

# LANDSAT 6 LAUNCH PLANNED

Close to press time, we received new information from the Earth Observation Satellite Company (EOSAT) announcing plans to launch Landsat 6 with standard multipectral scanners and additional sensor payloads aboard. The earth remote sensing satellite is scheduled for launch in early 1991. The January issue of the <u>Bulletin</u> will report on these sensor payloads in detail; here is a summary description:

In addition to the Enhanced Thematic Mapper (ETM) sensor with seven multispectral bands, mission plans include the Sea Wide Field Sensor (Sea-WiFS) for ocean color, and a new Thermal Infrared (TIR) capability. The ETM will allow composites using 60-meter thermal infrared data, 30-meter multispectral data, and 15-meter panchromatic data (compared with 120 meters, approximately 79 meters, and 30 meters, respectively, for the comparable sensors aboard Landsat 4 and 5). The Sea-WiFS, designed to help meet the needs of the ocean science and industry communities for space-acquired ocean color and surface temperature information in the 1990s, senses data in eight spectral bands with resolution available at 1.13 kilometers (termed Local Area Coverage) and at 4.5 kilometers (Global Area Coverage).

Performance requirements for both Sea-WiFS and TIR capabilities for the Landsat 6 mission were defined by user working groups sponsored jointly by EOSAT and NASA, composed of remote sensing experts within the public and private sectors, who integrated the data needs of the several disciplines represented into achievable instrument parameters. Landsat 6 will be launched on a Titan II launch vehicle from the Western Test Range at Vandenberg Air Force Base, California. The interval propulsion and navigation capabilities of Landsat 6 allow the

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#### LANDSAT 6 LAUNCH PLANNED, continued

spacecraft to become the upper stage of the launch vehicle, and place itself into its mission orbit at 705 kilometers (438 miles). Landsat 6 will maintain a sunsynchronous orbit with a late morning north-to-south equatorial crossing time.



#### EOSAT-UPDATE

#### GEOCODED LANDSAT IMAGERY

EOSAT now offers geocoded, or maporiented, digital image data derived directly from "A" type Landsat data, with less pixel distortion than geocoded data based on standard "P" type information. Data is currently available only on digital tape, and can be ordered in a variety of formats and projections. For further information on pricing and ordering please contact the EOSAT Customer Services Department, 4300 Forbes Boulevard, Lanham, Maryland, 20706. Telephone: 301/552-0537. This custom unenhanced data product, developed specifically to service the growing GIS field, is available only through the Customer Service department at EOSAT headquarters in Lanham, Maryland.



#### JAPAN LAUNCHES MARINE SENSOR

On February 23rd, 1987 the National Space Development Agency of Japan (NASDA) successfully launched the Marine Observation Satellite-1 (MOS-1), and has begun receiving preliminary transmission of test data. MOS-1 carries three sensor packages--a Multi-spectral Electronic Self-Scanning Radiometer, a Visible and Thermal Infrared Radiometer and a Microwave Scanning Radiometer. A Data Collection System Transponder has also been incorporated into the mission to relay data from a variety of collection platforms. The predicted mission life is two years.

NASDA is currently working through a series of test programs on the satellite and ground segments, and anticipates that data will become available to the public beginning around late November of 1987.

Data will be offered in both computer compatible tape and photographic form, and may be ordered through the Remote Sensing Technology Center (RESTEC). Inquiries may be made through RESTEC, Yuni Roppongi Building, 7-15-17, Roppongi, Minato-Ku, Tokyo 106, telephone (30) 403-1761.

(source: <u>EOSAT Landsat Data User</u> Notes, Vol. 2, No. 2, June 1987)



#### MAILING LIST UPDATE

Thank you for responding to our mailing list update and questionnaire. We had a very good percentage of returns. Our last mailer saying "SECOND NOTICE" ruffled some feathers. We received more returns from that mailer than the previous one.

Persons wishing to be added to the <u>Wisconsin Mapping Bulletin mailing</u> list should contact our office for a brief data base questionnaire.



WLRC FINAL REPORT--Governor Tommy Thompson (right) is briefed on the conclusions of the Wisconsin Land Records Committee last month by UW-Madison faculty members James Clapp (left) and David Moyer (center). Clapp, director of the UW's

#### WLRC REPORTS AVAILABLE

The Center for Land Information Studies of the University of Wisconsin-Madison has taken up the task of distributing the final report of the Wisconsin Land Records Committee (WLRC) and the 13 subcommittee reports. The final report, which contains the recommendations of the WLRC, is a 38-page document with 4 appendices and is available free-of-charge upon request from the Center for Land Information Studies, 1042 WARF Building, 610 Walnut Street, Madison, WI 53705.

The Center also has available for purchase copies of the 13 subcommittee reports of the WLRC. The total set costs \$17.00 plus 5% sales tax for Wisconsin residents from the address mentioned above. The check should be made payable to the UW-Madison. The subcommittee reports are listed as follows: Report #1 Statutory Data Requirements, 100-pp., \$5.50. Report #2 Benefits & Costs, 40-pp., \$2.00. Report #3 Data Responsibility, Maintenance & Security, 16-pp., \$1.50.

Center for Land Information Studies, chaired the committee, which has completed its twoyear assignment to recommend how to modernize land records in the state. (source: <u>IES News</u>, July 1987)

Report #4 Property Records, 21-pp., \$1.50. Report #5 Classification & Standards, 22-pp., \$1.50. Report #6 Interagency & Intergovernmental Data Processing ("Networking"), 27-pp., \$1.50. Report #7 Geographic Reference Standards, 11-pp., \$1.50. Report #8 Emerging Technologies, 25pp., \$1.50. Report #9 Capitalization & Financing of Data Systems, 23-pp., \$1.50. Report #10 Institutional Arrangements, 74-pp., \$3.00. Report #11 Cooperative Arrangements. 12-pp., \$1.50. Report #12 Developing Model Requests for Proposals (RFP's), 7-p., \$1.50 Report #13 Local Institutional Arrangements, 78-pp., \$3.00 The 5% sales tax for Wisconsin

residents should also be added to any individual order of these reports.

Upon request, the State Cartographer's Office will supply an order form which contains a brief abstract of each of the subcommittee reports and ordering information; contact Brenda at (608) 262-3065.

## DANE COUNTY GLOBAL POSITIONING SURVEY

On October 26, survey engineers of the National Geodetic Survey (NGS) began conducting a 4-week geodetic survey within Dane County using five state-of-the-art Trimble Global Positioning System (GPS) receivers. They expect to gain GPS horizontal and vertical control data for approximately 150 locations, some being existing control points: these will be re-occupied and treated as unknowns which will be checked for net distortions.

Staff support for the GPS reconnaissance is being provided by a group of county, state, and federal agencies cooperating in the CONSOIL (Conservation of Natural Resources through Sharing of Information Layers) Project. The goal of this project, authorized and funded by Congress through the U.S.D.A. Soil Conservation Service, is "to implement, test, and evaluate the applicability of automated information technologies for improving conservation planning and program compliance monitoring through improved farm and natural resource program service delivery procedures." The GPS survey begins one of CONSOIL's six integrated component plans, called the Geodetic Control Network Maintenance and Access Project. Its stated objective is "to provide the cooperators with a Public Land Survey System related network which improves as geodetic information becomes available." Under the CONSOIL project, Dane County has been selected as the test area for establishment of a Multipurpose Land Information System featuring the automated integration of soils data and additional geodetic control obtained with GPS technology.

Fixing 150 new control points represents a first step towards establishing a control net that will ultimately be much larger. Remonumented section corners will be used with the County's cooperation as control points wherever such corners are in positions that allow observation of the GPS satellites.



Follow-up data manipulation and analysis for the County-wide GPS survey will be carried out using the University's own geodetic reduction capabilities with NGS performing its own data reduction for comparison.

A public information meeting sponsored by CONSOIL was held October 28th at 1:30 PM at the Dane County Exposition Center. For questions contact Professor Alan Vonderohe at 262-9854 or 262-9860, Rm. 1208, 1415 Johnson Drive, Engineering Building, UW-Madison, Wisconsin 53706.

#### TOP TEN METRO AREAS

Metro Areas	Population
New York	18.0 million
Los Angeles	13.1 million
Chicago	8.1 million
San Francisco-Oakland-	5.9 million
San Jose	
Philadelphia	5.8 million
Detroit	4.6 million
Boston	4.1 million
Dallas-Fort Worth	3.7 million
Houston	3.6 million
Washington, DC	3.6 million

The Nation's metro areas have a total population of nearly 185 million, or about 77 percent of the country's 241 million people.

(source: <u>Data User News</u>, August 1987)

#### Wisconsin Mapping Bulletin

# EARLY RESULTS OF DIGITAL DATA SURVEY

As our readers may recall, the July 1987 Bulletin included a 1-page "Geographic Data Sharing Questionnaire" prepared by the State Interdepartmental Geographic Data Sharing Group. Currently there is no centralized referral service available to determine what public or private computerized cartographic/geographic digital data is available in the state. The brief questionnaire is meant to reflect the general types and quantity of geodata available to help in developing a proposal to fund a more detailed inventory of such data. Besides the Bulletin survey, the Data Sharing Group sent 580 guestionnaires to selected additional state addresses. The State Cartographer's Office is working with the Data Sharing Group by surveying Bulletin readers and by assembling and maintaining the inventory returns.

The initial response to these mailings was very encouraging with 51 respondents indicating they have data to share, and 140 indicating they would like to obtain such data. If you haven't yet returned your questionnaire, there is still time to be included in the final results of the survey.

After allowing time for additional responses, the Data Sharing Group plans to mail follow-up inquiries to respondents willing to share digital geodata, and to those interested in obtaining such data. We expect this survey to generate considerable interest on the part of GIS groups outside as well as within Wisconsin, and this office has already received an inquiry from the Data Acquisition Section of the USGS National Cartographic Information Center. The State Cartographer's Office wishes to reassure respondents that your names and other information provided to us will not be distributed to other groups without first obtaining your permission. Thank you for your responses.

For more information about the Data Sharing Group or the questionnaire, contact David Fletcher, Department of Transportation, 201B Hill Farms Building, Madison, WI 53702, phone 608/266-1357.

### CHRISTINE'S FAREWELL BASH

In the July <u>Bulletin</u>, Christine included a letter on page 3 announcing her acceptance of the position of State Cartographer in Olympia, WA.

To complete the departure scenario, her friends held a farewell dinner in her honor on Friday, August 14th at the Essen Haus located here in Madison. It was an enjoyable time with plentiful German food and "suds". That Friday was a long day for Christine since it was her last day in the office. She didn't realize how many friends she had until that day. She took vacation for the remainder of the month.

We have heard via U.S. mail of her safe arrival (2,200 miles in a new chevy bronco) in Olympia, where she secured her living accommodations and started her new position on September 1st.

The July <u>Bulletin</u> gave you her business address but for those of you who "misplaced" that issue we will reprint the address: Christine Reinhard, State Cartographer, State of Washington, DNR, Division of Engineering, Resource Mapping Section, 1063 South Capitol Way-Rm. 201, MS AW-11, Olympia, WA 98504, phone 206/753-5340.

The SCO wishes Christine happiness, good fortune, and success in Olympia.





#### SCIENCE HALL'S 100TH ANNIVERSARY

For 13 years the State Cartographer's Office has been located in Science Hall, one of the most historic buildings on the UW-Madison campus. As this year the campus community is observing the 100th anniversary of Science Hall's construction, we thought our readers might be interested in some of the historical details of this unique old building.

The current structure was built on the site of an older Science Hall destroyed by fire in 1883; the building had housed the departments of anatomy, anthropology, biology, botany, chemistry, geology, geography, physics and zoology--all the UW Sciences except astronomy and pharmacy. Today Science Hall's occupants are the geography department and library, the Arthur H. Robinson Map Library, part of the Institute for Environmental Studies, the Foreign Students Office, Chicano Studies Program, and of course the State Cartographer's Office.

The "new" Science Hall constructed after the 1883 fire was built in a heavy Gothic style that continues to draw mixed responses ranging from admiration to repulsion. Working as an assistant to the construction supervisor during rebuilding was a student named Frank Lloyd Wright. The new structure was one of the first in the world to incorporate steel I-beams, and today is believed to be the oldest existing building to use I-beams as a base. Because the building was constructed before the advent of acetylene torches, the beams had to be trimmed by drilling small holes and bending the beams until they broke. The jagged edges are still visible in the attic above the fifth floor, close to where the State Cartographer's Office stores its inventory of completed County Cartographic Catalogs.

Designed to be completely fireproof, Science Hall's wall, ceiling and roof are of hollow tiling, the stairs are iron and the use of wood is restricted to furnishings and decorative trim. For good measure, fire escapes and a spiral slide reaching from a fifth floor tower to the ground were also installed. Both these relics were removed during relatively recent building renovations.

The former location of the anatomy department's dissection chamber in Science Hall has given rise to several macabre tales involving the building. Most notable of these is the legend that during one of the renovations a corpse (presumably a cadaver) was discovered walled into the building. If you have ever visited Science Hall, you can easily imagine how the imposing Gothic structure could inspire such rumors. Sad to say, nothing so melodramatic as mummified body parts have yet been discovered in the group of first-floor offices that house the State Cartographer's Office staff.

(source: <u>Wisconsin Week</u>, Sept. 23, 1987)



## TESTING CAD PACKAGES FOR CARTOGRAPHIC USE

The State Cartographer's Office has upgraded its Automated Cartographic System by replacing the IBM XT with a new Telex 1280 computer workstation, equipped with an EGA (Enhanced Graphics Adapter) 2001/Plus graphics board from Ahead Systems, Inc., and a MultiSync monitor from NEC Home Electronics. The Telex is much faster than the IBM, the graphics board automatically switches between several graphic protocols, and the monitor automatically adjusts its scanning frequency. The new hardware configuration has increased significantly the number of compatible software choices. In recent months the Office has been reviewing several low-priced computer-assisted design/drafting (CAD) packages: Generic CADD, Prodesign II, LaserCAD, and TurboCAD. Besides the economical price, hardware compatibility, general performance, and suitability for cartographic applications, we specifically looked at their usefulness for automated production of County Cartographic Catalog pages. Following is a brief summary of our preliminary findings:

Generic CADD: The Office tested version 3.0 of this modular program. The basic program costs \$99.95, and have also purchased several software modules: Drafting Enhancement-1 and Drafting



Enhancement-2 (each \$49.95) which allow the user to draw parallel lines, and to hatch and fill solid areas, and DotPlot (\$49.95) needed to direct output to a printer. Other modules such as AutoConvert (\$49.95) and Generic IGES (\$249.95) which enable the exchange of files with AutoCAD and mainframe computers have not been tested. Generic CADD uses 187 commands which can be easily combined into macros or executed as batch files. In addition, the program has excellent menu utilities. It allows the use of up to 10 screen and 10 digitizer menus which can be reorganized or entirely rewritten by the users, allowing the construction of custom menus for specific applications. The office has selected this program as our tool for initial automated catalog production. Generic CADD is available from: Generic Software, Inc., 8763 148th Ave., NE, Redmond, WA 98502.

Prodesign II: The Office tested version 2.0 which requires an IBM PC or compatible hardware with at least 512K of RAM. The list price of this version is \$299.95 but the company provides separately several useful utilities, such as Font Editor (\$49.95) and AutoCad Interchange Utility (\$99.95). The software is easy to install, learn and use. Some of the flaws of version 2.0 (e.g. no hatching, macros, etc.) have been remedied in version 2.5. Other problems (e.g. only nine line widths and an inability to manipulate color masks) will be revised in version 3.0, scheduled for distribution in November under the name DesignCAD-2D. The list price will be \$299.95 (only \$30 for the update of any version of Prodesign II). Font Editor and AutoCad Interchange Utility will be included in the program. Prodesign II is produced by American Small Business Computers, 118 South Mill Street, Pryor, OK 74361.

LaserCAD: The Office tested version 4.01G of this program, priced at (\$99.95). Installation is very easy but the program is restrictive in terms of acceptable system configuration: a digitizer is

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#### TESTING CAD PACKAGES FOR CARTOGRAPHIC APPLICATIONS, continued

needed for operation, digitizer and plotter must use different ports, and there is virtually no flexibility in terms of setting operation and communication parameters for peripherals. Another disadvantage of this package is the way it handles color; each layer appears on the screen in an automatically assigned color, with the top layer always appearing white. Different plotter-pen colors can be associated with individual objects but they will be displayed as different intensities of the color assigned to that particular layer. A new enhanced version of this product is expected in early 1988. LaserCAD is available from: DSL Inc., 411 West 7200 South, Suite 303, Midvale, UT 84047.

TurboCAD: The package looked interesting but we were unable to test this program because it turned out to be incompatible with our DigiPad5 digitizer, despite assurances from the producer that we could use all our current peripherals with this program. They stated that a new version of TurboCAD (\$99) is expected in January including the driver for DigiPad5. TurboCAD is available from: MSA Group, Inc., 12021 Wilshire Blvd., Suite 370, West Los Angeles, CA 90025.

(source: Irena Fraczek, Automation Specialist, State Cartographer's Office)



# SPOT: APPLICATIONS FOR WISCONSIN IDENTIFIED

Remotely-sensed imagery obtained from the French SPOT satellite promises to be very helpful for Wisconsin's environmental monitoring and resource management programs, according to Thomas Lillesand, Director of the UW-Madison's Environmental Remote Sensing Center. Lillesand is among 19 American scientists selected by SPOT's French manufacturer to evaluate the satellite's performance; over the past year Lillesand and his students have been studying SPOT images of the Madison, Spooner and Green Bay areas.

Within its 37- X 37-mile field of view, SPOT can produce images of features as small as 30 feet across. Sensors aboard the Landsat satellites, the source of the highest-quality imagery currently available in the U.S. for civilian use, have resolution to only about 90 feet. SPOT's greatest advantage over Landsat, says Lillesand, is its pointable mirror: "Landsat has a fixed mirror and must be directly overhead to view an area, which happens once every 16 days. SPOT's pointable mirror puts it in range of any given location on earth 11 days out of its 26-day orbit."

A major potential use of SPOT's more detailed imagery is to help firefighters more accurately pinpoint the hundreds of forest fires that threaten Wisconsin's woodlands each year. The DNR is currently helping evaluate the use of SPOT for forest management. SPOT imagery of Green Bay--the bay, not the city--is being studied to determine if it can provide a statewide lake water-quality mechanism. SPOT's ability to relay three-dimensional images also makes it ideal for mineral and geologic exploration. In addition, Lillesand is working with the State Cartographer's Office to produce a color satellite image of the Madison area with three times the detail of those available previously, which could be especially useful to city planners.

(source: IES News, July 1987)

#### NGS-UPDATE

The National Geodetic Survey (NGS) has issued new billing information for people wishing to obtain geodetic control data. Prepayment is required for all orders. The standard charges are as follows:

- Published quadrangle bookletshorizontal or vertical control data: 1-25 shts, p/bklt.....\$ 6.50 26-50 shts, p/bklt....\$13.00 51-100 shts, p/bklt...\$26.00 101 or more shts, p/bklt..\$50.00
- 2. Complete county coveragehorizontal or vertical control: Old format data not presently available in published guadrangle booklets.....\$ 4.00
- 3. Manuscript form-horizontal or vertical control. Unadjusted project data or recently adjusted projects in process of being incorporated into quadrangle booklets: 1-25 shts, p/proj.....\$ 6.50 26-50 shts, p/proj.....\$13.00 51-100 shts, p/proj....\$26.00 101 or more shts, p/proj...\$50.00
- Geodetic diagram regardless of size or area covered.....\$ 6.00
- 5. State Calibration Base Line booklets.....\$ 6.50

To obtain information and/or data, please forward your request to: National Geodetic Information Center, NOAA N/CG 17, Rockville, MD 20852 or telephone (301/443-8631 Geodetic Data, Diagrams, and Software, Vicki Davis); (301/442-8316 Geodetic Publications, Grace Sollers).

NGS reports that the budget for its mark maintenance activity has been eliminated, and that this service to users of the National Geodetic Reference System (NGRS) will be reduced immediately. NGS is seeking the aid of states, counties, cities, universities, business and others in maintenance of NGRS, recovery of geodetic points and updating of station descriptions as necessary. Information and training will be provided by NGS to volunteers wishing to assist in recovery and maintenance of the NGRS system.

NGS has published a new <u>Geodetic</u> <u>Glossary</u>, replacing the <u>U.S.</u> Coast <u>and Geodetic Survey's Special</u> <u>Publication 242</u>. The 274-page <u>Geodetic Glossary</u> contains nearly <u>5,000 definitions</u>, a six-fold increase over the previous version. In addition to strictly geodetic terms, the glossary includes related material in geophysics, space science, mathematics, astronomy, photogrammetry, surveying, computer science, and land management.

The Geodetic Glossary costs \$13 and can be ordered from: National Geodetic Information Branch, N/CG17x2, Rockwall Bldg., Room 14, National Geodetic Survey, NOAA, Rockville, MD 20852, phone 301/443-8316.

Prepayment is required, by personal check or money order (payable to NOAA, Geodetic Survey); by VISA, Choice, or MasterCard; or by a prepaid Government Printing Office account. For orders sent outside the United States, a surcharge of 25% must be added to the publication price to cover additional postage.



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# COLUMBUS AND THE WORLD MAP

The University of Wisconsin at Milwaukee has received a \$38,000 grant from the National Endowment for the Humanities to plan an extensive Exhibition on "Columbus and the World Map" to coincide with the 1992 Quincentenary of Columbus' first voyage. The project will be directed by Dr. Brian Harley of the UWM Geography Department together with Dr. Roman Drazniowsky, Curator of the University's American Geographical Society Collection, and with the collaboration of Dr. David Buisseret of the Hermon Dunlop Smith Center for the History of Cartography at the Newberry Library, David Bosse of the William L. Clements Library at the University of Michigan, and Dr. John Parker of the James Ford Bell Library at the University of Minnesota. The basic idea is that the four institutions will pool their expertise and resources in producing a major exhibition and published catalog. The emphasis will be on maps of the period, using their images and the historical, scientific, and cultural events they portray as a means of reinterpreting the Columbian encounter for both the scholarly and public audiences.

With the strength of these collections the planned Exhibition will contain many of the rare original maps and artifacts which recorded the discovery and exploration of the New World. The proposed themes for the exhibition include: European maps and mapping on the eve of the Columbian



voyages; Columbus and cartography; the earliest cartographic images of the Americas in manuscript and printed maps; the impact of the Columbian discoveries on European cartography (including maps and the Ottoman encounter with the New World); maps as seen from an American Indian point of view; and the ideology of cartographic decoration.

Plans call for the Exhibition to be available from the end of 1989 through 1992. Inquiries are welcome at the project office. Contact Mark Warhus, Coordinator, The Center for Map History, American Geographical Society Collection, University of Wisconsin-Milwaukee, P.O. Box 399, Milwaukee, WI 53201, phone 414/229-4101.

(source: Mark Warhus)



# GEOGRAPHICAL DATA SENSING AND PROCESSING

The Commission on Geographical Data Sensing and Processing is pleased to announce that the headquarters of the Commission will be located, as of this date, in the Geographic Information Systems Laboratory of the Department of Geography of The Ohio State University. All communications regarding Commission business should be directed to: Dr. Duane F. Marble, Chairman, IGU Commission on Geographic Data, Sensing and Processing, Department of Geography, The Ohio State University, Columbus, OH 43210. The new telephone number of the Commission is 614/292-2250 and Telex transmissions may continue to be addressed to 650-218-4975 MCI.

#### NEW MAPS



#### WISCONSIN GROUNDWATER CONTAMINATION SUSCEPTIBILITY

A 1:1.000,000-scale map, in color, has been prepared to display areas of higher and lower susceptibility to groundwater contamination in Wisconsin. Five physical resource characteristics were identified as important in determining how easily a contaminant can be carried through overlying materials to the groundwater. These factors are: depth to bedrock; type of bedrock; soil characteristics; depth to water table; and surficial deposits. Statewide resource characteristic maps for each of these factors were compiled at a scale of 1:250,000 or 1:500,000, and are included on the map sheet. Each of the resource characteristic maps was digitized and combined into a 1:1,000,000-scale composite map using a computer.

The map is designed for use with other planning tools such as land use maps, groundwater quality data and contamination source information to help state and local officials make sound groundwater management and land use decisions. Because the composite map is compiled from very generalized sources, it is not intended for any site-specific purposes. Marginal text further describes the methodology used in preparing this map, and additional limitations for its use.

The map sheet, titled "Groundwater Contamination Susceptibility in Wisconsin," is published by the Wisconsin Department of Natural Resources and the Wisconsin Geological and Natural History Survey. Available from the Wisconsin Geological and Natural History Survey, 3817 Mineral Point Road, Madison, WI 53705.

#### USGS DIGITAL DATA PUBLICATIONS

The U.S. Geological Survey has a number of publications which describe digital data products, digital data applications and digital data standards. These publications will be particularly valuable to those working with computer graphics, geographic information systems or computer image analysis.

A selected list of USGS digital data publications is given below. These publications, with one exception, are free upon written request to the U.S. Geological Survey, Books & Open-File Reports, Federal Center, Bldg. 41, Box 25425, Denver, Colorado 80225, phone (303) 236-7476.

USGS Publications List

"USGS Digital Cartographic Data Standards", GS Circular 895, 1984. (A-G Separate Publications):

A: Overview of USGS Activities

- B: Digital Elevation Models
- C: Digital Line Graphs from 1:24,000 Scale Maps
- D: Digital Line Graphs from 1:2,000,000 Scale Maps
- E: Land Use and Land Cover Digital Data
- F: Geographic Names Information System
- G: Digital Line Graph Attribute Coding Standards

"Digital Line Graphs from 1:100,000 Scale Maps: Data Users Guide 2", 1985.

"GEODATA: Digital Cartographic and Geographic Data" (Pamphlet)

"Applications of Geological Survey Digital Cartographic Products, 1979-1983", USGS Bulletin 1583, 1986. Price \$2.00.



#### NEW MAPS, continued

# ALKALINITY OF UPPER NIDWEST SURFACE WATERS

This 1:2,500,000-scale, color map illustrates the regional patterns of mean annual alkalinity of lakes and streams in the northern portions of Minnesota, Wisconsin and Michigan. The map is based on data available as of June 1983 from approximately 14,000 Takes and streams and the apparent spatial associations of these data with watershed characteristics such as land use, physiography, geology and hydrology. A diagram indicates very rough locations of sites from which alkalinity data were obtained. All data points are associated with watersheds of less than 2600 square kilometers; about 85% are associated with watersheds of less than 130 square kilometers. Roughly 82% of the data points are from lakes and 18% from streams.

Explanatory marginal text emphasizes that because alkalinity is only a partial indicator of potential sensitivity of surface waters to acidic deposition, the map cannot be used alone for making quantitative assessments of the number or surface area of affected lakes or streams.

An 11-page excerpt from

Environmental Management, Vol. 10, No. 6, pp. 829-839 accompanies the map and provides a detailed explanation of its development and utility, as well as more detailed discussion of all the factors influencing regional confidence limits.

For ordering information contact the U.S. Environmental Protection Agency, 230 South Dearborn Ave., Chicago, IL 60604.

#### BURNETT COUNTY CATALOG

The <u>Burnett County Cartographic</u> <u>Catalog</u>, the 46th in the series, is now available. With a total of 151 printed pages, it is the largest catalog yet published. County catalogs for Washburn and Vilas are in work. For your free copy of any available catalog, contact Brenda at 608/262-3065.

#### ICE AGE TRAIL TO OPEN IN TAYLOR COUNTY

By the fall of 1987, Taylor County will have on the ground about seventy miles of unbroken National Scenic Ice Age Trail. The trail will stretch from approximately Highways 64 and F in the southwest portion of the county and travel to the northwest corner of the county and enter Lincoln County. The trail is built for hiking but, especially in the Rib Lake-Westboro areas, the trail also presents some of the best cross-country skiing in the Midwest.

The last remaining segments will be completed this summer. Members of the American Hiking Society and the Wisconsin Go Hiking Club will be converging on Wisconsin to cut trail on the Fisher Creek segment and the Wisconsin Conservation Corps will finish the Wood Lake segment. Both segments are in the northeast corner of Taylor County. National dedications of these segments are set for September 19, 1987 and a state-wide Ice Age Trail Hike-A-Thon (occurring partially between Rib Lake and Timm's Hill) is set for October 3, 1987.

(source: Northwest Regional Planning Commission Tourism Newsletter, summer 1987)



#### WISCONSIN COUNTY TOPO MAPS

The Wisconsin Geological Survey (WGS) received two new USGS 1:100,000-scale Wisconsin County Series Maps since our April report. The total number of Wisconsin counties for which the WGS has county topographical maps now stands at 49. The latest maps are: GREEN, and ROCK. Please see the July 1987, April 1987, January 1987 and October 1986 <u>Bulletins</u> for lists of the other available maps. Folded copies can be purchased for \$4.00 from the Wisconsin Geological Survey, 3817 Mineral Point Rd., Madison, WI 53705, phone 608/263-7389.

#### COMING EVENTS



WISCONSIN CONFERENCE ON LAND RECORDS On February 25 and 26, 1988, the Wisconsin Land Information Coalition (WLIC) will convene a 1-1/2 day conference at the Radisson Inn, Oshkosh, WI.

The direction of the conference is "WISCONSIN LAND RECORDS MODERNIZATION, FOCUS ON IMPLEMENTATION".

The WLIC is the independent association whose formation has been recommended by the Wisconsin Land Records Committee (WLRC). The association is currently supported as a committee of the Urban and Regional Information Systems Association (URISA), Wisconsin Chapter. URISA is serving as a temporary host to the fledgling WLIC.

While the WLIC is convening the conference, it is being sponsored by a group of Wisconsin organizations representing a wide variety of professionals in the state, including surveyors, assessors, register of deeds, property descriptors, cartographers, photogrammetrists, planners, utility personnel and others. These organizations are coming together for the common goal of improving the state's land records.

In a brief synopsis, the conference will include national speakers, examples of Wisconsin modern land records systems in place and a 4-track set of parallel sessions (some being repeated) on Geographic Information Systems, Geodetic Control, Parcel Mapping and Special Applications.

In addition, the conference planning committee is allowing time for groups of professionals to meet and discuss the direction of WLIC and present their recommendations to the entire conference during the last session on Friday. The State Cartographer's Office is preparing a statewide mailing of the preliminary conference program in mid-December. This program will have an advance conference registration form and hotel reservation information.

In order to afford maximum accessibility to this conference, the WLIC committee has attempted to keep the cost at a minimum. The conference fee for individuals is \$25.00 which will include the Thursday luncheon and break refreshments.

For additional information contact: Art Ziegler, State Cartographer, Rm. 160 Science Hall, Madison, WI 53706-1404, phone 608/262-6852.



# ST. LOUIS SITE OF 1988 ACSM/ASPRS CONVENTION

The theme is "The World in Space" for the 1988 Annual Convention of the American Congress on Surveying and Mapping (ACSM) and the American Society of Photogrammetry and Remote Sensing (ASPRS) scheduled to be held March 13-18 in St. Louis. Papers on a wide range of topics will be presented, including automated cartography, geographic information management systems, land surveying, remote sensing, and data processing reproduction and display. Over 300 exhibit booths are expected to display items of interest to professionals in the mapping sciences. For further information contact Jerome J. Lenczowski (ACSM) or Bobbie Lenczowski (ASPRS), 12755 Weber Hill Road, St. Louis, MO 63127 or call 314/842-4679.

#### Wisconsin Mapping Bulletin

#### EVENTS, continued

# MAP EXHIBITION AT UNIV. OF ILLINOIS LIBRARY

The University of Illinois Map & Geography Library has announced an exhibit of maps of the "Holy Land" which will be on display through December and January. An opening reception is scheduled for December 6, 1987, when antiquarian dealer Kenneth Nebenzahl will present a paper illustrating his interest in maps of the region. An exhibit catalog, containing color plates, will be available to exhibit attendees.

Beginning with a sixth century mosaic, the exhibit includes the first known example of a printed map, the first map engraved by an Englishman, the first 'modern' geographical dictionary and maps from well-known cartographers such as Ortelius, Jansson and Mercator. The exhibit graphically portrays the change from mapping biblical events to objective geographical descriptions and includes maps from the sixth century to the mideighteenth century.

#### AUTOMATED MAPPING/FACILITIES MANAGEMENT (AM/FM) Winter 1988 Conference

March 7-10, 1988 in Fort Worth, TX. Theme: New Technologies and Innovative Applications. Contact: AM/FM International, 8775 E. Orchard Rd., Suite 820, Englewood, CO 80111.

#### SPECIAL LIBRARIES ASSOCIATION -GEOGRAPHY AND MAP DIVISION (SLA) Annual Conference

June 11-18, 1988 in Denver, CO. Theme: Expanding Horizons: Strategies for Information Managers. Contact: June Crowe, City of Tucson Planning Dept., Planning Library, P.O. Box 27210, Tucson, AZ 85726-7210.

#### ASSOCIATION OF AMERICAN GEOGRAPHERS (AAG) First International Symposium on Geographic Information Systems November 15-18, 1987 in Arlington, VA. Contact: E.H. Pechan & Associates, Inc., 5537 Hempstead Way, Springfield, VA 22151, Att: IGIS 87.

#### URBAN AND REGIONAL INFORMATION SYSTEMS ASSOCIATION (URISA) Fall Conference

November 30-December 1, 1987 in Calgary, Alberta. Theme: Information Explosion, Myth or Reality? Contact: URISA, Alberta Chapter, c/o Margaret Flaska, Registration Co-ordinator, Edmonton Metropolitan Regional Planning Commission, Suite 600, 10025-106 Street, Edmonton, Alberta Canada T5J 164.

THE STATE CARTOGRAPHER'S OFFICE ISSUES THE WISCONSIN S MAPPING BULLETIN IN JANUARY, APRIL, JULY AND OCTOBER. IT IS DISTRIBUTED FREE OF CHARGE ON REQUEST.

THE EDITOR WELCOMES NEWS ON COMPLETED OR ONGOING PROJECTS, PUBLISHED MAPS OR REPORTS, CONFERENCES/WORKSHOPS. LOCAL AND REGIONAL INFORMATION IS ESPECIALLY REQUESTED.

PLEASE SEND ALL COMMENTS, CORRECTIONS, AND NEWS ITEMS TO:

> STATE CARTOGRAPHER'S OFFICE,

155 SCIENCE HALL MADISON, WI 53706-1404, 608/262-3065.

# ACSM/ASPRS 1988 Annual Convention March 13-18, St. Louis "THE WORLD IN SPACE"

Denver

Wash. D.C.

FOR RESIDENTS OF WISCONSIN, 1988 WILL OFFER THE BEST OPPORTUNITY IN SEVERAL YEARS TO ATTEND THE ANNUAL ACSM (AMERICAN CONGRESS ON SURVEYING AND MAPPING)/ASPRS (AMERICAN SOCIETY OF PHOTOGRAMMETRY AND REMOTE SENSING) CONVENTION WITHOUT HAVING TO TRAVEL HALFWAY ACROSS THE COUNTRY. THE 1988 CONVENTION, SCHEDULED FOR MARCH 13-18, WILL TAKE PLACE IN ST. LOUIS, MISSOURI, A MERE SEVEN-HOUR DRIVE (APPROXIMATELY) FROM MADISON OR MILWAUKEE. THIS IS THE CLOSEST THE ANNUAL MEETING WILL BE HELD FOR AT LEAST THE NEXT THREE YEARS (1989-BALTIMORE; 1990-DENVER; 1991-WASHINGTON, D.C.)

STLOUK

THIS IS A MAJOR CONFERENCE FOR THE MAPPING SCIENCES, AS LAST YEAR'S ANNUAL ACSM/ASPRS CONVENTION WAS THE LARGEST EVER, WITH 320 EXHIBIT BOOTHS AND MORE THAN 7000 PEOPLE ATTENDING. AT LEAST AS LARGE A TURNOUT IS EXPECTED FOR THE ST. LOUIS CONVENTION. THE UNIVERSITY OF WISCONSIN-MADISON STUDENT CHAPTER OF THE ACSM PLANS TO STAFF A BOOTH AT THE CONVENTION FEATURING SAMPLES OF ITEMS PRODUCED BY THE U.W. CARTOGRAPHIC LABORATORY AND THE STATE CARTOGRAPHER'S OFFICE, AS WELL AS A SUMMARY OF RESEARCH BEING CARRIED OUT BY GRADUATE STUDENTS IN THE MAPPING SCIENCES AT THE MADISON CAMPUS. ALSO IN ATTENDANCE WILL BE PROFESSOR JAMES CLAPP, PRESIDENT-ELECT OF ACSM AND PROFESSOR PHILLIP MUEHRCKE, OUTGOING PRES-IDENT OF THE AMERICAN CARTOGRAPHIC ASSOCIATION.

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