Reston, VA.

The newly-organized laboratory serves as a multi-divisional research center for USGS scientific activities that require correlating geographic and cartographic data with natural-resources, socioeconomic and environment-related data.

In his new position, Houghton manages and directs the laboratory's research personnel and activities. He provides team leadership for research projects that involve design, development and application of newly developed or emerging automated data-processing techniques to multidisciplinary geographic-information systems. These systems address such critical issues as the nation's energy and mineral potential, quantity and quality of water supplies and areas subject to risk from natural hazards. Contact him at USGS, 920 National Center, Reston, VA 22092, phone 703/648-6133.

WISCONSIN, USA

While between flights at the Detroit airport, your Editor picked up a <u>USA Today</u> which featured Wisconsin in its Friday, March 27th issue. Their BusCapade USA stopped in Wisconsin on its 6-month, 50state bus tour of the US. According to reporter Al Neuharth the ABC's of life in Wisconsin are: <u>Activism</u>, right and left; <u>Beer</u>, bratwurst, bowling; <u>C</u>ows, cheese and crackers.

The article went on to state that Wisconsin now leads the US in the number of bars per person, according to the most recent U.S. Census data. Across the USA, there is one bar for every 2,273 people. Wisconsin has five cities on the top of the list with three times the average:

Eau Claire 1 for every 629
La Crosse 1 for every 676
Kenosha 1 for every 693
Green Bay 1 for every 703
Milwaukee 1 for every 843
And I bet they were only sampling the big cities!

MEDIA OF INTEREST



LINCOLN COUNTY CATALOG

The Lincoln County Cartographic Catalog, the 43rd catalog of the series, is now available. MONROE is due in late May, followed by JUNEAU in late July. LINCOLN and all following catalogs will feature an expanded geologic maps section, and more extensive footnotes and crossreferences. Catalogs will also include a user's guide to help people find sources more easily. For your free copy, contact Brenda at 608/262-3065.

SCO PUBLICATIONS

The State Cartographer's Office is producing two new items. A pagesize magnetic declination map of Wisconsin, epoch 1985, and a pagesize explanatory document on the National Aerial Photography Program (NAPP) will be available upon request from the SCO in July.

COUNTY PLAT BOOKS

The following 1987 <u>Wisconsin County</u> Land Atlas and Plat Books are now available: ADAMS, BROWN, DANE, JUNEAU, LAFAYETTE, MANITOWOC, MONROE, OCONTO, PRICE, RICHLAND, ROCK, and WOOD counties. Plat books cost \$18.00, except ADAMS BROWN, JUNEAU, OCONTO, and RICHLAND which cost \$20.00. A 10% discount applies to orders of 10-49 books. Postage and handling costs \$3.00 for the first book and \$.50 for each additional book. Wisconsin residents pay a 5% sales tax. All books are shipped UPS which requires a street address for delivery. Send orders and checks to: Rockford Map Publishers, Inc., P.O. Box 6126, Rockford, IL 61125, phone (orders only) 800/435-0712 or for customer information 815/399-4614.

WISCONSIN: A GEOGRAPHY

<u>Wisconsin: A Geography</u>, 1986, by Ingolf Vogler with Harold Mayer, Brady Foust, Richard Palm, and editorial assistance from Sharon Knopp. While the favorite image of Wisconsin may be "America's Dairyland", this book demonstrates the state is as rich in culture as it is in agriculture, as diverse as it is bountiful. The book's 160 photographs, sketches, graphs, tables, and maps reflect the state's variety and delineate its geography---the red and white farmsteads, the abandoned ore mines of the Gogebic Range, the beauty of the Chequamegon National Forest, the small-town ethnic festivals, and busy streets of Milwaukee.

The authors examine popular images and impressions of Wisconsin, its physical landscape and climate, and its historical landscapes. Various chapters consider its distinct regions: the Northwoods; the southern agricultural region; and the state's small towns and urban areas including a separate chapter focusing on Milwaukee and its ethnic neighborhoods.

Ingolf Vogeler is Associate Professor and chair of the Department of Geography, UW-Eau Claire and series editor of Geographies of the United States.

Harold Mayer is Professor of Geography at UW-Milwaukee. Brady Foust and Richard Palm are Professor and Assistant Professor at UW-Eau Claire. Sharon Knopp is associate editor of the <u>Journal of</u> <u>Geography</u>.

<u>Wisconsin: A Geography</u> is available for \$26.00 (paper) or \$47.00 (clothbound) from Westview Press, 5500 Central Ave., Boulder, CO 80301, phone 303/444-3541. Ask for it at your local bookstore.

UPDATED AGS MAP SOURCE

The American Geographical Society Collection, University of Wisconsin-Milwaukee Library's, Index to Maps in Books and Periodicals, Third Supplement 1987, features material cataloged from 1975 to 1984. As the third supplement it updates the main catalog (1968) and previous supplements (1972 and 1976). These are the only sources for maps appearing in books and periodicals. The entire Index provides the necessary complement to bibliographies listing separately issued maps. Entries are arranged both by geographical and political division in chronological order and alphabetically by subject. Each entry includes a full bibliographic citation of the article or book in which the map appears. The 676page Third Supplement includes 14,200 entries and costs \$175. For ordering information write to G.K. Hall, 70 Lincoln Street, Boston, MA 02111 or call toll-free 800/343-2806.

WHICH MAP IS BEST?

Which Map Is Best? Projections for World Maps, 1986, is an educational booklet produced by the Committee on Map Projections of the American Cartographic Association (ACA), American Congress on Surveying a Mapping. Cartographers have devised many ways by which to transform the rounded surface of the earth in order to display it on a flat surface. No matter how one does this, however, something will be wrong with the shapes and relative sizes of regions and the distances and directions between places. According to the ACA, many viewers are unaware or unconcerned when blatantly distorted geographical shapes and sizes are displayed without reason. The ACA has prepared this 14-page booklet to show a few of the better-known options among projections for world maps and to point out some of their characteristics. It is aimed at both those who display maps and those who look at them.

Arthur H. Robinson prepared the text and design. The University of Wisconsin Cartographic Laboratory prepared the graphics. (A second booklet is in production.) <u>Which</u> <u>Map Is Best?</u> is available for \$5.00 (ACSM members) or \$5.50 (nonmembers) plus \$2.00 for shipping and handling from the American² Congress on Survey and Mapping, Little Falls St., Falls Church, VA 22046, phone 703/241-2446.

HISTORICAL ATLAS OF CANADA

Historical Atlas of Canada, Volume I: From the Beginning to 1800, R. Cole Harris, editor, Geoffrey J. Matthews, cartographer/designer. Volume I represents a map record depicting the roots of early Canada. The book begins with the retreat of the last continental ice sheets and the appearance of the Fluted Point People, encompasses the millennia of indigenous cultures, and ends when European trade and settlements had been firmly established. It offers 70 double-page color plates, incorporating paintings, graphs, and illustrations. Explanatory texts, written and researched by 240 scholars from 28 Canadian universities, accompany the plates.

Copies of Volume I ordered before its fall 1987 publication are \$85.00, or \$95.00 after publication. Shipping costs \$3.50 for one, \$1.50 for each additional copy. Payment, purchase order, or charge account must accompany orders. Checks may be made paya to the University of Toronto Press. Mail your order to: Manager, Direct Mail Marketing, University of Toronto Press, 63A St. George Street, Toronto, Canada M5S 1A6.

(continued next page)

MEDIA, continued

ART AND CARTOGRAPHY

David Woodward's (UW-Madison Geography) <u>Art and Cartography</u> came out this month, but it has been omewhat overshadowed by Volume I of the <u>History of Cartography</u>, which will be available in early May. The 250-page <u>Art and</u> <u>Cartography</u>, features <u>34-color</u> plates in addition to 193 halftones and sells for \$65.00

The first volume of the six-volume History of Cartography project, Cartography in Prehistoric, Ancient. and Medieval Europe and the Mediterranean, has 599 pages, 40 color plates, and 300 black-andwhite illustrations, Its price is \$100. In the midst of jubilation (or is it relief?) at the project office, work continues on Volumes II and III. To order, contact: University of Chicago Press, 5801 So. Ellis Ave., Chicago, IL 60637, phone 312/568-1550.

NGS COORDINATE DATA AND DOCUMENTS

NAD 83 COORDINATE DATA The National Oceanic and Atmospheric Administration's (NOAA) National Geodetic Survey (NGS) is publishing adjusted coordinate data for the North American Datum of .983 (NAD 83). The NAD 83 adjustment removed distortions from the continent-wide <u>horizontal</u> reference system. In addition, the horizontal reference datum has been redefined to more accurately fit the size, shape and center-of-mass location of the Earth.

Thirty-four states (among them Wisconsin) have adopted new State Plane Coordinate Systems (SPCS) which are compatible with NAD 83. New State Plane Coordinates have been computed from the NAD 83 latitudes and longitudes using the new SPCS.

NGS has already published NAD 83 coordinate data listings for Alaska; it will publish the coordinate data for the remainder of the U.S. in the following order: The Gulf of Mexico and Atlantic coastal areas, the Pacific coast states and Hawaii, the Great Lakes region, and the remaining conterminous U.S. and Pacific Ocean territories. Coordinate data will be made available in three forms: paper, floppy diskettes, and magnetic tape. NAD 83 coordinate data are usually distributed in blocks of 1 degree of latitude by 2 degrees of longitude. Requests for data pertaining to other rectangular areas will be processed on a case-by-case basis. For more

information about the coordinate data, contact: National Geodetic Information Branch, N/CG174, Rm. 24 Rockwall Building, Rockville, MD 20852, phone 301/443-8631.

NAD 83 PUBLICATIONS The achievement of NAD 83, based on the adjustment of a quarter million points, provides a unified, consistent network of latitude and longitude values for the entire North American continent. This network is used by regional planners, engineers, surveyors, navigators, geophysicists, and others who depend on accurate and reliable horizontal reference data. Various publications about NAD 83 are available from NGS. For a list of available publications contact Ms. Grace Sollers at the address given below.

NAVD 88 PUBLICATIONS NGS has also published various documents about the new vertical datum, the North American Vertical Datum of 1988 (NAVD 88). NAVD 88, initiated in 1978 to redefine the National Geodetic Vertical Datum of 1929, will perform a general readjustment of the vertical control portion of the National Geodetic Reference System. The project, scheduled for completion in 1990-91, will provide a computer-accessible integrated data base of all NGS validated vertical data for crustal motion and other scientific applications. It will provide a unified, consistent set of benchmark heights for the North American continent. To receive a list of NAVD 88 publications and prices contact: Ms. Grace Sollers National Geodetic Information Branch, N/CG17X2, Rockwall Building, Rm. 14, National Geodetic Survey, NOAA, Rockville, MD 20852, phone 301/443-8316.

TEACHING MAP SKILLS

The National Council for Geographic Education (NCGE) recently released <u>Teaching Map Skills: An Inductive</u> <u>Approach.</u> Written by Jeremy Anderson, the publication includes sixteen "lessons" covering such topics as mental maps, map elements, symbols, orientation, "turf maps", grids, scale, and outline maps. It is especially intended to assist kindergarten through eighth grade geography teachers. Copies are available for \$5.00 post paid from NCGE, Western Illinois University, Macomb, IL 61455, phone 309/298-2470.

MACINTOSH TERRA MOBILIS <u>Terra Mobilis: A Plate Tectonics</u> <u>Program for the Macintosh</u>, by Charles R. Denham and Christopher R. Scotese, provides an interactive demonstration of the basic

principles of plate tectonics. The computer graphics program dynamically illustrates the Earth's plate tectonic development from 600 million years ago to the present. Past positions of continents and oceans can be viewed in a variety of map projections, including a spherical one that gives a 3-D perspective of the Earth. Its built-in plate tectonic model, providing snap-shot views of the Earth through time, is designed for instruction of both elementary and advanced geology. At the same time, <u>Terra Mobilis</u>, can prove a serious research tool that allows users to produce accurate plate tectonic reconstructions or to test published tectonic models.

The program's two diskette set will run on a Macintosh with 128K or 512K of memory, or a Mac Plus. Online help is available and a user's manual with examples of applications is provided. Terra Mobilis costs \$195 and can be ordered from GEOIMAGES, 1307 Ridgemont Drive, Austin, TX 78723, phone 512/450-1174.

CADASTRAL SURVEY COURSES CATALOG The National AudioVisual Center distributes a pamphlet, <u>Cadastral</u> <u>Survey Training Courses</u>, which catalogs Bureau of Land Management (BLM) audiovisual training courses. The pamphlet includes the newest course, "Astronomical Observations and Computations". To request a copy or for information about the audiovisual courses contact: National AudioVisual Center, Customer Services Section/WJ, 8700 Edgeworth Drive, Capitol Heights, MD 20743-3701, phone 301/763-1896.

NEW MAPS



GROUNDWATER SUSCEPTIBILITY MAP The Wisconsin Department of Natural Resources (DNR) has completed its 1:1,000,000-scale <u>Groundwater</u> <u>Contamination Susceptibility Map of</u> <u>Wisconsin</u>. The full-color <u>composite</u> map can be used to identify regions in Wisconsin having greater or lesser natural susceptibilities to groundwater contamination. Measuring 29" by 40", the map is the final product of a computer process that

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MAPS, continued

incorporated five layers of digital information from five separate satellite maps. The digital information includes: type of bedrock, depth to bedrock, soil characteristics, depth to water table, and characteristics of surficial deposits. The final map derives twenty categories of contamination susceptibility. It includes narrative and suggestions about how to use the data presented. The Wisconsin Geological Survey (WGS) expects to have copies available in early summer. The WGS is located at 3817 Mineral Point Road, Madison, WI 53705, phone 608/263-7389.

(source: SUR/VIEW, Dec. 1986)

MORE COUNTY TOPO MAPS

The Wisconsin Geological Survey (WGS) received thirteen new USGS 1:100,000-scale Wisconsin County Series Maps since our last report in January. The new maps are: DANE, DOUGLAS, GRANT, IRON, JEFFERSON, LAFAYETTE, MARATHON, RACINE, WALWORTH, WASHBURN, WAUKESHA, WAUSHARA, and WINNEBAGO. At press time, this brings the total number of available county maps to 43. Please see the January 1987 and October 1986 Bulletin issues for lists of the other available published maps. You may purchase folded copies for \$4.00 from the Wisconsin Geological Survey, 3817 Mineral Point road, Madison, WI 53705, phone 608/263-7389.

Mike Czechanski, WGS Cartographer, reports that the Survey now has reproducible negatives for ALL the counties. Contact him at the above address for information on using the negatives, phone 608/263-7393.

IRON RIVER GEOLOGIC MAPS

<u>Structural and Tectonic Map of the</u> <u>Iron River 1° by 2° Quadrangle</u>, Michigan and Wisconsin, 1986, by W.F. Cannon. The rocks of the Iron River Quadrangle contain evidence of geologic events from at least 3.4 billion years ago to early Paleozoic time along the southern margin of the Canadian Shield. This USGS 1:250,000-scale map shows major lithotectonic units and structures and describes the region's geologic evolution. The sheet measures 23" x 41". Specify its ordering code and title, I-1360-D MICHIGAN, WISCONSIN, when sending your order. (See address, price, and shipping costs below).

Metamorphic Map of the Iron River 1° by 2° Quadrangle, Michigan and <u>Wisconsin</u>, 1986, by Karen Wier is also available from USGS. The 1:250,000-scale map depicts zones of metamorphic intensity defined by appropriate index minerals for metamorphic episodes during the Archean, Proterozoic X, and Proterozoic Y eras. The metamorphic pattern could be important for defining belts of mineral resource potential for the kinds of ore deposits that are generated by metamorphic processes. The map measures 23" by 38". Specify its ordering code and title, I-1360-G MICHIGAN, WISCONSIN, with your order.

Each map costs \$3.10. Postage and handling is an additional \$1.00. Send checks payable to the U.S. Geological Survey to: Map Distribution, USGS, Building 41, Federal Center, Box 25286, Denver, C0 80225.

MIDWEST NATIONAL PARKS BROCHURE

The University of Wisconsin-Madison Cartographic Lab recently produced the new "National Parks in the Midwest" brochure. It includes a locational map of the areas administered by the National Parks Service-Midwest Region. The map depicts National Scenic Trails, National Historic Trails, and Scientific Research Units. Other features include 35 photos and state by state descriptions of NPS units. To obtain copies write: National Park Service, Midwest Region, 1709 Jackson Street, Omaha, NE 68102.

VOYAGEURS POLYART TOPO

Voyageurs National Park Minnesota, 1979. The U.S. Geological Survey, in cooperation with the National Park Service, has produced this 1:50,000-scale metric topographic map. The experimental version of Voyageurs is printed on polyart, a durable water resistant material suited for camping and canoeing trips. The experimental polyart map is a limited press run and should be ordered early. Specify that you want the polyart experimental version. The map measures 37.5" x 53.5" and has a 10-meter contour interval. Among its many cultural and physical symbols, <u>Voyageurs</u> features campgrounds, ski areas, snowmobile routes, ranger stations, and navigational symbols for the park's waterways. Both polyart and paper versions of the map cost \$4.00, plus \$1.00 for postage and handling. Checks should be made payable to the U.S. Geological Survey and orders sent to Map Distribution, USGS, Building 41, Federal Center, Box 25286, Denver, CO 80225.

SURFACE WATERS ALKALINITY MAP Total Alkalinity of Surface Waters, Upper Midwest, 1983 by James M. Omernik and Glenn E. Griffith. This full-color 1:2,500,000-scale map presents a graphic overview of regional patterns of lake and stream mean annual alkalinity in the Upper Midwest Region. As such, it provides a qualitative graphic overview of the relative potential sensitivity of surface waters to acidic inputs. The map is accompanied by a 19-page report by the authors.

The Upper Midwest map, as well as other full-color maps of the New England/New York Region and the Western Region are available in limited quantities from: The Center for Environmental Research Information, ORD Publications, U.S. Environmental Protection Agency, Cincinnati, OH 45268. The authors are currently involved in revising alkalinity patterns for the eastern U.S., using more data on larger scale maps. When this is completed they plan to produce a revised national map.



LAND INFORMATION SPEAKERS'BUREAU

(Fill out a separate form for each topic.)

Please fill out this form if you or someone in your organization is willing to speak on a land information topic. I will try to match requests for speakers with possible presentations. _____ (date) TOPIC: PERSON: ADDRESS: _____ PHONE: _____ AFFILIATION: _____ LENGTH OF PRESENTATION: FEE/HONORARIUM: AUDIENCE TYPE (check all that apply): general public professional associations local officials federal agencies state agencies college students other _____ AUDIOVISUAL AIDS (check all that apply): slides viewgraphs_____ video_____ handouts_____ other ____ PLEASE RETURN TO: Christine Reinhard, State Cartographer's Office, 143 Science Hall, Madison, WI 53706-1404.

THANK YOU.

The American Cartographic Association's Education Committee is compiling a slide set to be shown at a special seminar at the '88 ACSM/ASPRS Spring Convention in St. Louis, Missouri. The slide set will present an overview of computer cartography.

We invite everyone to submit slides for possible inclusion in this set. The slides should be in 35mm format and fit one of the topics in the outline below. The committee will judge each slide and notify the chosen contributors. Successful contributors will be able to purchase a slide set at a reduced price. Slide set orders will be taken at the conference.

For each slide, please indicate the appropriate subject area and enclose a copy of the slide submission form for each slide. Please send all slides by June 1, 1987, to Larry Stipek at the address shown below.

6. Graphics from Digital Data

b. Devices and Systems

8. Data Storage and Retrieval

c. Data Base Management

e, Hardware, Software

d. Implementation-Evaluation

9. Cartographic Data Processing

a. Principles

c. Editing

a. Data Banks

Systems

a. Software

c. Manipulations

b. Display

b. Data Structures

b. Possibilities

7. Interactive Graphics

TENTATIVE OUTLINE Computer Applications to Modern Cartography: An Overview

a. Applications to Cartography

1. Introduction

- a. What is a map?
- b. What is a computer?
- c. Aims
- d. Benefits
- 2. Cartographic Data
 - a. Sources and Characteristics b. Assemblage
 - c. Geocoding
- 3. Graphics Systems
- a. Hardware, Software, Vaporware
- b. Vector Systems
- c. Raster Systems
- d. Coordinate Manipulations
- 4. Data Capture
- a. Requirements
- b. Methods
- 5. Digitizers
- a. Principles
- b. Types
- c. On-Line, Off-line

slide number

SLIDE SUBMISSION FORM

Submit a completed copy of this form for each slide. Number the form and corresponding slide on the top left corner. Please fill out completely and accurately; also please type or print.

Any information submitted on this form may be used in the credit notices. Slides will not be copyrighted. There is no guarantee that your slide will be accepted for publication. The committee reserves the right to include only those slides meeting their specific criteria. Sorry, but slides cannot be returned.

1. Submitter's name	
2. Signature	
3. Address	
4. Company	
5. Telephone Number(s)	
6. Slide title	
7. Subject area	
8. Credit note to appear with slide (limit 40 characters)	·········
9. Technical information (a description of the hardware, software, product, diagram, or flowchart)	
Send your slides and completed form(s) by June 1, 1987, to:	

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- 10. The Computer-Assisted Mapping System
 - a. Design
 - b. Implementation
 - c. Evaluation
- 11. Digital Surface Models
 - a. Digital Elevation Models
 - b. Digital Terrain Models
 - c. Basic Principles and Procedures
 - d. Applications
- 12 Geographic and Land Information Systems
 - a. Principles, Basic Concepts
 - b. Design and Implementation
 - c. Evaluation -
 - d. Examples
- 13. Special Applications a. Cartographic Generalization b. Map Design -