

# WISCONSIN MAPPING BULLETIN

Vol. 15 No. 3 July 1989



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

## LEGISLATURE AND GOVERNOR CONSIDER STATE LAND INFORMATION PROGRAM

The Wisconsin Legislature and the Governor appear ready to establish a Land Information Program.

Consideration of Assembly Bill 269 (see April Bulletin) accelerated during the months of May and June. In the considerably abbreviated form being considered as part of the biennial budget, some aspects of the Program could begin as early as July.

AB 269 was introduced in April by State Representative Joe Wineke (D-Verona) at the urging of the Wisconsin Land Information Association (WLIA). The leading Republican co-sponsor has been Representative Robert Welch (Redgranite). The Legislature and Governor Thompson's administration have recently come to some forms of a compromise which would scale down the program in its initial phase, but which would also put it in place sooner.

On May 4th, the State Assembly's Committee on State Affairs held a public hearing on AB 269. At this hearing there was broad support for the bill in its form as introduced. Speaking in favor were representatives from local, state, and federal government agencies, utilities, the private sector, and professional associations. A few other persons testifying objected to the proposed funding source (raising the real estate transfer fee 10¢ per \$100 transferred). These persons proposed no alternative source(s) of funds beyond a reallocation (between the county and state) of the existing level of transfer fee. Such a reallocation (for instance, a 50/50 split rather than the current 6¢/24¢) would amount to funding the program out of State General Purpose

Revenues (GPR); this idea appears to be unacceptable to state policy makers.

On May 23rd, the State Affairs Committee voted unanimously to accept a substitute amendment to AB 269 offered by Rep. Wayne Wood (D-Janesville). This amendment essentially eliminated mention of a specific funding source for the program, as well as a specific means of allocating funds which might be raised. Instead, the new Land Information Board would be charged with determining a user fee structure and distribution mechanism. Start-up funds from GPR were included, but were to be paid back to the General Fund from the eventual user fees. The Committee then voted 11-1 to recommend this version of AB 269 to the Assembly as a whole.

Upon receiving the Committee's recommendation on AB 269, Assembly Speaker Tom Loftus sent the bill to the Joint Finance Committee for consideration of its fiscal impacts; this action is standard procedure. As of this writing, Joint Finance has not taken up AB 269 because its time has been fully occupied for months with the Biennial State Budget. If Joint Finance passes the bill later this summer (either as is, or after further modification), then the entire State Assembly could consider it during the Fall floor period. After that step, AB 269 would go to the State Senate, and then to the Governor for signature or veto.

...continued on page 2

## Land Info Program

..cont. from page 1

As a result, in the last several weeks negotiations amongst the key players have further modified the proposal, and Rep. Wineke believes that it appears to have a good chance of passage as part of the Budget.

In the form passed by the Assembly, and reaffirmed by the Assembly-Senate Conference Committee, the major modifications are:

Only one project position (temporary employe) would be funded at \$40,000 (including benefits, presumably). The position is assigned to the Department of Administration (DOA) to work on the details of the program with the Land Information Board which would be appointed by August 15, 1989. These details would take the form of recommendations for Administrative Codes as well as a funding report to be submitted jointly by the Board and DOA to the Joint Finance Committee by December 15, 1989. This timing provides the Legislature with an opportunity to appropriate funds for the program before the end of the session.

The Land Records Board would be advisory to DOA, but would have the responsibility along with DOA to develop the program and recommend policy to the legislature. Since there are no start-up funds beyond the single position, and no user fees designated to support the program, the details of funding local coordination and modernization efforts would be considered by the Board and DOA, with advice forwarded to the Legislature

Rep. Wineke, in a letter to persons interested in land records modernization, urged people to write to Governor Thompson indicating their support for the language in the state budget. The Governor has the power to veto all or virtually any part of any budget item. The process of determining these "line item vetos" will probably take up the first several weeks of July, after which the Legislature can attempt to override any particular veto.



## WLIA TO MEET IN GREEN BAY SEPTEMBER 6

The Wisconsin Land Information Association will hold a general membership meeting on September 6 at the Howard Johnson in De Pere. The meeting will begin at 10:30 am. The site is near the junction of US 41 and County Trunk G.

The status of the Wisconsin Land Information Program will be the focus of the meeting. According to WLIA President Ben Niemann, the association intends to continue taking a very active role in establishment of such a program for Wisconsin.

There will be a buffet lunch as part of the meeting. WLIA members will receive a mailing regarding the meeting including reservations for the lunch.

For additional information on the meeting or on membership, contact WLIA Secretary Bob Gurda at 608/262-6850.

---

## UPDATE ON WISCONSIN GEODETIC REFERENCE SYSTEM

The Wisconsin Department of Transportation (WisDOT) and the National Geodetic Survey (NGS) are moving forward with their cooperative survey using Global Positioning System (GPS) technology. (See the January and April 1989 issues of this Bulletin for details on the rationale and plan). Some aspects have changed slightly, and the schedule has been pushed back.

As of this writing, about 15% of the approximate total of 200 monuments have been poured; this work is continuing. Reconnaissance is 95% complete. DOT has purchased 4 Ashtech receivers, but will use these for highway project work; the GPS survey will be done by contractor(s), who will not be chosen until monumentation is complete (projected by mid-autumn).

NGS will do all surveying at all 47 ADAM sites except tying those primary points which will also be in the WGRS horizontal network; DOT will survey all other points for the WGRS, all of which will ultimately have azimuth marks (although some azimuths will follow the initial survey).

## NEWS FROM THE SCO

---



### CHANGE IN OFFICE CATALOG DISTRIBUTION POLICY

For all catalogs produced after July 1, 1989, the State Cartographer's Office will institute a charge to recover cost of reproduction, printing, and distribution. This policy takes effect with the Dane County Cartographic Catalog, 1988, being released for distribution July 3, 1989.

This policy was approved by the Committee on State Cartography at their May 2, 1989 meeting and coordinated with the College of Letters and Science, University of Wisconsin-Madison.

This policy will apply to all future catalogs of the Office, including County Cartographic Catalog, Aerial Photography Coverage Catalogs, and Geodetic Catalogs.

The State Cartographer's Office will, however, in compliance with Wis. Stat. 36.25 (12m), (e) will distribute single copies of catalogs, without charge to: Contributors to the content, and applicable information collections affiliated with: Wisconsin Government entities, Public Libraries, and Education Institutions.

In addition, the Office has the option on future catalog printings to negotiate support funding for reproduction, printing, and distribution from interested organizations.

This change in distribution policy was necessitated by increased service requirements of the Office while faced with a fixed funding budget.

### DANE COUNTY CARTOGRAPHIC CATALOG AVAILABLE

The Office has completed the Dane County Cartographic Catalog. This 161-page catalog is the 52nd in the county series produced by the State Cartographer's Office. Mapping resources are indexed in three base graphics: Dane County East, Dane County West, and a City of Madison inset. The catalog also includes pages on the recent Global Positioning Surveys and the Orthophoto Quarter Quads series.

This new catalog is available for distribution from the Wisconsin Geological & Natural History Survey, Map and Publication Sales, 3817 Mineral Point Road, Madison, WI 53705, phone 608/263-7389. The cost is \$7.00 at the Map Sales counter or \$8.00 by mail. The Dane County Cartographic Catalog is the first issue produced under a new cost-recovery policy of the Office.

### CATALOGS IN PRODUCTION

The Chippewa County Cartographic Catalog is nearing completion. Work has begun on catalogs for Green County and Clark County. Marathon County is being scheduled.

Collection of information is underway for a county-by-county report on the status of remonumentation of the Public Land Survey System. We project an autumn publication date.

# CONFERENCES AND TECHNICAL MEETINGS

## 1989

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

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

July 17-21, **GIS Technology in Land Resources Management: A Short course for Managers.** Colorado University, Cooperative GIS Technology Lab., College of Forestry & Natural Resources, Ft. Collins, CO. Contact: Office of Conference Services, Rockwell Hall, CSU, Ft. Collins, CO 80523, 303/491-7501. Course also offered December 4-8.

July 25-27, **Executive Clinic on GIS and Remote Sensing Technologies.** Colorado State University, Pingree Park Campus. Contact: Office of Conference Services, Rockwell Hall, CSU Ft. Collins, CO 80523, 303/491-7501

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

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

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

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

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

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

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

September 6, **Wisconsin Land Information Association, General Membership Meeting,** 10:30 a.m. - 3:00 pm, De Pere, WI (at US 41 & County Trunk G). Contact: Bob Gurda at 608/262-6850.

September 6-8, **Digital Geographic Information Systems,** a class offered by the George Washington University will be held in Washington, DC. Contact: Darold Aldridge at 202/994-8518.

September 17-22, **ASPRS/ACSM's fall conference** will be held in Cleveland, OH. Contact ACSM, Brandy Bethel, 210 Little Falls St., Fall Church, VA 22046, 703/534-6617.

September 18-19, **Options for the Federal Agenda for Earth Observations in the Global Change Era,** at the National Press Club Building, Washington, DC. Contact: Dr. Robert H. Rogers, ERIM, Box 8618, Ann Arbor, MI 48107-8618, 313/994-1200, ext. 3234.

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

October 17-19, **Third Annual Midwest/Great Lakes ARC/INFO Users Conference,** Madison, WI. Contact: ARC/INFO User Conference Coordinator, Wisconsin Geological & Natural History Survey, 3817 Mineral Point Road, Madison, WI 53705, 608/262-1705.

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

November 7-9, **Developing Geographic Mapping and Analysis Systems,** a class offered in Madison, WI by the Univ. of Wisconsin-Madison. Contact: Patrick Eagan, Dept. of Engineering Professional Development, 432 N. Lake St., Madison, WI 53706, 608/262-2061

November 12-15, **NCGA Mapping and Geographic Information systems '89.** Westin Bonaventure Hotel, Los Angeles, CA. Contact: Education Coordinator, National Computer Graphics Association, 2722 Merrilee Dr., Suite 200, Fairfax, VA 22031, 800/225-NCGA; 703/698-9600.

November 13-15, **Infrastructure Information Management Systems,** a class offered in Madison, WI by the Univ. of Wisconsin-Madison. Contact: Patrick Eagan, Dept. of Engineering Professional Development, 432 N. Lake St., Madison, WI 53706, 608/262-2061

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

## 1990

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

April 23-26, **AM/FM International Conference,** will be held at Stouffer Harborplace Hotel, Baltimore, MD, 303/779-8320.

August, **URISA's 28th annual conference,** Edmonton, Alberta, Canada

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

## LANDSAT PROGRAM SUPPORTED

On June 1, President Bush announced that he had approved funding for the continued operations of Landsats 4 and 5, and for the completion and launch of Landsat 6 (expected in June, 1991). This indication of support for the Landsat program endorsed the actions of the National Space Council, which recommended such support at its first meeting May 12.

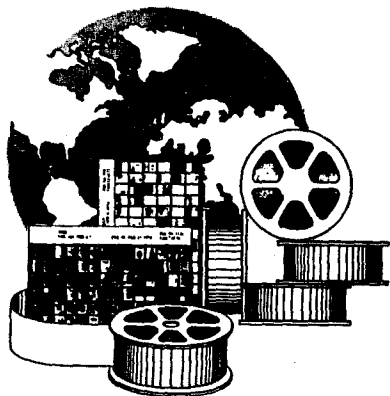
Funding for Landsat 6 is currently included in the Department of Commerce (NOAA) budget. The question of determining the ultimate best home for Landsat activities in the federal bureaucracy remains unanswered. NASA continues to work on developments in sensors which, if put into use, would collect amounts of data which in one year would dwarf what is currently available from the entire history of the Landsat program. The storage, dissemination, and pricing of such data will continue to raise questions of public policy and coordination of agencies involved.

Sources: *Landsat World Update, Vol.2, no.6; Science, Vol.224*

## LANDSAT CATALOG FROM EOSAT

EOSAT, the private consortium that operates the LANDSAT system under contract with the federal government, has created a new catalogue of products and services, which includes full descriptions of new digital and photo products, and of services provided by EOSAT representatives and LANDSAT stations throughout the world. The new catalogue will be sent automatically to current EOSAT customers, and can also be obtained at no charge on request from the EOSAT Customer Services Office, EOSAT Headquarters, 4300 Forbes Boulevard, Lanham, Maryland 20706.

Source: *Landsat World Update, Vol.2, no.6*



## GIS/LIS VIDEOS AND TEXTS

ACSM is offering several new resources on geographic/land information systems. Prices below are for members or students/nonmembers.

- a video "GIS Today" filmed at the GIS/LIS '88 Conference in San Antonio in November. \$50.90 / \$90.90
- a text "Fundamentals of GIS: A Compendium". \$30.00 / \$50.00 (available late summer)
- a text "GIS/LIS Compendium for Practicing Surveyors" \$25.90 / \$30.90 (available early fall)
- a text "Multipurpose Cadastre: Terms and Definitions" \$5.00 / \$5.00

For detailed information on content, size, format, etc., contact ACSM at 210 Little Falls St., Falls Church, VA 22046. To order with credit card by phone, call (703) 241-2446.

## REPORT ASSISTS IN GIS EVALUATION

How does a person, or agency, or business evaluate a geographic information system? Several perspectives, formed into a coordinated whole, are helpful: Vendor literature and demonstrations can be illuminating; consultants can help analyze individual situations; discussions with other offices that have attempted to apply GIS are extremely valuable; and a systematic in-house study can develop a list of issues that must be considered.

A new report, "A Process for Evaluating Geographic Information Systems" provides a good overview of the factors that should be considered. This report was produced by the Technology Exchange Working Group of the Federal Interagency Coordinating Committee on Digital Cartography. The 140-page document features an overview of GIS, ideas on performing a User Requirements Analysis, and an extensive set of topics on technical evaluation. A 63-page reference guide and a 14-page glossary are also included.

To receive a copy, order *Open File Report 88-105* from the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, Denver, CO 80225, phone 303/236-7476. A check payable to the Dept. of the Interior--USGS for \$21.25 (paper copy) or \$4.00 (microfiche copy) will cover the report and mailing.

## NEW IMAGE MAP PRODUCT USES SPOT DATA FOR USGS QUAD

The U.S. Geological Survey has produced a 7.5-minute quadrangle with a portion of the San Diego harbor shown as depicted on the standard line map and on a new SPOT image map. SPOT data were merged from the 10m and 20m channels by USGS' EROS data center. The line map was revised in 1985 while the SPOT data was recorded in 1986. Both are USGS products printed back-to-back at 1:24,000-scale, and titled "Point Loma (32117-F2-SI-024)." Order from the USGS Distribution Branch, Box 25286 Federal Center, Bldg, 41, Denver, CO 80225. The cost of \$7.00 includes shipping and handling.

## USGS/DMA METRIC TOPOGRAPHIC MAPS

The following 15-minute quadrangle maps are newly available: City Point and Pittsville. These maps are part of the metric series of topographic quadrangles produced by the U.S. Geological Survey and the Defense Mapping Agency (DMA). Both sheets are at a scale of 1:50,000, cover 15 minutes of latitude and longitude, and have a contour interval of 10 meters. The information used to construct these maps was collected in 1986.

Metric mapping has not become particularly popular in the U.S. However, the DMA has maintained an interest in this format, and has produced some quadrangles for areas of Wisconsin where military facilities warrant. These two new sheets adjoin the north edge of a block of 6 metric quads produced in 1976 for the area around Fort McCoy.

These maps can be ordered from the Wisconsin Geological and Natural History Survey, 3817 Mineral Point Road, Madison, WI 53705, phone 608/263-1705 or from the USGS, Map Distribution, Federal Center, Box 25286, Denver, CO 80225, phone 303/236-7477.

## COUNTY PLAT BOOKS

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

## GLOBAL ELEVATION DATA

Global land elevation data at a resolution of 10 minutes (1/6 degree) are available from the National Geophysical Data Center (NGDC). These data, which include 2.3 million observations, were originally compiled by the U.S. Navy from navigational and aeronautical charts. Error checks and refinements have been made by the National Center for Atmospheric Research and NGDC.

The data set includes modal, minimum, and maximum elevations; orientation of ridges; terrain characteristics; and percentages of water surfaces and urban development for each 10-minute area. 10 minutes of latitude is approximately 12 miles. At 45 degrees north of the equator, 10 minutes of longitude is approximately 8 miles.

The data are available on magnetic tape in a variety of geographical divisions. All tapes are 9-track, 1600 6pi, ASCII, except that the entire world data set is also available at 6250 6pi. In addition, custom searches on the data set are available, with output on IBM-PC compatible floppy diskette (5 1/4" double-sided double density).

Prices for data on tape range from \$140 to \$420 per tape. Floppy disk data prices vary depending on search area. For details, contact: National Geophysical Data Center, NOAA, Code E/GC4, 325 Broadway, Boulder, CO 80303 or phone 303/497-6900.

## BUILDINGS ON TOPOS

Is it a house, or is it a barn, or is it an office, or is it a machine shed, or...? For many years the USGS has depicted two categories of buildings on its topographic maps. When the maps were being produced for the first time, USGS used field surveys to determine Class 1 buildings (used primarily for human activity) versus Class 2 (used primarily for storage, machinery, or animals).

With more primary mapping and revisions being done from aerial photography, making this distinction accurately has become difficult. USGS is proposing to drop the two-tiered system; however, landmark buildings, schools, and churches would continue to be identified by unique symbols or labels. This change would expedite mapping operations.

Anyone wishing to comment on the proposed change should contact the Chief of the Office of Technical Management, USGS, 510 National Center, Reston, VA 22092 (telephone 703/648-4566). Comments are requested by July 15, 1989.

## CALL FOR PAPERS

THE AMERICAN CARTOGRAPHER

### SPECIAL ISSUE ON ANALYTICAL CARTOGRAPHY

The editors of *The American Cartographer* are soliciting papers for a special issue on analytical cartography to be published in January 1991.

#### POTENTIAL TOPICS INCLUDE:

- conceptual structure of analytical cartography
- theory of spatial operators in regular/irregular cellular systems
- spatial filtering in cartography
- spatial data structures; relational data structures in a cartographic setting
- object oriented data structures; mathematical definition of cartographic objects
- spatial database systems
- numerical terrain analysis/representation
- cartographic query languages
- the use of artificial intelligence in cartography
- concepts of vehicle navigation systems
- use of fractals in cartography
- concepts of numerical map generalization
- new work in map projections

Please contact the guest editor if you are interested in a topic that is not listed here. All manuscripts submitted will be peer reviewed with the normal process. For the style requirements, please refer to the July, 1989 issue of *The American Cartographer*.

Please send a one page prospectus to the guest editor if you are interested in writing an article.

Guest Editor: Prof. Harold Moellering, Dept. of Geography 103 BK, Ohio State University, Columbus, OH 43210, phone 614/292-2608, Bitnet Ts0215@OHSTVMA

#### SCHEDULE:

Prospectus due: October 1, 1989  
Submission of manuscript: February 1, 1990  
Notification of review: May 1, 1990  
Revision of manuscript: September 1, 1990  
Planned publication: January, 1991

## ARC/INFO USER CONFERENCE IN MADISON TAKES SHAPE

Planning is proceeding for the 1990 Midwest/Great Lakes ARC/INFO User Conference. The meeting will take place October 17-19 (Tuesday noon -- Thursday noon) at the Inn on the Park in Madison.

Conference organizers--a group of Wisconsin users--are planning for 300 attendees. ESRI President Jack Dangermond will be the Keynote Speaker. Sessions will cover a diversity of topics, including some generic to GIS. There will also be posters/demonstrations of applications developed by users, and a vendor display.

ARC/INFO is a geographic information system (GIS) software product developed by Environmental Systems Research Institute. ARC/INFO operates on a variety of hardware platforms. At UW-Madison, it is available on a VAX cluster, and pc ARC/INFO is in use for both teaching and research at several UW system campuses. Other users include the DOT and DNR, plus several counties and federal agencies.

Registration materials and a Preliminary Program will be available later in the summer. Organizers are also exploring the possibility of a pre-conference workshop to be offered through URISA, which would probably be all day Monday plus Tuesday morning. A number of topics are being considered.

Make reservations for lodging directly with the hotel by calling (608) 257-8811. Rates are \$41 single/\$63 double.

For more information, contact Mike Bohn or Mindy James at 608/262-1705.

## ACSM & ASPRS CHOOSE NEW NATIONAL OFFICE LOCATION

The American Congress on Surveying and Mapping (ACSM), and the American Society for Photogrammetry and Remote Sensing (ASPRS) have together selected a new location for their respective national headquarters. The new site in Bethesda, Maryland is a 35-acre development of the former estate of Dr. Gilbert H. Grosvenor of the National Geographic Society.

The development includes the original buildings and several new office buildings all managed by the Renewable Natural Resources Foundation. The site already houses the headquarters of a number of natural resource organizations. ACSM and ASPRS will purchase separate office space, but will be in the same building. This arrangement will help facilitate a continuation of joint activities.

## MADISON-AREA SATELLITE MAPS STILL FOR SALE

What a bargain! You can purchase a copy of the French SPOT satellite map at a scale of 1:62,500--with Madison focused as its center also covering areas of Sun Prairie, Stoughton, Verona, Dane, and Deforest--on heavy weight stock (110#), shipped and rolled for only \$6.50 or on medium weight stock (80#), folded approx. 8.5" x 11" for only \$2.50. Copies are for sale at the State Cartographer's Office, Rm. 155 Science Hall, Madison, WI 53706-1404 and from the Wisconsin Geological & Natural History Survey, 3817 Mineral Point Road, Madison, WI 53705, 608/263-7389. Make check(s) payable to: Univ. of Wisconsin-Extension.

### Satellite Image Map of Madison & Vicinity

*Prices include handling, tax, and shipping*

Heavy weight stock (110#), shipped rolled: \_\_\_\_\_ copies @ \$6.50 = \$ \_\_\_\_\_

Medium weight stock (80#), folded approx. 8.5" x 11": \_\_\_\_\_ copies @ \$2.50 = \$ \_\_\_\_\_

Total of above = \$ \_\_\_\_\_

Mail to: (please print clearly)		
_____		
Name _____		
Address _____		
_____		
City _____	State _____	Zip _____

*Make check payable to:*  
University of Wisconsin-Extension

*Mail this form with payment to:*  
Map and Publication Sales, Wisconsin  
Geological and Natural History Survey, 3817  
Mineral Point Road, Madison, WI 53705,  
608/263-7389.

## Wisconsin Mapping Bulletin

Published quarterly by the State Cartographer's Office. A University of Wisconsin-Madison outreach publication distributed free upon request.

News is welcome on completed or ongoing projects, published maps or reports, conferences/workshops. Local and regional information is especially welcomed. The Editor makes all decisions on content. Deadline for the next issue is September 10, 1989.

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

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

State Cartographer's Office  
Univ. of Wisconsin-Madison  
550 N. Park Street  
Room 155 Science Hall  
Madison, WI 53706-1404

Nonprofit Organization  
U. S. POSTAGE  
PAID  
Madison, Wisconsin  
Permit No. 658