

TOPO MAPPING COMMITTEE NEWS

On the afternoon of September 23rd, the Wisconsin Topographic Mapping Advisory Committee met to discuss future programs and funding for 1987. Items included a potential revision program for the 1:24,000-scale 7.5' quad series, the ten 1:100,000-scale county topographic maps that are now available in printed format (see New Maps), and the status of the National High-Altitude Photography (NHAP) II program in Wisconsin.

In regard to the 1:24,000 revision program, Chair Dr. Meredith Ostrom reported on figures he had requested from the USGS listing the number of 1:24,000 topo maps published in each decade up to the present. Some quads date back to the 1950's and the Committee is concerned with updating those older maps. Before initiating a new cooperatively funded revision program, the Committee will obtain more data and cost figures. We will include an update in the January Bulletin.

The Wisconsin Geological and Natural History Survey (WG&NHS), the lead agency in the state's cooperative mapping program with the USGS, has received the final printed versions of ten 1:100,000 county topo series maps and now has sets of production negatives for 50 counties. These county topo maps portray contours in feet; the USGS quadrangles (30 minute by 1 degree) at the same 1:100,000scale portray contours in meters. The county maps are compatible with the 1:24,000-scale 7.5' quadrangle series mentioned above, and show most of the essential detail from that series. Total coverage of the state in the form of final printed versions is expected by June 1987.

The USGS says that NHAP II for Wisconsin is 70 percent complete. Like NHAP I, NHAP II will use black-andwhite infrared film at the 1:80,000scale and color infrared film at the 1:56,000-scale. As before, indexing will be keyed to the 7.5' topographic quadrangles. NHAP II, however, will differ from NHAP I in two principal ways. First, NHAP II will be flown when foliage is on the trees ("leafon"). Second, the federal agency administering the program is attempting to have entire states flown in the same year rather than over the three-year period characteristic of NHAP I.

The January 1987 <u>Bulletin</u> will include information on the program's status, print availability and cost.

MULTI-COUNTY

AERIAL PHOTOGRAPHY

The Wisconsin Department of Natural Resources (DNR) has acquired aerial photography for BROWN, DANE, JEFFERSON, and WINNEBAGO Counties. Remote Sensing

AERIAL PHOTOGRAPHY, continued

Specialists Limited and Aerometric Engineering, Inc. flew the photography in May, June, and July 1986 ("leaf-on") using the same format and specifications as the Unified Aerial Acquisition of 1978-79. The flight used black-and-white infrared film taken with a 6-inch focal lens. The original prints are at a scale of 1" = 1667' (1:20,000) and the coverage is overlapping (stereographic). Each 9" x 9" photo covers four township sections with its center corresponding to the center of the four sections. The DNR will use the photography to update Wetlands Inventory maps for the above counties.

The Department of Transportation (DOT) has not yet decided if it will produce 1" = 400' diazo enlargements, similar to those it had available for purchase from the 1978-79 flight. For more information about the photography contact: Steve Fix, Wisconsin Dept. of Natural Resources, 101 S. Webster, Box 7921, Madison, WI 53707, phone 608/266-0053.

THE LAW AND SECTION LINES

In April 1986, the legislature enacted a statute relating to adverse possession of real property which pertains to section lines:

SECTION 2.893.24 of the statutes is created to read: <u>893.24 Adverse</u> <u>possession; section lines.</u> (1) A written instrument or judgment that declares the boundaries of real estate adversely possessed under s. 893.25, 893.26, 893.27 or 893.29 does not affect any section line or any section subdivision line established by the United States public land survey or any section or section subdivision line based upon it.

(2) Occupation lines that the court declares to be property lines by adverse possession under s. 893.25. 893.26, 893.27 or 893.29 shall, by order of the court, be described by a retraceable description providing definite and unequivocal identification of the lines or boundaries. The description shall contain data of dimensions sufficient to enable the description to be mapped and retraced and shall describe the land by government lot, recorded private claim, quarter-quarter section, section, township, range and county, and by metes and bounds commencing with a corner marked and established by the United States public land survey or a corner of the private claim.

(source: <u>Wisconsin Professional</u> <u>Surveyor</u>, June 1986)



MORRISON NEW NMD OFFICER

Joel L. Morrison is the recently appointed assistant division chief for research at the U.S. Geological Survey's National Mapping Division in Reston, VA.

In his new position, Morrison will direct the division's research, experimentation and development activities in: cartographic and geographic investigations, new and improved instrumentation, field survey procedures and methods, photogrammetric methods, map design, automation of production procedures, and the application of space technology to mapping and related disciplines.

Before joining the USGS in 1983, Morrison was a professor of geography at the University of Wisconsin-Madison (1967-1983), where he also served as director of the UW Cartographic Laboratory (1973-1977) and chaired the Department of Geography (1977-1980). He also chaired the Committee on State Cartography (1977-1982). Prior to his current position, he was the senior scientific advisor for geography to the National Mapping Division's chief.

Morrison is president of the International Cartographic Association, a member of the board of directors of the International Union for Surveying and Mapping, a member of the U.S. National Committee for the International Geographical Union, and past-president (1981) of the American Congress on Surveying and Mapping. He also serves on the affirmative action committee of the Association of American Geographers.

Co-author of <u>Elements of Cartography</u>, 5th edition, <u>1984</u>, and <u>associate editor</u> of <u>Goode's World Atlas</u>, 17th edition, 1986, he has written numerous articles and papers appearing in various cartographic and geographic journals.

With his wife Beverly, and four children, Anne, Ashley, Anja, and Jane, Morrison lives in Reston, VA.

DANE COUNTY LAND RECORDS

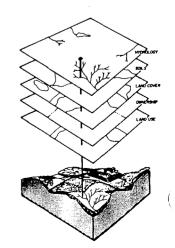
A group of University of Wisconsin-Madison researchers recently explained to the Dane County Board a land records system it has developed with government officials to make records more usable. The system uses computers to prepare maps or overlays with common reference points. This allows planners to simultaneously compare several kinds of land-related information.

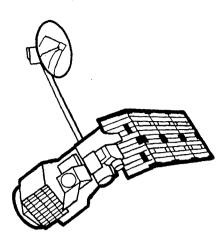
The UW-Madison group used computers, satellite remote sensing, and satellite positioning to modernize land records for the towns of Westport, Oregon, and Primrose. Using a computer, they integrated six different types of land records for each town by developing common reference points. The records included land parcels, zoning, floodplains, wetlands, land cover, and soils. The group had the computer search the information and prepare maps with identical scales and reference points.

The group's four-year effort has focused on natural resource planning. Wisconsin has mandated that county governments prepare plans to limit soil erosion. The researchers' methods could help counties meet the state' mandate. For example, the group (the computer to determine which farmland qualified for the new federal Conservation Reserve Program. Using the system it took the researchers minutes to pinpoint which part of a farmer's land qualified for the program. Doing the work manually took two hours.

For more information contact Prof. Ben Niemann, Landscape Architecture Dept., 25 Ag Hall, Madison, WI 53706, phone 608/263-6506.

(source: Institute for Environmental Studies <u>Newsletter</u>, July 1986)





EOSAT

APPLICATIONS GROUP

The Earth Observation Satellite Company (EOSAT), operator of the Landsat system, has formed a Landsat Applications Group comprised of Applications Specialists in the areas of Geographic Information Systems (GIS), Agriculture, Forestry, Land Use, Hydrology, and Geology. In addition to these specialists, the Application Group includes new products and special projects sections which work in conjunction with sales and other EOSAT

'keting groups to identify future ds in various Landsat market sectors.

The Landsat Applications Group supports current and potential Landsat customers by providing technical information on the use of Landsat data for solving real problems on an operational basis.

Case histories known as "Applications Notes" are currently being prepared by the Applications Group. These are nontechnical summaries of how existing Landsat users are applying Landsat to solve a particular resource problem.

Applications Specialists also work directly with customers by providing:

-advice on how to incorporate Landsat data into current or future operations;

-information on existing companies which offer image analysis and processing service, appropriate equipment, hardware, and software (a directory of United States companies is currently available free on request, and a directory of international companies is in preparation).

Any interested persons wanting to know how Landsat can be used to meet their formation needs may contact EOSAT's isat Applications Group by calling useir toll free number (U.S. residents only) 800/344-9933 or by writing: Mr. Donald Garofalo, Director, Landsat Applications Earth Observation Satellite Company, 4300 Forbes Boulevard, Lanham, MD 20706, U.S.A.

1990 CENSUS UPDATE: LEGAL BOUNDARIES

In the July 1986 <u>Bulletin</u> we reported that the Census Bureau has begun dividing the entire nation into blocks. Bureau guidelines for this process discourage state and local participants from using legal boundaries as census tract, Block Numbering Areas, Block Groups, or block boundaries if these legal boundaries do not follow visible features.

As a result some participants in these small-area delineation programs concluded that the blocks for which the Bureau <u>tabulates</u> and presents data would not reflect legal boundaries.

The Bureau wishes to assure users and participants that their guidelines reflect efforts to simplify the data <u>collection</u> phase of the 1990 Census. <u>Collection</u> according to block boundaries will overcome difficulties census enumerators face when attempting to figure out the location of nonvisible boundaries while canvassing an area.

The Bureau will use legal boundaries (provided in response to the Bureau's 1990 Boundary and Annexation Survey) as the boundaries of census blocks at the time of data tabulation. Thus legal boundaries will be shown on 1990 Census maps and there will be data for political units similar to those identified and presented in 1980 products.

Additional census block numbers will be necessary in order to establish legal boundaries as unique tabulation area boundaries. These will be created by adding alphabetic suffixes to the three-digit block numbers used for the collection phase of the Census. For example, if a January 1, 1990 city limit splits collection block number 702, that part of the block inside the city limit will be assigned tabulation block number 702A. That part of the collection block outside the city limit will be tabulation block 702B.

For more information about these plans, contact: Gavin Shaw, Geography Division, Bureau of the Census, Washington, DC 20233,phone 301/763-2364.

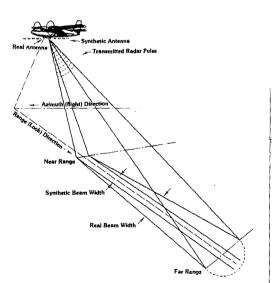
(source: Bureau of the Census, Data User News, July 1986)

SLAR IMAGERY AVAILABLE

Side-Looking Airborne Radar (SLAR) 1:400,000-scale strip imagery, 1:250,000-scale mosaics, and a 1:1,000,000 microfiche reference system are available for the Two Harbors, MN and Ashland, WI project area. SLAR is an electronic image-producing system whose name derives from its method of transmitting radar beams perpendicularly to the side of the aircraft acquiring the data. The result is an obliquely illuminated view of the terrain which enhances subtle surface features and facilitates geologic interpretation.

Both strip images and mosaics are available as paper prints, film positives, and film negatives. Strip images are generally regarded as the best medium for interpretation because of their high photographic resolution. Mosaics provide a synoptic view of the terrain, but as a third-generation photographic product it may be of somewhat lesser resolution than photo reproductions of the original strip images.

To place orders and to obtain additional information regarding technical details and ancillary products, contact: U.S. Geological Survey, EROS Data Center, User Services Section, Sioux Falls, SD 57198, phone 605/594-6151.



WPSC DIGITAL MAPPING

by: Bruce D. Baikie

Wisconsin Public Service Corporation (WPSC), an investor-owned electric and gas utility, is just completing computerization of its 10,000 square mile service area.



The system maintaining the digital information is a WPSC developed system based on the IBM GFIS software. The WPSC software named FACILITIES SYSTEMS is designed to handle all automated mapping, land information management, utility facilities information management, and modeling analysis (see October 1985 <u>Bulletin</u>). The digital land base in use was formed by digitization of U.S. Geological Survey (USGS) maps. The quadrangle maps were enlarged by an outside vendor to 1" = 500' before digitization. All geographic information (lakes, streams, roads, buildings, etc.) was included in the conversion process.

COORDINATE SYSTEM

Selection of a coordinate system on which to enter the USGS maps was the first concern prior to conversion. As with most systems, the location identification can be satisfied through the use of a grid coordinate. A grid can be superimposed over the geography of the required area and any location (point) can be defined as an X and Y value.

There are several standard grid systems that are designed specifically for geographic coordinates. Use of an accepted standard system has many advantages over a unique, arbitrary system. The primary advantage is that government agencies establish monuments (visible landmarks with known coordinates) to help control accuracy and limit errors. Two necessary requirements of a grid system for WPSC were:

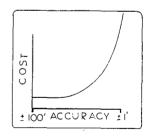
- The grid be large enough to cover the entire service territory as a single continuous grid.
- The coordinates should be identified to the nearest data unit (foot, meter, decimeter, etc.)

Latitude/longitude is the most universal geographic grid system: however, these units are cumbersome to handle in computer format. Two other systems, the State Plane Coordinate system and the Universal Traverse Mercator (UTM) system are better adapted to automated usage. There is a separate state plane grid coordinate system for each state in the USA with a base unit expressed in feet. The UTM system is a world-wide system similar to the state plane coordinate system with basic units expressed in meters and with less precise accuracy over extreme distances. These coordinate systems project the spherical surface of the earth on a flat plane and impose an X, Y coordinate on the plane. With the state plane coordinate system, any point can be identified with a 15-digit number. One or more digits are used as a zone identifier, and the remaining are for the X and Y coordinates, seven characters for each. This system was selected for use at WPSC.

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SOURCE MAPS

The selection of the land base map or digitization fell under two categories: 1, cost and 2, accuracy. These two factors turned out to be very closely related.



The USGS maps products were chosen due to their relative low cost and controlled accuracy. The price breakdown was:

1" = 2000' mylar USGS quads (7' series) \$70.00/quad x 250 quads = \$17,500

1" = 500' mylar quad blow-ups \$270.00/quad x 250 quads = \$67,500 Total \$85,000 (

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WPSC, continued

CONVERSION PROCESS

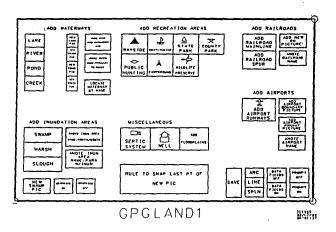
To encode the USGS map blow-ups, the operators used the Facilities Systems control menus for land data.

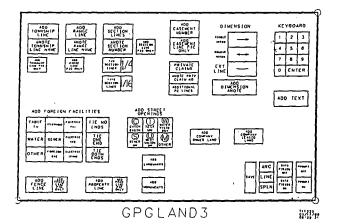
e registration of the maps began by conversion of the latitude/longitude coordinates of the USGS to Wisconsin State Plane X, Y coordinates. The Plane Coordinate Intersection Tables (2 172 minute) Wisconsin published by the U.S. Department of Commerce was used for this step.

CONVERSION TIME

The total conversion time was broken down in person hours by land type. The entire 10,000 square mile conversion would require 22,505 person hours. The land type breakdown was:

Urban	19,927	hours
Rural	1,658	hours
Sparse Rural	920	
Total	22,505	hours





The section lines were the first items entered (digitized). The menu key "section line" was activated by pointing a cursor. The screen prompted the user how to complete the required digitization steps.

After all the section lines were completed, the township lines, range lines, waterways, inundation areas, and railroads were entered. The roads and highways were entered by centerline only. The road widths were taken off the existing WPSC natural gas distribution maps and keyboard entered into the system data base. Once completed, a centerline expansion program was executed to automatically velop the correct right-of-ways.

ildings were converted next. Cleanup of the covered area was completed by comparing the paper output to the USGS 1" to 500' enlargements.

Once completed, the digital land base was ready for the addition of electric and gas facilities.

OUTPUT SYSTEMS

Output or hardcopy maps are produced in four modes:

- 1. High Q Black/White Electrostatis
- Plots 2.
- 8 Color 36' Pen Plots 6 Color Tabletop Plots 3.
- Computer Output on Microfilm (COM)

The fourth output is the newest in technology for WPSC. COM allows a direct one step process to produce microfilm field cards. A computer tape of the data base is forwarded to Northern Micrographics. This firm processes the tape to produce the microfilm card. No photographic step is needed.

The COM cards are provided to field personnel to use in their utility trucks or with a special hand-held viewer.

Anyone interested in the WPSC project or the digital land base is welcome to contact: Bruce D. Baikie, WPS Development, Inc., 700 North Adams Street, P.O. Box 19001, Green Bay, WI 54307-9001, phone 414/433-4948.

MAPPING PAST CLIMATES

Using supercomputers, a sophisticated computer model, as well as extensive fossil and geological evidence, Institute for Environmental Studies (IES) scientists at the University of Wisconsin-Madison and colleagues elsewhere are piecing together a more sophisticated understanding of climate and climatic change.

John Kutzbach, a professor of meteorology and environmental studies at the UW, and other scientists have been using a computer model developed at the national Center for Atmospheric Research to simulate and to map climates as long ago as 18,000 years.

Kutzbach says the simulations are checked against extensive physical evidence such as pollen and marine-bed core samples unearthed by more than 40 scientists participating in the Cooperative Holocene Mapping Project (COHMAP).

At the recent annual meeting of the American Association for the Advancement of Science, he told scientists that the emerging picture of climate indicates, among other things, that cyclic changes in the orbit of the earth and the wobble and tilt of its axis not only pace the ice ages, as has been shown, but also significantly affect interglacial climates and tropical monsoons. The work of COHMAP shows both physically and quantitatively, just how these orbital changes produced significant changes in climate.

Accurate climate simulations may help scientists determine the potential consequences of human impacts on climate such as carbon dioxide-induced warming of the earth's atmosphere (the greenhouse effect).

"There are alot of questions about how biological systems might react to even a slight warming of the climate,' said Kutzbach. "Our models and the supporting physical evidence are a testbed not only for theories of past climate but also for how biological systems might change as a result of future climate change.

(source: IES Newsletter, July 1986)



NEW MAPS

TEN 1:100,000 COUNTY TOPOS AVAILABLE Ten new 1:100,000-scale USGS Wisconsin county series maps are available from the Wisconsin Geological Survey (WGS).

Counties	Dates	Contour Intervals	Supplem Contour Intrvls
BROWN	1986	20'	5'
CALUMET	1986	40'	20'
CLARK	1986	40'	
CRAWFORD	1985	80'	
LANGLADE	1984	40'	20'
MANITOWOC	1986	40'	
OUTAGAMIE	1985	20'	
SAUK	1986	80'	20'
TAYLOR	1985	40'	
TREMPEALEAU	1985	80'	20'

Folded copies are available for \$4.00 from the Wisconsin Geological Survey, 3817 Mineral Point Road, Madison, WI 53705, phone 608/263-7389.

The WGS has received sets of production negatives for a total of 50 counties, with 4 more sets expected imminently. The 50 counties are: ADAMS, BARRON, BUFFALO, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DANE, DODGE, DUNN, EAU CLAIRE, FLORENCE, FOREST, GREEN LAKE, IOWA, JACKSON, JUNEAU, KENOSHA, KEWAUNEE, LA CROSSE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARQUETTE, MENOMINEE, MILWAUKEE, MONROE, OCONTO, OUTAGAMIE, OZAUKEE, PEPIN, PIERCE, POLK, PORTAGE, RACINE, RICHLAND, RUSK, ST. CROIX, SAUK, SAWYER, SHEBOYGAN, TAYLOR, TREMPEALEAU, VERNON, WASHINGTON, WAUPACA, and WOOD.

OUTDOOR WISCONSIN MAP

Outdoor Wisconsin, by Dean Landers, 1986. This map, with its accompanying text and indexes, consolidates a wealth of information on recreation areas in Wisconsin. Among the items included in its key are: public fishing and hunting locations; public and private campgrounds; cross-country ski, snowmobiling, and cycling trails; downhill ski areas; golf courses; national and state forests; waterfalls; rustic roads; and state trails.

Its indexes list the names of many of the above items and the text includes emergency phone numbers, Department of Natural Resources contacts, statewide road report numbers and radio frequencies, and county office contacts for local up-to-date outdoor information. The map has a 1:400,000scale (1 inch = 6.31 miles) and is available at many bookstores or by mail for \$3.95 (plus \$1.50 for shipping and \$.20 for sales tax) from: Information America, 917 Milton Avenue, Janesville, WI 53545, phone 608/752-0569.

TACTILE APOSTLE ISLANDS CHART

Nautical Chart of the Apostle Islands, The tactile chart, published by 1983. Sona Karentz Andrews, features: an outline map of the Apostle Islands in Lake Superior; water depths; 2 compass roses; ferry crossings; buoy and radio beacon locations; longitude and latitude grids; and inset maps of harbors. The chart has a scale of 1 inch = 1 statute mile, measures 86 by 68cm, and its key is in large type English and Braille. It is available for loan or for sale (\$15.00) from the University of Minnesota, Department of Geography, 414 Social Science Building, 267 19th Avenue South, Minneapolis, MN 55455.

IRON RIVER BEDROCK GEOLOGIC MAP

Bedrock Geologic Map of the Iron River 1° by 2° Quadrangle, Michigan and Wisconsin, by W.F. Cannon, 1986. The 1:250,000-scale map is the product of 40 years of detailed mapping by geologists. Much of the geologic pattern is interpreted from geophysical data that includes aeromagnetic, electromagnetic, and gravity data. The map, which measures 38" by 41", can be obtained by sending \$3.10 (plus \$1.00 for postage and handling) payable to the U.S. Geological Survey, and specifying ordering code and title I-1360-B, MICHIGAN, WISCONSIN to: U.S. Geological Survey, Map Distribution Section, Federal Center, Bldg. 41, Box 25286, Denver, CO 80225.

GLACIAL GEOLOGIC HAP, WI/MN

"Glacial Geologic Map of Northeastern Wisconsin and Western Upper Michigan", 1986, is included as a plate in the 14page USGS bulletin, <u>Late Wisconsinan</u> <u>Glacial History of Northeastern</u> <u>Wisconsin and Western Upper Michigan,</u> by W.L. Peterson, 1986. The colored map has a 1:500,000 scale. The accompanying bulletin discusses four late Wisconsinan glacial advances and their associated end moraines and outwash deposits. You can obtain the bulletin by sending \$2.25 and indicating code number and title, B 1652 WISCONSIN, MICHIGAN, to the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, Denver, CO 80225.

SOIL SURVEY OF LANGLADE COUNTY

The USDA, Soil Conservation Service issued the LANGLADE County soil survey in May 1986. It contains 167-pages of text, one fold-out, color, general soil map, 66 photobased map sheets delineating soil boundaries, and an index to those sheets. The soil survey, authored by Michael J. Mitchell of the SCS, was made in cooperation with the Research Division of the College of Agricultural and Life Sciences, University of Wisconsin. For more information or to obtain a copy contact either the Langlade County SCS Field Office or the SCS state office at 4601 Hammersley Road, Madison, WI 53711, phone 608/264-5341. ATTN: Soil Survey Section.

LAKE MICHIGAN DIVE CHART

Lake Michigan Dive Chart: Principal Shipwrecks Located and Identified, 1985, by Paul W. Ackerman. The 1:800,000-scale map measures 82 x 55 cm, and shows depths by soundings contours. It includes descriptive indexes to wreck sites and a list of wrecks not charted. Midwest Explorers League publishes the chart which costs \$6.00. For more information write to: Midwest Explorer League, 3641 N. Marshfield Ave., Chicago, IL 60613.

UN CART LAB NEWS

The University of Wisconsin-Madison's Cartographic Laboratory recently completed two projects. The Lewis and Clark National Historic Trail Brochure, 1986, displays a colored map (1" = 80 miles) with shaded relief depicting the explorers' trail from the junction of the Missouri and Mississippi Rivers to the mouth of the Columbia River. The two-sided informational brochure. prepared by the National Park Service and the Lewis & Clark Trail Heritage Foundation, includes text on 80 important trail sites, biographical sketches of Lewis and Clark, and information on travelling the Trail today. Free copies can be obtained from the National Park Service-Midwest, 1709 Jackson St., Omaha, NB 68102 or the Lewis & Clark Trail Heritage Foundation, Inc., 5054 S.W. 26th Place, Portland, OR 97201.

The Cart lab produced another two-sided color brochure, the <u>Wisconsin</u> <u>Snowmobile Trail Map</u>, 1986. The 1:500,000-scale map shows all recognized snowmobile trails in Wisconsin. It should be available in November from the Wisconsin Department of Tourism, 123 W. Washington Ave., Madison, WI 53702, phone 608/266-2147.

EARTH'S SURFACE RELIEF MAPS

A three-sheet set of world maps, Relief of the Surface of the Earth, edited by J.R. Heirtzler, provides highly accurate relief images of the Earth's surface. The maps are machine-produced from gridded digital elevations using computer imaging, photography, and printing. Sheet I, Computer-Generated Shaded Relief, depicts relief using gray monochrome shading and a simulated sun angle of 20 degrees above the western horizon. Sheet II, Computer-Generated Color-Coded Shaded Relief, uses the hue, saturation, and intensity of colors to portray elevation or depth. Sheet III, <u>Hemispheric Images</u>, with the same hue, <u>saturation</u>, and intensity as Sheet II, shows simulated views of the Earth from space centered on 30° N and 135°E; 30°N and 135°W; 30°N and 45°W; 30°S and 75°E; 30°S and 110°W; and 30°S and 15°W.

A set of the digital relief maps (three 36" x 46"sheets) costs \$30.00 and will be shipped rolled. Prepayment is required and checks or money order_ should be made payable to Commerce/NOAA/NGDC. Add \$10.00 for non-U.S.A. orders. Inquiries and orders should be addressed to: National Geophysical Data Center, NOAA E/GC 3 FLI, 325 Broadway, Boulder, CO 80303, phone 303/497-6338.

COMING EVENTS

WGLR, ASPRS & SLMS, ACSM FALL JOINT-MEETING

November 7, Wood Dale, IL (Elmhurst Country Club, HN 560 Wood Dale Road). The themes of this fall's meeting of the American Society for Photogrammetry and Remote Sensing, Western Great Lakes Region, and the American Congress on Surveying and Mapping, Southern Lake Michigan Section will be Geographic Information Systems and Liability Issues in Mapping. Mr. Jerry W. Robinson, President, Automation Group Inc., Rosemont, IL will deliver the keynote address; "Intelligent Infrastructure: The Opportunities". The evening will feature a social hour (cash bar) and a banquet, followed by the keynote address. The price for the banquet is \$14.00 (\$7.00 for ASPRS student members). To make banquet reservations contact Ms. Dee Gillespie, Department of Forestry and Natural Resources, Rm. 302, Purdue University, West Lafayette, IN 47907, phone 317/494-3599.

AM/FM MEETING

November 13, Milwaukee, WI. The local AM/FM (automated mapping/facilities management) group will host a cash bar and dinner with two speakers. David traniak of Donahue Intelligraphics will speak about current scanning methods. Tom Carlsen of DOT Technical Services will report on their quadrangle scanning project. The event begins at 5:30 at the Brookfield Marriott on Moorland Road. Contact Errol Bos for dinner reservations, phone 414/784-9200. Additional meetings are scheduled for January 8th and March 12th.

SURVEYING SHORT COURSE

November 15-16 (Module II) and December 5-6 (Module III), Madison, WI. Paul R. Wolf and Alan P. Vonderohe, Professor and Associate Professor of Civil and Environmental Engineering UW-Madison will offer a Continuing Education short course entitled "Modern Surveying Computational Methods". The course, designed to provide continuing education opportunities to practicing surveyors, will feature computational methods including matrix algebra, solution of equations, computer programming, and ultimately, the application of these procedures in adjusting surveying measurements by the method of least squares. It is the first course in a series planned by the University of Wisconsin-Madison. Fees for Module II and Module III are \$80 and \$120. Module I was offered October

and November 1. For more information or to register contact Wendy Drotos at 608/262-1299.

WORKSHOP: MULTIPURPOSE CADASTRAL AND LAND RESOURCES

December 8-12, Madison, WI. The University of Wisconsin-Madison will host this week-long series featuring a series of presentations by top experts. The workshop is intended for federal, state, and local government officials and private professionals who have an interest in and responsibility for: the preparation, transfer, or use of maps and land records; the creation and maintenance of geodetic control; the modernization of the Public Land Survey System (PLSS); or the implementation of modern land systems for state and local government. The Workshop format will be designed to encourage interaction and discussion. A midweek field trip will provide a survey of actual on-going applications of automated systems for a variety of uses in Wisconsin. A fee of \$1000 includes all lectures; the Primer; audio/visual set; bus transportation to field trip sites; selected meals; and a banquet dinner. For reservations or more information contact ASAP: Bob Merideth, Workshop Coordinator, Institute for Environmental Studies, UW-Madison, 1001 WARF Bldg., Madison, WI 53705, phone 608/262-3931 or 608/262-9937.

HANUKKAH/CHRISTMAS CONCERT & MAP EXHIBIT

December 9, Milwaukee, WI. For the sixth year in a row, the Friends of the UW-Milwaukee Golda Meir Library will sponsor a special Hanukkah/Christmas concert and exhibit in the library's American Geographical Society (AGS) Collection in early December 1986. A reception and holiday party will follow the concert. Both are free and open to the public.

To accompany the concert/reception, rare and beautiful maps of Israel and the Holy Land dating from the 16th, 17th, and 18th centuries will be exhibited with other AGS Collection treasures. The exhibit, entitled "Maps of the Holy Land" will run from December 9, 1986 to January 25, 1987. For more information call 414/963-6282.

IES SEMINAR PANEL DISCUSSION

December 12, Madison, WI. A panel discussion entitled "Natural Resource Planning and Management in Wisconsin: The Role of Land Information Systems Technology" will be the last in this series of Wisconsin Department of Natural Resources (DNR) and Institute of Environmental Studies, UW-Madison lectures and discussions. The panel will consist of: Janet Price of the DNR; Dr. Meredith Ostrom, State Geologist; Greg Allord of the USGS Water Resources Division; and Dave Fodroczi, Farmland Preservation Specialist. The seminar will meet at 1:20 p.m. in GEF II, Room 041, at 125 S. Webster Street in Madison. For more information, contact Prof. Ben Niemann, phone 608/263-7750.

LAND SURVEYING REFRESHER COURSE

January 20 - March 10, 1987 (Tuesdays, 8:00-9:50 p.m.). The course will provide an opportunity for interested participants to prepare for the Wisconsin Land Surveying registration examination. It will be presented over SEEN (the Statewide Extension Education Network) and available at 27 sites throughout Wisconsin. Course topics include the U.S. Public Land System, math, legal aspects, instrument adjustment, state plane coordinates, astronomy, photogrammetry, route surveying and property descriptions. State exams will be held April 9 & 10, 1987, but fees must be in the hands of the Wisconsin Examining Board no later than February 6, 1987. For course enrollment information contact: Janice Friis, SEEN Programming, Engineering Professional Development, University of Wisconsin-Madison, 432 North Lake Street, Madison, WI 53706, phone 608/262-2026.

PECORA XI: CALL FOR PAPERS

May 5-7, 1987, Holiday Inn City Centre, Sioux Falls, SD. The 1987 Pecora XI Memorial Symposium, entitled "Satellite Land Remote Sensing - Current Programs and a Look to the Future" will focus on domestic and foreign remote sensing programs. Issues will include commercialization, sensor and satellite systems, and discipline applications in satellite remote sensing and related technology. To have a paper considered, a detailed abstract must be submitted to the Chair of the Technical Program Committee by December 1, 1986. Abstracts should be less than 200 words and include the paper's title, author, and author's affiliation. A separate page with the author's (authors') complete mailing address(s) (include position and institution) and telephone number(s) must accompany the abstract. Indicate clearly the senior author's name and whether the paper is intended as a poster session or oral presentation. Manuscripts to be published in the proceedings are due May 1, 1987. Mail abstracts to: Chair of the Technical Program Committee, Pecora XI Symposium, EROS Data Center, Sioux Falls, SD 57198.

INTERNATIONAL CARTOGRAPHIC ASSOCIATION CONFERENCE, MEXICO

October 12-21, 1987, Morelia, Mexico. The theme of the 8th General Assembly of the International Cartographic Association and its 13th International Conference will be "Choices for Technological Changes in Cartographic Production". Authors are invited to submit papers based on the conference theme through their National Committees. For detailed information about papers, programs, registration fees, accommodations, excursions, social events, etc., request a copy of the Second Circular and other information by writing to: Mr. Manuel Gonzalez, Conference Director, XIII ICA Conference, Apdo. Postal 25-549, Mexico. POINTS AND LINES

LOST UPDATES FOR MAILING LIST Sometime during the compilation of the April 1986 Bulletin, our computer lost all of our mailing list corrections, deletions, and additions received between January and April 1986. If your address is incorrect or you know of any colleagues' addresses that need correction, please call or mail them to our Office. We are sorry for the inconvenience.

YIPPEE FOR THE U.P.! Residents of Michigan's Upper Peninsula found the magazine <u>Country Journal</u> guilty of the egregious crime of ignoring their existence, that is, leaving them off the map. Hostile "Uppity Peninsula" readers had the following admonishments:

"You've committed the ultimate, and oft-repeated, crime against the U.S. of A.! How will our citizens ever learn about the beautiful Upper Peninsula when people like you leave our area completely off the map?"

"The Upper Peninsula of the state of Michigan seems to have disappeared from the map of the United States in your June issue. Last summer <u>Newsweek</u> gave the U.P. to Canada, and a number of times it has been ceded to the State of Wisconsin, but this is the first time it has disappeared completely...I leave to your discretion the appropriate punishment for the article's author, the map drawer, and the editors who should have caught it. Yippee for the U.P.!"

Courageous but contrite, CJ's editor testified to the innocence of the author and map makers, who will spend their 1986 winter vacations in Florida and the Caribbean. Said the Ed., "Appropriate punishment for the editor, who alone was at fault: a week in the U.P. this winter."

(source: <u>Country Journal</u>, September 1986)



OVERSIZE COPY SERVICE

The WARF Duplicating Center has the only oversize xerographic copier on the UW-Madison campus. The machine makes copies as large as 2' x 3' on erasable sheepskin vellum, or 23" x 35" on white or color 70# vellum. The erasable vellum is ideal for reproducing highquality graphics, blueprints, or lines made with non-reproducible pens or pencils. The 70# vellum comes in an array of colors suited for poster production. Prices per copy range from \$.50 to \$1.50 depending on the copy size. For more information contact Millie Smith, 263-9187.

1980 CENSUS MAPS INVENTORY COMPUTERIZED Microcomputer diskette and microfiche inventories of 1980 Census maps are available from the Bureau of the Census. The inventories are most useful to data users who maintain a comprehensive collection of 1980 census maps for either an entire state or a group of states, or who frequently order maps for rural areas from the Bureau's Data Preparation Division. The inventories are organized by county or county equivalent with a data record for each map in the county. The microcomputer data base, containing files of the 50 states, Puerto Rico, the District of Columbia, and territories, can be purchased on six 9sector, double-sided, double density MS DOS format disketts for \$120. The Bureau has produced State inventory listings from the data base and converted these to microfiche. The entire set of listings is contained on 29 microfiche and costs \$22.50. Contact the Bureau of the Census Customer Services at 301/763-4100 for further information.

(source: Census Bureau, <u>Data</u> <u>User News</u>, July 1986)

SATELLITE DATA USERS GROUP

Ron Weinkauf of LaCrosse, WI has informed us that the Rocky Mountain Users Group of National Oceanic and Atmospheric Administration's (NOAA) polar-orbitting satellite data met in May of 1986 at the National Geophysical Data Center in Boulder, CO. They met to form a users group of the above data, including Advanced Very High Resolution Radiometer (AVHRR) imagery. If interested you may contact: David Hastings, NOAA/NSDIS National Geophysical Data Center, 325 Broadway (E/GCI), Boulder, CO 80303, phone 303/497-6729.

PUBLIC LANDS OFFICE MOVES In late August 1986, the Board of Commissioners of Public Lands moved to their new office at the Tenney Building. The new address is 110 E. Main St., Suite 701, Madison, WI 53703. Their phone number remains 608/266-1370. NGS PRICE INCREASE, PREPAYMENT POLI The National Oceanic and Atmospher. Administration (NOAA) user fee, based on U.S. Government policy, requires the National Geodetic Survey to charge users the marginal cost of disseminating geodetic products. Department of Commerce guidelines also require prepayment for information/products to non-federal organizations or individuals. The following prices have been in effect since March 1985:

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Published quadrangle booklets horizontal or vertical control: 1 thru 25 shts, p/bklt....\$ 6.50 ea. 26 thru 50 shts, p/bklt...\$13.00 ea. 51 thru 100 shts, p/bklt...\$26.00 ea. 101 or more shts, p/bklt...\$50.00 ea.

Complete county coverage - horizontal or vertical control: Old format data not presently available in published quadrangle booklets.....\$4.00 each.

Manuscript form - horizontal or vertical control: Unadjusted project data or recently adjusted projects in process of being incorporated into quadrangle booklets. 1 thru 25 shts, p/proj...\$6.50 ea. 26 thru 50 shts, p/proj...\$13.00 ea. 51 thru 100 shts, p/proj..\$26.00 101 or more shts, p/proj..\$50.00

Geodetic diagrams (regardless of size or area covered).....\$ 6.00 ea.

Geodetic mainframe software: First program copied to 9-tract tape.....\$60.00 ea. Each add'l program copied to same tape.....\$10.00 ea.

Calculator programs for HP-41CV and HP-97....\$10.00 ea.

Geoid height, Laplace corrections and gravity predictions: First prediction.....\$20.00 ea. add'l predictions on same order.....\$ 5.00 ea.

The above prices include postage and handling costs.

FICCDC CHARTER RENEWED

On March 18, 1986, the Director of the Office of Management and Budget renewed the charter for the Federal Interagency Coordinating Committee on Digital Cartography (FICCDC) through March 15, 1989. The primary purpose of rechartering the committee is to continue the process of coordinating the digital cartographic activities of federal agencies.

(source: Federal Digital Cartography, FDC Newsletter, Summer 1986)

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POINTS/LINES, continued

YOUNG MAP ENTHUSIASTS State Cartographer Art Ziegler won some fans at Madison's Mary Queen of eace School with his October 7, 1986 presentation on map reading. Here's one of 49 letters he received from his fourth grade pals:

October 8, 1994

Dear Mr. Ziegler, I liked your speech it could pass a test it was so good. I hanks boy the maps I thought yo were going. I be a yonger man with no explaince in maps I was wrong but you are hansome if you want to write lack elle put the entor on the back. Well I can't say you changed my hopes in a job but it was nice well by

your new loaddy Greg Hincicit

IN MEMORY

Not all news is good news. Your Editor is sad to report the death of Richard "Dick" Corbett, age 60, of cancer on October 1, 1986. Dick was a charter member of the Southern Lake Michigan Section of the American Congress on Surveying and Mapping. He fought long and hard for the strengthening of sections as the true interdisciplinary meeting ground within the mapping community.

Born on June 19, 1926 in Chicago, Dick worked as a surveyor for Commonwealth Edison for 39 years, becoming the Senior Surveyor of its Transmission Engineering Dept. in 1982. Perhaps his most satisfying professional undertaking was coordinating the City of Chicago's 1st-order Geodetic Surveying Project in 1977.

His friends and colleagues will miss his intensity and wit. I'll miss hearing him say "How ya doin' kiddo; buy you a beer?"

WLRC NEWS

The Wisconsin Land Records Committee has issued its first report recommending the tablishment of a land information

ogram. A series of public information meetings will be held around the state. For more information call 608/263-6843.

STATE INDEX/CATALOG BOOKLETS

At long last, the <u>Wisconsin Index to</u> <u>Topographic and Other Map Coverage</u> and <u>its companion publication the Wisconsin</u> <u>Catalog of Topographic and Other</u> <u>Published Maps are available from our</u> office. As we reported earlier (see April 1986 <u>Bulletin</u>) these will replace the outdated single-sheet indexes. The Wisconsin <u>Index/Catalog</u> is available from both the State Cartographer's Office, Room 155 Science Hall, University of Wisconsin-Madison, Madison, WI 53706-1404, phone 608/262-3065 and the Mid-Continent Mapping Center, U.S. Geological Survey, 1400 Independence Road, Rolla, MO 65401, phone 314/341-0851.

C&GS CONTACTS

The Office of Charting and Geodetic Services (C&GS), in addition to standard nautical and aeronautical charts and related products, provides published and raw geodetic data for cartographic applications, engineering projects, land-use planning, and space and defense systems. The following is a list of informational subdivisions in C&GS published in September 1985:

Director, Office of C&GS 301/443-8204, Aerial Photographs, Orders and Information 301/443-8601, Aeronautical Chart Information 301/443-8770, Geodetic Data 301/443-8631, Geodetic Literature & Records, Archival Services 301/443-8316, Geodetic Software 301/443-8623, Litigation Services 301/436-5766,

Nautical and Aeronautical Chart Sales 301/436-6990, Nautical Chart Information 301/443-8661.

Wreck and Obstruction Information 301/443-8752.

LAND SURVEYORS BOARD

As reported in last year's October Bulletin, three land surveyors and two public members sit on the 20-member Board of Architects, Professional Engineers, Designers & Land Surveyors. These five members are responsible for licensing and regulating land surveyors in Wisconsin. Under statute S.15.405 (2) all Board members are appointed by the Governor. Members are the same as last year but some of their positions within the section have changed. The changes are as follows:

-Donald L. Paulson, Chair Land Surveyor -Mary Hall Sullivan, Vice-Chair Public Member -Philip E. Klein, Secretary Public Member -Frederic H. Copp Land Surveyor -Bernard L. Watermolen Land Surveyor

You may direct questions about board~ related business to the Bureau of Design Professions in the Department of Regulation and Licensing at 608/266~ 1397.



PUBLICATIONS OF INTEREST

OUTAGANIE AND COLUMBIA CATALOGS Since our last county cartographic catalog announcement (October 1985 <u>Bulletin</u>), OUTAGAMIE and COLUMBIA catalogs, consisting of 97 and 120 pages respectively, have become available. They are the 40th and 41st in the series. Ready to go the printe is JACKSON. MONROE and LINCOLN will soon follow.

MANITOWOC COUNTY 1872 PLAT MAP INDEX Manitowoc County 1872 Plat Map Index, 1985, by Robert A. Bjerke. This is a name index to E.M. Harney's 1872 plat map of Manitowoc County, the earliest published plat. Bjerke appended a reproduction of the map to the index, one half township per page. The index is a sesquicentennial publication of the UW Center-Manitowoc County and the Manitowoc County Genealogical Society. The price is \$6.00 plus 30¢ tax and \$1.50 postage. Send you order to Mrs. Evelyne Keith, 1696 Atlanta Circle, Manitowoc, WI 54420.

LARGE-SCALE MAPPING GUIDELINES Large-Scale Mapping Guidelines, 1986 i a U.S. Geological Survey Open-File Report (86-005). The purpose of the guidelines is to help local, state, an federal agencies, private developers, corporations, and individuals in preparing specifications and acquiring large-scale maps for a variety of uses To order the publication, Open-File Report 86-005, send a check payable to the U.S. Geological Survey for \$7.75 paper copy, \$4.00 microfiche, to the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, Denver, CO 80225, phone 303/236-7476.

SPATIAL DATA HANDLING PROCEDURES The <u>Proceedings</u> of the Second International Symposium on Spatial Data handling are now available. The 600page volume contains nearly 50 technical articles. The <u>Proceedings</u> costs \$40.00, which includes handling and shipping by surface transport. A \$5.00 discount applies if a check is drawn in U.S. dollars and payable through a U.S. bank, and enclosed with the initial order. Shipment by air is available to points outside North

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America, and extra costs will be invoiced to customers. All orders should be addressed to: IGU Commission on Geographical Data Sensing and Processing, P.O. Box 571, Williamsville, NY 14221. Make checks payable to: IGU Comm. on Geog. Data Sensing & Processing.

PUBS OF THE NATIONAL GEODETIC SURVEY Publications of the National Geodetic Survey, January 1986 is an 18-page Tisting of NOAA technical memorandums and reports, Charting and Geodetic Services publications, and geodesy publications of other organizations. A free copy of the listing may be obtained from the National Geodetic Information Center (N/CG17x2), Charting and Geodetic Services, NOS, NOAA, Rockville, MD 20852.

LAND TITLE SURVEY STANDARDS After more than a year of joint effort, the American Congress on Surveying and Mapping (ACSM) and the American Land Title Association (ALTA) have updated the Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys initially developed by the two organizations in 1962.

Both ALTA and ACSM agreed that the 1962 standards had become technically and functionally obsolete. They recognized the need of the title industry for maximum physical information and the practical and marketing restraints affecting surveyors.

The updated standards will be available for purchase from ACSM, 210 Little Falls Street, Falls Church, VA 22046, phone 703/241-2446.

NEW GIS JOURNAL

A new journal, <u>International Journal of</u> <u>Geographical Information Systems</u>, will be launched in January 1987. The journal will contain papers on all aspects of geographical information systems (GIS's) supported by tutorial reviews, news and information, and book reviews. The journal will provide a forum for the exchange of ideas, techniques, approaches, and experiences in the rapidly growing field of geographic information systems.

For further details on this publication contact: Dr. K.E. Anderson, Chief, Eastern Mapping Center, U.S. Geological Survey, 567 National Center, Reston, VA 22092.

THE EARTH'S SURFACE IN DIGITAL RELIEF The National Geophysical Data Center is offering a new worldwide elevation and bathymetric data base. They assembled digital land and seafloor elevations from several uniformly gridded data bases into a worldwide data set with a grid spacing of 5-minutes latitude by 5-minutes longitude. The Defense Mapping Agency supplied the land elevations for North America. The digital data is available on binary magnetic tape, ASCII magnetic tape, and floppy disc. Contact P. Sloss, NOAA E/GC3, 325 Broadway, Boulder, CO 80303, phone 303/497-6119. THE STATE CARTOGRAPHER'S OFFICE ISSUES THE WISCONSIN 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:

CHRISTINE REINHARD,

STATE CARTOGRAPHER'S OFFICE,

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