

# WISCONSIN MAPPING BULLETIN

## Volume 7 No. 4 October 1981

A QUARTERLY NEWSLETTER FOCUSED ON  
CARTOGRAPHIC ACTIVITIES IN WISCONSIN

Wisconsin State Cartographer's Office

Established 1973

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(608) 262-3065

Art Ziegler  
State Cartographer

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Editor

### MAP DATA ACQUISITION PROGRAM STARTS

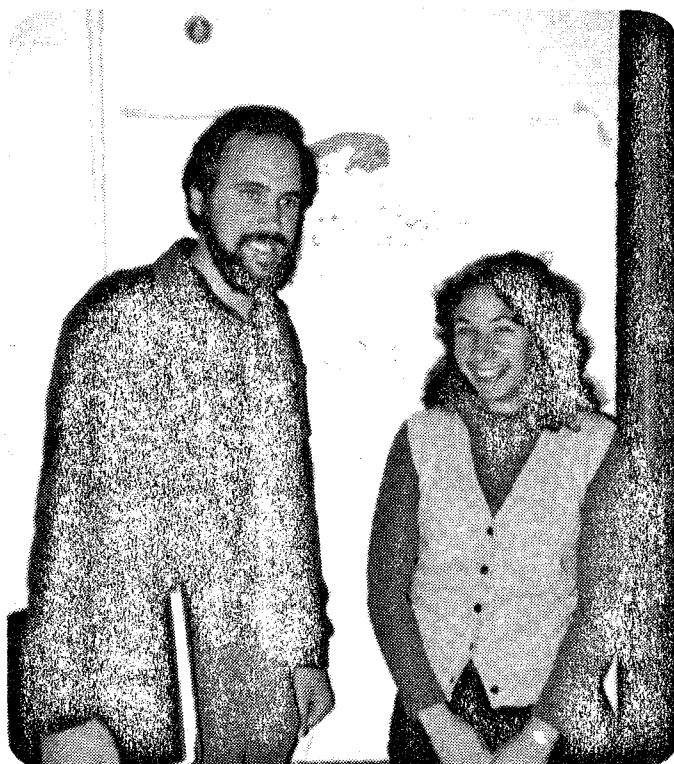
The State Cartographer's Office has begun its program to inventory the cartographic products of counties, large municipalities and state/federal/regional offices as discussed on page 14 of the July 1981 Bulletin.

Mike D'Onofrio has been hired as the field representative to visit various offices in the state to collect information on their cartographic holdings. Mike is pictured below with Ms. Wendy Ormont, the inventory coordinator and support person. Wendy is a part-time SCO project assistant and a graduate student in Environmental Studies.

To prepare for the collection activities, the office inventory staff has completed pilot projects in JEFFERSON and DODGE counties, the city of Beaver Dam and the federal and state offices in the Horicon Marsh.

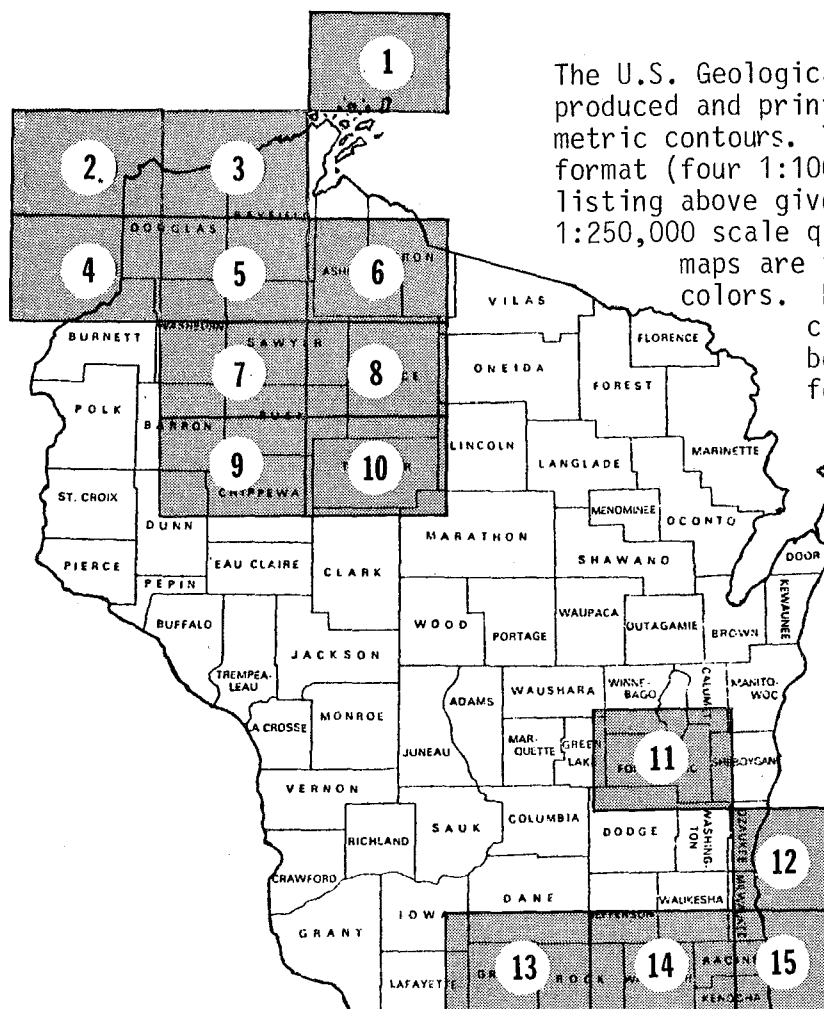
The cartographic collection program will start in the east central portion of the state. Between now and the first of January, Mike plans to visit offices in the following counties: KEWAUNEE, DOOR, MANITOWOC, CALUMET and BROWN. He will also visit all municipalities over 10,000 population and the regional offices of the state and federal governments in the area.

The State Cartographer is asking that local and regional officials support Mr. D'Onofrio in his unique assignment. The collection of cartographic data will be of invaluable assistance at the state level. In addition, once the information is encoded into the U.S.G.S.'s National Cartographic Information Center's system, county printouts will be available as part of NCIC's cartographic catalog.



# 1:100,000 METRIC TOPOGRAPHIC MAPPING

| <u>Quad Name</u> | <u>Quadrant of 1:250,000</u> | <u>Publication Date</u> |
|------------------|------------------------------|-------------------------|
| 1 Outer Island   | Two Harbors SE               | 12/78                   |
| 2 Duluth         | Duluth NE                    | 11/80                   |
| 3 Port Wing      | Ashland NW                   | 11/80                   |
| 4 Sandstone      | Duluth SE                    | 2/81                    |
| 5 Solon Springs  | Ashland SW                   | 3/81                    |
| 6 Ironwood       | Ashland SE                   | 4/81                    |
| 7 Spooner        | Rice Lake NW                 | 11/80                   |
| 8 Park Falls     | Rice Lake NE                 | 4/81                    |
| 9 Bloomer        | Rice Lake SW                 | 4/81                    |
| 10 Medford       | Rice Lake SE                 | 4/81                    |
| 11 Fond du Lac   | Madison NE                   | 11/80                   |
| 12 Milwaukee     | Milwaukee SW                 | 5/81                    |
| 13 Monroe        | Rockford NW                  | 9/81                    |
| 14 Lake Geneva   | Rockford NE                  | 5/81                    |
| 15 Racine        | Racine NW                    | 5/81                    |



The U.S. Geological Survey, over the past 2 years, has produced and printed 15 maps at 1:100,000 scale with metric contours. These maps are 30 minute by 1 degree in format (four 1:100,000's make up one 1:250,000). The listing above gives their names, locations in the 1:250,000 scale quad, and their dates of publication. The maps are printed on a 24 x 44 inch sheet in 5 colors. Hydrography, land lines, roads including city street patterns, county and state boundaries, railroads and other cultural features, names, vegetation and either 5 meters (16.4 foot) or 10 meter (32.8 foot) contour lines are shown.

The metric maps are currently available for purchase at \$2.00 each from the Eastern Distribution Branch, U.S. Geological Survey, 1200 South Eads Street, Arlington, VA 22202. The Wisconsin Geological and Natural History map sales office is planning to stock these maps for sale after January 1, 1982.

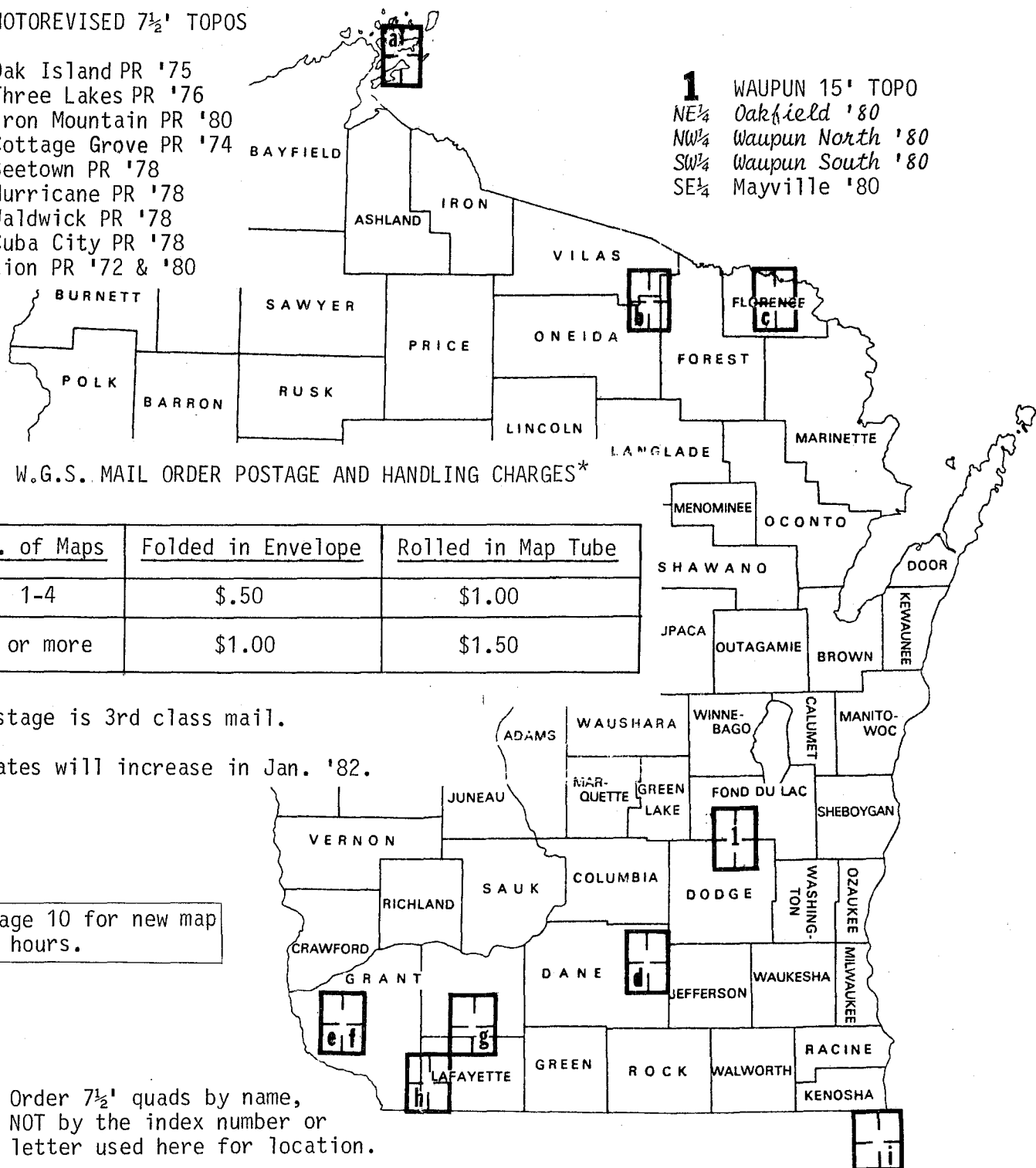
# NEW PRODUCTION FROM U.S. GEOLOGICAL SURVEY

These newly published 7½' topographic quadrangle maps (1:24,000) are listed by their location on the superseded 15' topographic map of the area. They are available from the Wisconsin Geological Survey, 1815 University Ave., Madison, WI 53706 (608) 263-7389. Topographic quadrangles are \$1.50 each.\*

## PHOTOREVISED 7½' TOPOS

- a Oak Island PR '75
- b Three Lakes PR '76
- c Iron Mountain PR '80
- d Cottage Grove PR '74
- e Beetown PR '78
- f Hurricane PR '78
- g Waldwick PR '78
- h Cuba City PR '78
- i Zion PR '72 & '80

- 1** WAUPUN 15' TOPO  
 NE¼ Oakfield '80  
 NW¼ Waupun North '80  
 SW¼ Waupun South '80  
 SE¼ Mayville '80



W.G.S. MAIL ORDER POSTAGE AND HANDLING CHARGES\*

| No. of Maps | Folded in Envelope | Rolled in Map Tube |
|-------------|--------------------|--------------------|
| 1-4         | \$ .50             | \$1.00             |
| 5 or more   | \$1.00             | \$1.50             |

Postage is 3rd class mail.

\*Rates will increase in Jan. '82.

See page 10 for new map sales hours.

NOTE: Order 7½' quads by name, NOT by the index number or letter used here for location.

## EDC PRICE INCREASES

On October 1st, the EROS Data Center (EDC) raised its prices on almost all data products, including those from LANDSAT. The increases reflect the higher cost of supplies, materials, and labor needed to reproduce remotely sensed data. Prices were last changed in January 1977.

The new prices for Landsat photographic products are summarized in the table on this page.

Aerial photographic product prices, although too numerous to list here, will be boosted also. Many prices will increase as much as 50 to 100 percent.

The U.S. Geological Survey is required to recover the cost of reproduction when furnishing image data to the public. If you have any questions concerning the recent price increases, please contact the User Services Section, U.S. Geological Survey, EROS Data Center, Sioux Falls, SD 57198, telephone: (605) 594-6151.

**SUMMARY OF LANDSAT PRODUCT PRICES**

| Image Size | Scale       | Format    | Black & White<br>Unit Price |              | Color<br>Unit Price |              |
|------------|-------------|-----------|-----------------------------|--------------|---------------------|--------------|
|            |             |           | Current                     | As of Oct. 1 | Current             | As of Oct. 1 |
| 56 mm      | 1:3,369,000 | Film Pos. | \$ 8                        | \$ 8         | N/A                 | N/A          |
| 56 mm      | 1:3,369,000 | Film Neg. | 10                          | 10           | N/A                 | N/A          |
| 185 mm     | 1:1,000,000 | Film Pos. | 10                          | 10           | \$15                | \$15         |
| 185 mm     | 1:1,000,000 | Film Neg. | 10                          | 12           | N/A                 | N/A          |
| 185 mm     | 1:1,000,000 | Paper     | 8                           | 10           | \$12                | \$15         |
| 370 mm     | 1:500,000   | Paper     | 12                          | 20           | 25                  | 35           |
| 742 mm     | 1:250,000   | Paper     | 20                          | 35           | 50                  | 70           |



Both the U.S. Geological Survey and the National Ocean Survey have been forced by Federal budget cuts to charge "user fees" on their map products. The user is now expected to pay for the entire cartographic process: from aerial photography and surveying, through compilation and drafting until the map is printed and sitting on the shelf. Before the user absorbed only a portion of the cost of producing a map sold by the federal government. Price lists are not yet available but large increases are expected. The January Bulletin will have the new prices if they've become available

(ed. note: See page 3 for new Wisconsin Geological Survey mailing charges)

## NEW CATALOG STAFF

The beginning of the 81-82 fall semester brought changes in the county cartographic catalog staff. Former Assistant Editor Jane Rouder and Production Manager Patricia Burlew left to devote full time to their studies. In their places we hired Laurie Boyer as Production Manager and Jerry R. Norenberg as Assistant Editor.

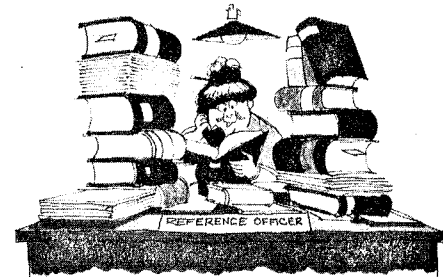
Laurie Boyer is a new graduate student in Cartography at the U.W.-Madison. She received a B.A. in Geography from U.C.L.A. and went on to study Cartography and Geomorphological Photointerpretation at the International Institute for Aerial Survey & Earth Sciences (ITC) in Enschede, The Netherlands. While at ITC she obtained excellent practical training in nearly all aspects of map production. She is a member of the Assoc. of Am. Geographers and the Am. Congress on Surveying and Mapping.

Jerry R. Norenberg received his B.A. degree in Environmental Studies and Social Studies from St. Cloud State University, St. Cloud, Minnesota in 1979. He is presently a graduate student at the U.W.-Madison, pursuing a M.S. degree in the Environmental Remote Sensing Program. For nearly a year Jerry was a Cartographer/Graphic Artist for the Wis. Dept. of Natural Resources, where he produced the Wisconsin Trout Stream Manual. He is also a member of the American Society of Photogrammetry and the American Congress on Surveying and Mapping.

Laurie and Jerry hope to further improve the visual quality and consistency of presentation of the graphics in the county cartographic county series.

All SCO publications are produced by a part-time staff of six undergraduates, most of whom are studying cartography. General supervision and management of catalog production are supplied by graduate students who have part-time project assistantships.

Laurie's assistantship is 50% and Jerry's is 65%. The part-time nature of our student production staff is the major factor in the steady but slow output of catalogs and index maps.



## NCIC AFFILIATES

The adjacent states of Michigan and Minnesota are also U.S.G.S. National Cartographic Information Center state affiliates. For map-related information about these states contact:

### MICHIGAN

Sherman Hollander  
Div. of Land Resources Programs  
Michigan Dept. of Natural Resources  
Steven T. Mason Building, Box 30028  
Lansing, MI 48909  
(517) 373-3328

### MINNESOTA

Donald Yaeger  
Minnesota State Planning Agency  
Land Management Information Center  
Room LL45, Metro Square Bldg.  
7th and Robert Streets  
Saint Paul, MN 55101  
(612) 296-2613

Information about other north central states can be obtained from the Mid-Continent Mapping Center, National Cartographic Information Center, U.S. Geological Survey, 1400 Independence Road, Rolla, MO 65401, phone (314) 341-0851.

## NEW PUBLICATIONS



### SOIL GUIDES FOR WISCONSIN LAND LOOKERS

Here is a book to introduce students of the environment to the soils of the landscapes in which they live in Wisconsin. Prof. Francis Hole explains soil horizons, textures and classifications (or, as he says, "the soilscape") with diagrams, tables, and many maps. The 3-color, 66-page publication is Bulletin 88, Soil Series 63 of the Wisconsin Geological Survey, 1815 University Ave., Madison, WI 53706. It sells for \$3.50.

### A HISTORY OF THE ROCK ISLAND DISTRICT CORPS OF ENGINEERS, 1866-1975

The Rock Island Corps District includes a portion of southwestern Wisconsin and has had a considerable amount of influence on the Upper Mississippi River. The clothbound book is 171 pages in length with illustrations. Order with its SUDOCs number 008-022-00089-5 from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 for \$6.30.

### PUBLICATIONS OF THE GEOLOGICAL SURVEY, 1980

This is a cumulative listing of publications advertised monthly in New Publications of the Geological Survey during 1980. It is 352 pages long.

The book is available free from the Eastern Distribution Branch, Text Products Section, U.S. Geological Survey, 604 South Pickett Street, Alexandria, VA 22304.

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## UPDATES

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### NATIONAL GAZETTEER (v. 7, no. 2 & no. 3)

The U.S. Geological Survey has recently announced completion of the Wisconsin chapter of the National Gazetteer containing place and feature names prepared from 1:24,000 topographic maps by the U.S. Geological Survey and the U.S. Board of Geographic Names. The Wisconsin printout costs \$20.00 and the magnetic tape (9 track, 1600 Bpi, EBCDIC, unblocked) costs \$40.00. These may be ordered from the National Cartographic Information Center, 507 National Center, U.S. Geological Survey, Reston, VA 22092.

### COUNTY CARTOGRAPHIC CATALOGS (v. 7, no. 1)

Since our last report on the status of the SCO county cartographic catalogs, we have printed 6 more. Available for distribution are catalogs for BROWN, CALUMET, DOOR, KEWAUNEE, OCONTO and WASHINGTON counties. As stated in our new list of publications (inside the mailing cover), we plan to have Ashland, Marinette and St. Croix counties completed by the first of March 1982. A total of 26 county cartographic catalogs have been completed. This program has been funded through the current biennium. A complete report on catalog production will be in the January Bulletin.

### UPDATED SCO PUBLICATIONS LIST

You will find an updated list of SCO publications inside the mailing cover of this issue of the Bulletin. It is also a convenient ordering form, so you may want to retrieve it from your circular file.

## COMING EVENTS

### ASP/ACSM REGIONAL PROGRAM

The Western Great Lakes Region of the American Society of Photogrammetry and the Southern Lake Michigan Section of the American Congress on Surveying and Mapping are holding their first joint meeting in Rosemont, IL. The site will be the Sheraton O'Hare Hotel; the dates are Nov. 13 and 14. Attached to this Bulletin are the complete program and registration form (yellow sheets).

### U.W.-MADISON BROWN BAG SEMINARS

The Civil and Environmental Engineering Dept. offers two sets of lunch hour seminars. The public is invited.

Seminar in Surveying and Mapping in 2221 Engineering Building every Wednesday at 12:00 noon.

| <u>Date</u> | <u>Speaker</u> | <u>Topic</u>  |
|-------------|----------------|---|
| 4 Nov.      | R. Shrestha    | 3D Adjustment and Applications                                      |
| 11 Nov.     | B. DeWitt      | An Efficient Algorithm for Block Adjustments                        |
| 18 Nov.     | K. Jassem      | Surveying & Photogrammetry in Astronomy                             |
| 25 Nov.     | M Dawood       | Map Projections   |
| 2 Dec.      | C. Ghilani     | Problems Involved with Inertial Positioning                         |
| 9 Dec.      | D. Goodrich    | Semi-Analytical Extension of 35 mm (SLR) Terrestrial Photogrammetry |

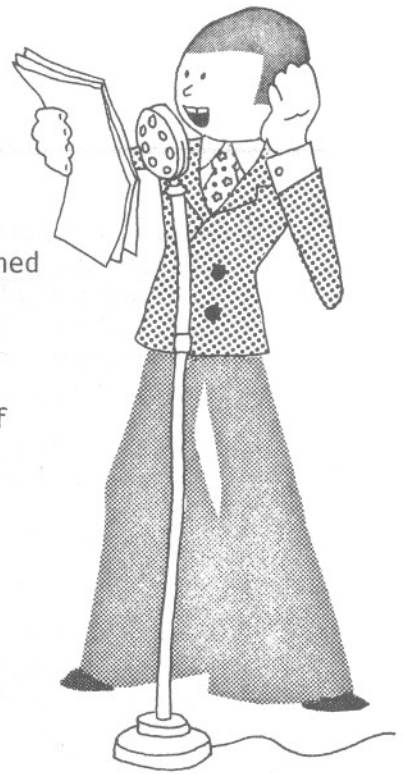
Environmental Monitoring Seminar in 2309 Engineering Building every 12:05 p.m. Friday.

| <u>Date</u> | <u>Speaker</u>   | <u>Topic</u>  |
|-------------|--|---|
| 6 Nov.      | Sean Ahearn, Graduate Student<br>Environmental Monitoring Program    | Forest Species Classification Using<br>Gradient Analysis and Spectral Data                |
| 13 Nov.     | Fred Townsend, Graduate Student<br>Environmental Monitoring Program  | Feature Extraction and Planimetric<br>Mapping from Digitized Stereo Aerial<br>Photography |
| 20 Nov.     | Dave Woodward, Assistant Prof-<br>essor, Geography                   | A New Objective Method of Analyzing Water-<br>marks on 16th Century Italian Maps          |
| 4 Dec.      | Larry Sromovsky, Senior<br>Scientist, Space Science & Eng.<br>Center | Saturn and Titan from Voyager   |
| 11 Dec.     | Nancy Bryant, Graduate Student<br>Water Resources Management Prgm.   | Vermont's Lake Classification Program   |

### IRLSA 1982 SILVER ANNIVERSARY CONFERENCE

The Illinois Registered Land Surveyors Association is celebrating its 25th year with a conference in St. Charles, IL on February 9-16, 1982. Four concurrent sessions will be offered on Wednesday and Thursday: Communications; Research & Liability; Legal Aspects/Court Cases; and Mini Computers/Office Management. On Friday Prof. Paul Wolf (U.W.-Madison) will present a half-day seminar on the use of basic photogrammetry as a surveying tool. The Association is reconvening in Grand Bahama Island. (*What a wonderful thing to do in February! ed.*)

For more information contact James Donahue, 20 S. 2nd Str., Geneva, IL 60134.



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## NEW MAPS

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### MAGNETIC DECLINATION

Wisconsin Magnetic Declination-1980 has just been published by the State Cartographer's Office. It replaces the 1975 magnetic declination map formerly available. Magnetic declination is the angle between magnetic north and true, geographic north. The page-size map is available free of charge. Order by using the publications list/order form inside the Bulletin mailing cover.

### BLM LAND AND MINERAL STATUS MAPS

Three new maps showing the location of public lands and Federal mineral ownership in east central Minnesota and northwestern Wisconsin are now available for sale to the public from the Bureau of Land Management (BLM), according to Bill Condit, Acting Duluth Field Office Manager.

The new BLM maps cover the areas around Sandstone, Minnesota and Port Wing and Solon Springs, Wisconsin. They are part of a series of maps produced as a result of a Bureau-wide program to map areas of mineral exploration interest. The maps are also a valuable aid to recreationists for identifying the location of public lands.

A color code is used on the maps to show private, county, state and federally-owned land, by agency in most cases. The extent of federally-owned mineral rights is overprinted on the surface ownership colors. Available in standard quadrangle editions, they are published at the metric scale of 1:100,000 (one centimeter = one kilometer) and cover an area approximately 34 x 60 miles. The maps show elevations in meters; highways, roads and other cultural features; water features; and geographic names. Section lines are indicated, and a mileage scale is included.

Besides the newly-released maps, additional BLM maps of northern Minnesota, northeastern Wisconsin, and western Upper Michigan have already been completed and are available for sale to the public. "Maps covering the remainder of northern Wisconsin and Lower Michigan will be available within the next two years", Condit added.

To order the maps or to obtain a free BLM map index, contact the Bureau of Land Management, Duluth Field Office, 125 Federal Building, Duluth, Minnesota 55802; or Eastern States Office, 350 South Pickett Street, Alexandria, Virginia 22304. Payment may be made by check or money order payable to the Bureau of Land Management. The maps are sold for \$2.00 per copy.

### GROUND-WATER LEVELS

A four-page, 8½" x 11" publication, Ground-Water Levels in Wisconsin, is available from the Wisconsin Geological Survey. This 1980 annual summary shows the location of observation wells, the average water-level changes from 1979 to 1980, and a summary of total annual precipitation in 1980 by county. Contact the WGS Map Sales Office (608) 263-7389 for a free copy.

### STANDARD METROPOLITAN STATISTICAL AREAS

The State Cartographer's Office will soon be issuing an updated SMSA map for Wisconsin. The page-size map will include several new standard metropolitan statistical areas. The most recent changes include the addition of the Wausau SMSA, with a population of 111,270, and the addition of Kenosha to the Chicago-Gary SCSA (standard consolidated statistical area), with a total 1980 population of 7,868,246. The free map is expected to be available in late December.

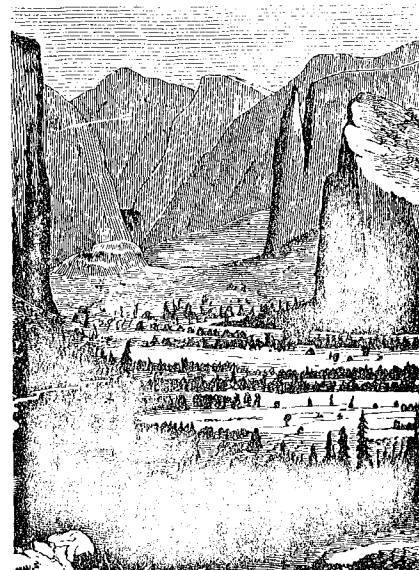


## BASIN COMMISSIONS ELIMINATED

Current federal administration budget cuts have eliminated various federal programs including the U.S. Water Resources Council, which is the parent organization of the six river basin commissions in the nation. Of the six, five were eliminated at the end of the fiscal year, September 30th. These five commissions were: Great Lakes Basin Commission, Missouri River Basin Commission, New England River Basins Commission, Ohio River Basin Commission, and the Pacific Northwest River Basins Commission. The Upper Mississippi River Basin Commission has been extended to the end of the calendar year in order to complete the Comprehensive Master Plan for the Management of the Upper Mississippi River System. The Master Plan, according to public law 95-502, is to be submitted to the U.S. Congress on January 1, 1982.

## NEW U. S. G. S. DIRECTOR

On September 30, 1981 Dr. Dallas L. Peck was installed as the new Director of the U.S. Geological Survey. Dr. Peck is a native of Cheney, Washington and has formal training in geology with a doctorate from Harvard University. He joined the U.S. Geological Survey in 1951 and has been involved in geological and geothermal energy studies in the west. Dr. Peck was highly recommended by the National Academy of Science to become the 11th director of the 101 year-old U.S.G.S. The U.S.G.S. has more than 9,000 fulltime employees and nearly 300 field offices and is one of the Department of Interior's largest bureaus.



## AGS COLLECTION OPENS

The American Geographic Society Collection was formally opened on Thursday, October 22, at the Golda Meir Library at the University of Wisconsin-Milwaukee. The celebration began with the unveiling of a commemorative donor wall in honor of the charter campaign for the AGS Collection. A dinner followed; John Wolter, Chief of the Geography and Map Division of the Library of Congress was the featured speaker. The AGS Collection's formal opening is a part of UW-Milwaukee's 25th anniversary celebration.

## NACIS FIRST MEETING

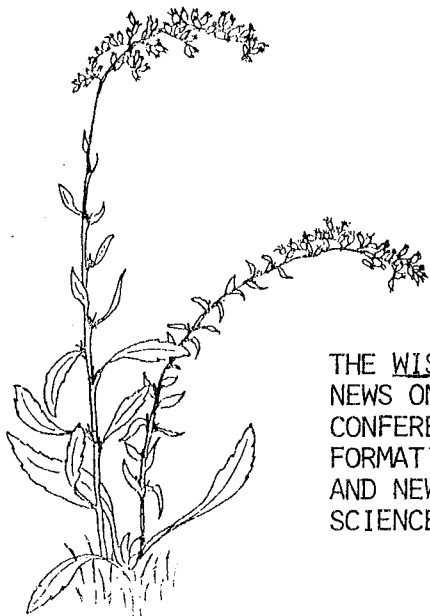
Over 50 people from all over the county participated in the North American Cartographic Information Society's first annual meeting. The highly interdisciplinary group heard technical papers, attended exhibits, worked hard on committees, toured TVA in Chattanooga and also toured Norris Dam and Oak Ridge. A preview of the Knoxville World's Fair site capped the activities. Newly elected officers are: Christine Reinhard, Madison, president; Don Daidone, Blacksburg, VA, president-elect; Michael Fox, Madison, Treasurer; Christopher Baruth, Milwaukee, secretary. Persons interested in NACIS should contact Christine Reinhard, 143 Science Hall, Madison, WI 53706.

## SPECIAL MAP

### SALES HOURS

To accomodate the demand for topographic maps during the hunting season, the Wisconsin Geological and Natural History Survey has announced that their Map and Publications Sales Office will now be open over the noon hour. Effective Oct. 1, 1981, new hours will be Monday through Friday, 7:30 a.m. to 4:30 p.m. In addition as a service to the many hunters wishing to purchase topographic maps, the Survey will be open Tuesday and Thursday evenings until 8:00 p.m. the first three weeks of November. Map sales room hours on Nov. 3, 5, 10, 17 and 19, 1981 will be 7:30 a.m. until 8:00 p.m. Prices of 7.5 and 15 minute topographic maps are \$1.50 (tax included) when purchased at the Survey office at 1815 University Avenue, Madison, WI 53706. Postage and handling charges are applied to mail orders. Write or call the map sales office (608) 263-7389 if you have questions.

Postage and handling charges for mail orders of topographic maps are as follows: 1 to 4 maps folded in an envelope \$.50 additional, rolled in a map tube \$1.00 additional. For 5 or more maps folded in an envelope \$1.00 additional, rolled in a map tube \$1.50 additional. All maps are mailed third class.



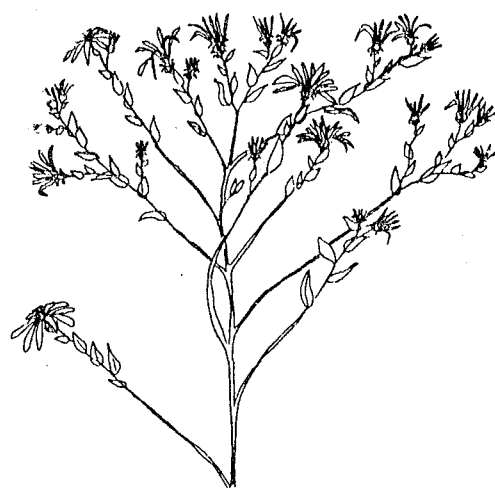
## SCO GEODETIC SERVICE

### HOURS

Due to economic conditions the State Cartographer's Office is reducing the inquiry service hours for geodetic information. Previously the office serviced all calls for horizontal control and benchmark information during the normal work day, 8:00 a.m. to 4:30 p.m. Due to the increased work load and our stable staff size, we are asking that telephone inquiries for geodetic information be restricted to the hours of 9:00-12:00 a.m. and 1:00-3:00 p.m.

Additionally, if you have an urgent request, we suggest you call in early in the day and let us respond later by telephone, rather than have you wait on the line.

The office continues to receive updated geodetic information, both horizontal control and benchmarks for federal government agencies, primarily the National Geodetic Survey (formerly the Coast and Geodetic Survey) and the U.S. Geological Survey.



THE WISCONSIN MAPPING BULLETIN IS DISTRIBUTED FREE OF CHARGE ON REQUEST. NEWS ON COMPLETED OR ONGOING PROJECTS, PUBLISHED MAPS OR REPORTS, AND CONFERENCES/WORKSHOPS IS WELCOMED BY THE EDITOR. LOCAL AND REGIONAL INFORMATION IS ESPECIALLY REQUESTED. PLEASE SEND ALL COMMENTS, CORRECTIONS AND NEWS ITEMS TO CHRISTINE REINHARD, STATE CARTOGRAPHER'S OFFICE, 144 SCIENCE HALL, MADISON, WI 53706, (608) 262-3065.

October 1981