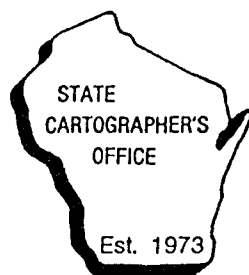


# WISCONSIN MAPPING BULLETIN

Vol. 14 No. 3 July 1988



QUARTERLY PUBLICATION OF THE  
STATE CARTOGRAPHER'S OFFICE  
PROVIDING INFORMATION ON LAND  
RECORDS AND MAPPING SCIENCES  
IN THE STATE OF WISCONSIN

## UW-Madison Site Visit by National Science Foundation

The University of Wisconsin-Madison is one of two finalists in the competition for the National Center for Geographic Information and Analysis (NCGIA) sponsored by the National Science Foundation (NSF). The other finalist is a consortium consisting of the University of California at Santa Barbara, the University of Maine, and the State University of New York at Buffalo. Each of the finalists was site visited by a review panel in mid-June with the UW-Madison visit on June 15 and 16. The site review team was comprised of 6 members, representing NSF, universities, and federal agencies.

NCGIA will serve to lead and coordinate basic and applied research, train teachers and researchers, and function as a database referral service and information clearinghouse. It will focus on practical as well as theoretical aspects of geographic information and analysis. To fulfill this mission, NCGIA will develop working relationships with government agencies, academia, users in public, private and utility sectors, software and hardware vendors, and educational/outreach organizations.

Proposals for the establishment of NCGIA were solicited by NSF with a January 29, 1988 deadline. UW-Madison's proposal was one of eight submitted. (A total of 14 institutions were involved in the eight submissions in that various consortia were proposed). During mid-May a preliminary screening panel narrowed the field to the two finalists.

Some 42 faculty members, representing 24 departments and programs, participated in the UW-Madison proposal formulation process. While the form and extent of each of these individual's input vary, the proposal is truly an institutional one. The proposal was submitted jointly by the College of Engineering, the College of Letters and Science, the College of Agricultural and Life Sciences, and the Institute for Environmental Studies (IES), which

has facilitated and coordinated the proposal development. In composite, the campus has pledged nearly \$2.6 million over the next five years to help support NCGIA if it is sited here.

Total potential funding for the Center is estimated as follows:

- \$2.6 million in composite pledged over a five year period by UW-Madison;
- \$1.25 million per year from NSF grant for eight years (\$10 million total);
- anticipated consortium fees in five years \$2.5 million annually;
- anticipated "secondary" research support in five years \$2.4 million annually;
- anticipated equipment/software donations in five years \$3.0 million annually;
- anticipated outreach income in five years \$200,000 annually.

The UW-Madison plan listed the following as principal and co-principal investigators:

Principal Investigator, Thomas M. Lillesand, (IES, Forestry, Civil and Environmental Engineering, {CEE}); Co-principal investigators James L. Clapp (CEE, IES), Phillip C. Muehrcke (Geography and IES), Bernard J. Niemann, Jr (Landscape Architecture, IES, Urban and Regional Planning), and Larry E. Travis (Computer Sciences); (Muehrcke and Lillesand are members of the Committee on State Cartography).

If UW-Madison is chosen to take on the responsibility for NCGIA, the State Cartographer's Office would probably become more involved in outreach activities nationwide. Development of such capabilities would enhance the services we are able to offer to current users.

The NSF is expected to announce its decision late this summer. Effective date of startup of the Center is set for October 1, 1988.

# The CONSOIL Project

CONSOIL is a three-year research and development project in Dane County with the goal of improving service delivery for a set of public resource conservation programs. It began in the spring of 1987 and will conclude at the end of 1989. The Project is using the Dane County area to test its prototypes, and its results should find applications in many of several thousand other counties across the country. Aspects of the Project will be of interest to resource managers, land and control surveyors, property mappers, land information system designers, planners, and many others.

The name "CONSOIL" is an acronym derived from "Conservation Of Natural Resources through Sharing Of Information Layers." Geographic Information Systems (GIS) and related technologies are being used and developed to accomplish the data sharing and geographic analysis needed to modernize the management of soil and water conservation programs. These programs include the 1985 federal farm bill (Food Security Act): swampbuster, sod-buster, conservation reserve, and conservation compliance; and Wisconsin programs for soil erosion control, non-point water pollution control, groundwater protection, and farmland preservation. County-level offices administer many of these programs; carrying out these mandates requires storing, updating, merging, analyzing, and displaying various types of geographic information.

By building up libraries of computerized geographic data needed for the various programs, and by developing means for routine sharing of data sets amongst programs and agencies, it should be possible to avoid duplication in the automation and maintenance of the data. Also, the agency most suited to manage each data set will become recognized as the custodian. Effective sharing of geographic data will require formal agreements amongst the custodian agencies. The development and maintenance of such agreements is a subject of study in the Project.

A high level of interest in the goals of the Project is evidenced by the list of cooperating organizations which signed the CONSOIL Memorandum of Understanding in 1987:

- USDA Soil Conservation Service (SCS)
- USDA Agricultural Stabilization and Conservation Service (ASCS)
- U.S. Geological Survey--Water Resources Division (USGS)
- Wisconsin Department of Natural Resources (DNR)
- Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP)
- Dane County
- University of Wisconsin-Extension--Geological and Natural History Survey (GNHS)
- University of Wisconsin-Madison--College of Agricultural and Life Sciences, College of Engineering, Institute for Environmental Studies, and State Cartographer's Office.

The State Cartographer's Office is particularly interested in CONSOIL in several respects: use and development of digital mapping and analysis systems; remonumentation; densification of geodetic control; organization of control information; digital data sharing; and experimental cartographic techniques.

## Organization, Funding, and Management

CONSOIL activities are grouped into several topic areas which are integrated into an overall plan of action. The completion of tasks defined for each area requires combined efforts of several cooperators. The particular topic areas are described later in this article. At monthly half-day meetings, project participants report on the status of particular tasks, and demonstrations and results of completed activities are presented.

Primary funding is through the USDA Soil Conservation Service Wisconsin State Office. The annual grant of \$250,000 is more than matched by resources in the cooperating agencies. It is a critical goal that, at the end of the third and final year of the Project, the cooperative activities will continue and expand without outside assistance.

CONSOIL is managed by an Executive Staff headed by three cooperator representatives: Robert Martin (USDA-SCS), Bernard J. Niemann, Jr. (UW-Madison), and Howard Braunschweig (Dane County, Systems and Data Processing Department). Day to day activities are coordinated by staff of the UW-Madison Land Information and Computer Graphics Facility. As the Project develops issues which have impact on agency policy and overall Project direction, recommendations are presented to an Policy Review Committee composed of the heads of the cooperating agencies.

## Historical Roots

The Dane County Land Records Project (DCLRP) is the immediate ancestor of CONSOIL. That project showed that modern technologies could economically provide the basis for soil erosion control planning. These technologies were topological overlay geographic information software, global positioning systems for geodetic control, scanning for digital conversion of maps, and satellite imaging for agricultural land cover determination. The project was applied to three of Dane County's 35 townships.

Based on the success of the DCLRP, Dane County contracted with the UW-Madison for production of a soil erosion control plan for the entire county. This plan was completed and published recently (see article on p. 7). The digital geographic layers created for the Plan are being used and augmented as part of CONSOIL.

....continued

## The CONSOIL Project, continued...

### Topic Areas

In order to produce a system design useful for the programs and agencies involved, CONSOIL has conducted a **structured systems analysis** of data needs and flows. This analysis is not a one-time effort, but the basis for an ongoing information bank--or data dictionary--on the geographic data used for program administration. It will provide flexibility to accommodate new programs or changes in existing programs.

The **Black Earth Creek Watershed** in northwestern Dane County provides a set of characteristics making it an ideal study area for the CONSOIL Project. Covering several townships, and approximately 100 square miles, it is of sufficient size for testing various techniques, but small enough to be manageable with the hardware, software, and personnel available. The watershed contains a mix of agriculture, woodland, small towns, and home sites. It also was already a priority area for non-point source pollution control efforts under a cooperative program between state and counties agencies. In addition, a wealth of data has been collected in the watershed due to its high quality trout fishery and due to its proximity to the Madison area.

CONSOIL has chosen **pcARC/INFO software** as its primary means to study the management and analysis of geographic data needed to address program needs. In addition, ties are being made to other database types which manage information on farm cooperators (for whom conservation farm plans are developed), property ownership, and zoning. A key element in relating the tabular and graphic databases to one another is a geo-coded property identification number. This new number is being assigned to all parcels outside the major urban areas by Dane County in cooperation with CONSOIL.

The integration of digital layers (or automated maps, in a sense) is dependent on a **common spatial reference system**. Since no large scale base maps exist for Dane County, a system of control coordinates for Public Land Survey System corners is being used to provide the "pins" that allow various layers to be overlaid in the computer. The accuracy of these coordinates is being examined by comparing various sources including USGS digital line graphs at various scales, field surveys, and global positioning system(GPS) observations.

Coordinates determined through GPS are being provided cooperatively by the National Geodetic Survey to **densify geodetic control**. Observations in western Dane County were made in the Fall of 1987 at monumented points selected by the Dane County Surveyor and Project Staff. The NGS plans to return later in 1988 to complete their survey in the eastern part of the county. CONSOIL is working on conversion of GPS data reduction software, so that it will run on a personal computer; this would allow local processing of data as GPS becomes more common.

Geodetic control information is essential to coordinated land surveys, in addition to accurate automated map overlay. This information exists in many forms and in many places. It has been developed over the years for many purposes, some of them ad hoc. There is no logical way to access this information, even if it were all in one location. CONSOIL is developing the concepts that will support a county-level **Position Information Network System (PINS)**.

The layer representing **land ownership** parcels is being digitized from existing 1:12,000 scale county maps. This process has begun over the Black Earth Creek Watershed. This layer is being studied relative to coordinate geometry and field survey results. Further research using property lines visible on new 1:4800 scale orthophotos is scheduled.

Integration of **satellite remote sensing** capabilities with CONSOIL GIS developments is expected to yield a very rapid method for identifying the crop type for any area already mapped as an individual field in the GIS.

In conjunction with the Project, SCS is developing a long term plan for adapting soil survey methods and products to technological developments. The potential exists for greatly broadening and deepening the collection, maintenance, and dissemination of soils information.

### Policy Issues

As a result of experience in the first year of The Project, several issues were presented to the Policy Review Committee in February of this year. The following actions were recommended to and endorsed by the Committee:

- agencies establish an interagency library system to support geographic data sharing;
- a committee of state and local agencies and utilities be convened to make a recommendation regarding a statewide orthophoto mapping program which responds to multiple needs;
- existing committees be asked for their collective advice concerning responsibility for a coordinated state and local geodetic control program for Wisconsin;
- agencies cooperate in a pilot project to investigate the potential for coordinated acquisition and dissemination of statewide satellite-derived land cover and change detection information.

### Reports and Future Activities

CONSOIL will be preparing two issues of the Wisconsin Land Information Newsletter, to report on the first year of the Project and the Dane County Soil Erosion Control Plan. For further information about CONSOIL, contact the Land Information and Computer Graphics Facility, B102 Steenbock Library, UW-Madison, WI 53706; phone (608) 263-5534.

## SENATE JOINT RESOLUTION 53: COUNTY OFFICE OF SURVEYOR

A proposed amendment to the Wisconsin Constitution would specifically allow (not require) counties to fill the office of surveyor by county board appointment. County boards already have statutory authority to appoint surveyors, but the applicable status has been challenged in a court case that is now before the Wisconsin Supreme Court.

SJR 53 was adopted by the Senate and concurred in by the Assembly during the recently concluded legislative floor-period. To amend the Constitution, SJR 53 would have to be adopted by the next Legislature, which will be seated in January, 1989, and then approved by the voters in a statewide referendum.

(source: *Wisconsin Counties*, May 1988)

## GROUNDWATER CENTER "DATA BASE"

Local officials and individuals requested help from the Legislature for the establishment of a central source of information, education and assistance on groundwater issues. In response, the Groundwater Center was established at the University of Wisconsin-Stevens Point in 1985 with state funding sponsored by State Senator Dave Helbach and State Representative Stan Gruszynski.

Tom Osborne, Center director and hydrogeologist, and Chris Mechenich, groundwater education specialist, fulfill the Center's two key missions: providing information and education to individuals with concerns, and providing technical assistance to local units of government. A third staff member, Mike Bohn, assists with data management needs from the Wisconsin Geological and Natural History Survey (WGNHS) in Madison.

The Center's philosophy is that many environmental issues, including groundwater, have aspects that can best be handled at the local level.

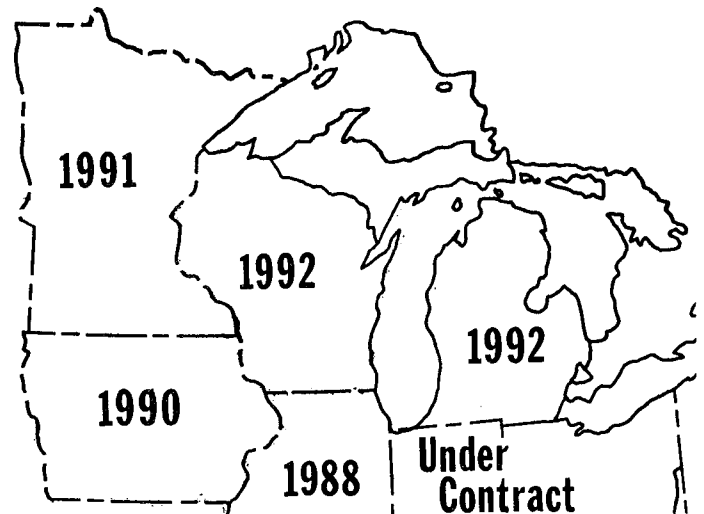
Data collection and management are the foundations for the Center's technical assistance activity. The Center is developing a computerized data base for groundwater quality data from central Wisconsin counties. Groundwater quality reports for 1987 data are currently being prepared for presentation to participating counties.

Ultimately, Center staff hope to see more Central Wisconsin counties beginning groundwater management planning. "Since groundwater quality is so closely tied to land use, and since the primary responsibility for land use decisions is at the local level, it's logical that counties should be the ones to implement groundwater management plans. And citizens may be more responsive to education or regulation that starts at the local level" Osborne said.

(source: *Wisconsin Counties*, April 1988)

## WISCONSIN MAPPING BULLETIN

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## NATIONAL AERIAL PHOTOGRAPHY PROGRAM (NAPP)

The above graphic depicts the schedule for acquisition in the NAPP for Wisconsin and adjoining states. This program replaces the National High-Altitude Photography (NHAP) program for the U.S. Geological Survey.

NAPP has as its basic objective the acquisition of photographs at an altitude of 20,000 feet (1:40,000-scale), with a single 6-inch-focal-length camera, exposing Color Infrared (CIR) film. The flight lines will be typed to provide stereoscopic coverage of each of the four quadrants of the 7.5-minute quadrangle (referred to as quarter-quad-centered photography).

For early acquisition in the program, USGS is giving priority to states which cooperatively fund their acquisition, as in the case of Ohio and Indiana. Cooperating states also have input into decisions on leaf-on/leaf-off acquisition.

The 1992 date for Wisconsin will be 5 years after the completion of NHAP II and is consistent with the federal plan for a 5 year cycle on high-altitude coverage. For Wisconsin to advance the date would require a significant cooperative effort within the state to fund the acquisition. Minimum areas contracted for are 1/2 of a state.

For additional information contact: Art Ziegler, State Cartographer at (608) 262-6852.

## FEDERAL LAND INFORMATION STUDY PROPOSED IN CONGRESS

A key provision of the Federal Land Exchange Facilitation Act, H.R. 1860, calls for a one-year land information study. The House approved this legislation in December, 1987. A hearing was held this March before the Senate Subcommittee on Public lands, National Parks and Forests. Witnesses were limited to Administration officials. The American Congress on Surveying and Mapping (ACSM), provided a written statement for the hearing record.

Although the Administration objects to certain land exchange appraisal provisions, it is anticipated that the Senate subcommittee will move the legislation in the near future. No opposition has arisen from subcommittee members to the inclusion of the one-year land information study.

The ACSM is working to ensure that Section 8 containing the land information study is included in the Federal Land Exchange legislation reported by the Energy and Natural Resources Committee for Senate consideration.

(source: *ACSM Bulletin*, June 1988)

## NEW PUBLICATIONS

### New Map Projections Booklet

Choosing a map projection for use in media presentations, in the classroom or in other applications can be a confusing task. To help map users make the right decision, the American Cartographic Association (ACA) of the American Congress on Surveying and Mapping (ACSM) has released the second publication in its series of booklets designed to clearly explain the inherent attributes, distortions, classes and aspects of different map projections.

In 15 pages of easy-to-understand text accompanied by first-rate color map projection illustrations, "Choosing A World Map" explores the differences and distortions among twelve of the most frequently used map projections.

Chapters cover Flat World Maps, Earth to Globe Projections, Map Scale, Attributes, Distortions, Classes of Projections for World Maps, Aspects of Projections and Recognizing Distortion.

The booklet's final section, on Distortion Cartoons, uses computer-generated map projections bearing drawings of the masks of tragedy and comedy (in place of the standard human face) to show where and how different projections distort objects plotted on them.

Copies of "Choosing a World Map" are available from ACSM for \$5.00 (single copy) to members and \$5.50 to non-members. Orders for ten or more copies can be obtained at the following discount:

Copies	Cost/Copy
10-19	\$2.00
20-29	\$1.50
30-39	\$1.25
40-49	\$1.10
50 +	\$1.00

Please add \$2.00 shipping and handling to all orders. To order send check or money order in U.S. funds drawn on a bank in the U.S. to ACSM Publications, 210 Little Falls Street, Falls Church, VA 22046.

All orders must be prepaid. Telephone charge orders accepted using VISA or MasterCard. Please call Sheila McMahon, (703) 241-2446.

### Geodetic Glossary Available

Almost 5,000 terms used in geodetic and other surveys are defined in this new 274-page geodetic glossary published by the National Geodetic Survey. The glossary is for sale for \$13.00 from the National Geodetic Information Branch, N/CG17x2, Rockwall Bldg., Room 14, National Geodetic Survey, NOAA, Rockville, MD 20852.

(source: *ACSM Bulletin*, June 1988)

### ACSM Plans New Survey Review Manual

"Our goal is to produce the first volume of the most comprehensive and usable survey review manual on the market," announced Dr. Richard L. Elgin, chair of the American Congress on Surveying and Mapping Review Manual Committee, at its meeting held in St. Louis during the annual convention. Elgin will be editor in chief of the first volume of the new ACSM publication.

When complete as a two-volume set, the manuals will be organized to follow the structure of the National Council of Engineering Examiners (NCEE) Surveying Exam. This exam is the standard licensing examination given to surveyors at the state level. Volume I will cover parts I and II (the fundamentals portion) of the NCEE exam and Volume II will cover parts III and IV (the principles and practice section).

Tentative areas to be covered in the book are: why registration is important for surveyors, how to take a test, exam preparation tips, basic surveying mathematics, linear measurements, angle measurements, leveling, traversing, route surveying, applications of coordinate geometry, control surveys, instrument error sources and errors analysis, geodesy, inertial and satellite positioning, celestial observations for azimuth, plane coordinate systems,

....continued

topographic surveys, earthwork calculations, photogrammetry, construction surveying and hydrographic surveying.

While ACSM is developing review manual, NCEE is cooperating by supplying a series of typical NCEE questions for topics which its exam covers.

(source: *ACSM Bulletin*, June 1988)

## Seminar Proceedings Available

A 175-page collection of papers on the use of Land Information Technology for Natural Resource Planning, Management, and Monitoring is available from UW-Madison. A diverse mix of applications is presented by Editors Benard J. Niemann, Jr. and Jerome G. Sullivan, from the Seminar on Multipurpose Land Information Systems. To order, send name, address and postal code, along with check or money order (US funds, US bank) for \$7.50 to: Office of Publications, Information, and Outreach Institute for Environmental Studies, UW-Madison, 15 Science Hall, 550 N. Park St., Madison, WI 53706, ask for IES Report 132.

## CONFERENCES & TECHNICAL MEETINGS

### 8th Annual Municipal Clerks Seminar

The Wisconsin Municipal Clerks Association (WMCA) will hold their 8th annual seminar on *August 18 & 19, 1988*, at the Holiday Inn in Manitowoc. All Clerks and Deputy Clerks are urged to attend this informative seminar. You need not be a member of the WMCA to attend and should register by July 20th. You may make room reservations directly with the Holiday Inn at (414) 682-6000. Prepaid registration (includes 2 luncheons, banquet & coffee breaks) is \$55.00. Make checks payable to: Wisconsin Municipal Clerks Seminar. Mail registration to: Nola Sodolski, CMC, 215 N. Shawano St., New London, WI 54961.

### Wisconsin Counties Association Annual Convention

*September 18-21, 1988* at the Radisson Hotel at Park Plaza in Oshkosh Winnebago County. Pre-registration forms must be postmarked no later than Aug. 19th. Registration fee for County Delegate is \$75.00. Contact: Wisconsin Counties Association, 802 W. Broadway, Suite 308, Madison, WI 53713-1897.

## Regional/National/International

*September 12-16, 1988. ACSM/ASPRS Fall Meeting.* Virginia Beach, VA. For more information contact: Sue Luthy, ACSM, Meetings Coordinator, 210 Little Falls St., Falls Church, VA 22046, (703) 241-2446.

*October 4-6, 1988. Great Lakes-Midwest ARC/INFO Users* will meet in St. Paul, MN. For more information, contact Paul Tessar, State Planning Agency, 300 Centennial Bldg., 658 Cedar St., St. Paul, MN 55155; phone (612) 296-3985.

*October 17-21, 1988. International Federation of Surveyors (FIS), Commission 2. Symposium: University Education for Surveyors.* Madrid, Spain. For more information contact: Colegio Oficial de I.T. en Topografia, Paseo de la Castellana 210.28046, Madrid, Spain.

*November 29-December 3, 1988. GIS/LIS '88 Conference.* San Antonio, Texas. For more information contact: ACSM, 210 Little Falls St., Falls Church, VA 22046.

*August 17-24, 1989. XIV International Cartographic Conference.* Budapest, Hungary. Call for Papers. For more information contact: A. Jon Kimerling, U.S. Program Committee (ICA), Department of Geography, Oregon State University, Corvallis, OR 97331, (503) 754-3141.

## COOPERATIVE EXTENSION

### Short Courses Offered

Two short courses in automated mapping and analysis will be given in Madison in the fall. From *September 19-21* will be "Developing Geographic Mapping and Analysis Systems". This beginning level class is being repeated following its very successful first offering in May of this year.

An advanced class is scheduled for *October 11-14, 1988*. It will focus on **data conversion issues and techniques**. Both classes are sponsored by the UW-Madison's Engineering Professional Development, with Cooperative Extension Services, and are held at the Wisconsin Center on the Madison campus.

For more information, including course description brochures, write: Engineering Professional Development, ATTN: Pat Eagan, 432 N. Lake St., UW-Madison, Madison, WI 53706 or in Wisconsin call toll-free 1-800-362-3020, and ask for Pat Eagan. Outside the state, call (608) 263-7429.

## WisURISA & WLIA TO MEET IN MADISON ON JULY 27, 1988

The Wisconsin Chapter of the Urban and Regional Information Systems Association and the Wisconsin Land Information Association will hold a joint meeting on **Wednesday, July 27, 1988** in Madison at the Holiday Inn East (US 12-18 and I-90). This location on the east edge of the Madison area provides easy access by major highway routes.

### Timetable

11:30 - 1:00 Lunch  
1:00 - 2:00 Committee Meetings  
2:00 - 2:45 WLIA Business Meeting  
2:45 - 3:45 Education Program  
3:45 - 4:30 WisURISA/WLIA Business Meeting  
4:30 - 5:00 WLIA Board of Directors/WisURISA Officers Meeting

Reports on organizational status, legislative contacts, and upcoming meeting and conferences will be given. Attendance is encouraged for anyone interested in modernization of Wisconsin land records and potential statewide cooperative activities. For additional information, contact the State Cartographer's Office at 608/262-3065.

## WISCONSIN--ILLINOIS AREA DIGITAL DATA USERS TO MEET

The SCO and the Illinois Mapping Advisory Committee are sponsoring a meeting of digital geographic data users. The group will meet from 10:00 a.m. until 3:00 p.m. on Thursday, September 8, 1988 at the Student Center of Northern Illinois University in DeKalb. This represents an opportunity for users to become acquainted on a first name basis, and to share experiences and plans. The emphasis will be on practical aspects of producing and using digital data for various program purposes, including data sharing (both technically and institutionally) software-hardware configurations, and format conversations. A nominal registration fee to include lunch will be necessary.

If successful, similar gatherings could be scheduled at some frequency at other sites in NE Illinois--SE Wisconsin. To receive information on agenda and registration contact Prof. Richard Dahlberg, Dept. of Geography, NIU, DeKalb, IL 60115; or call (805) 753-6827.

## BICENTENNIAL OF CONSTITUTION BECOMING LAW OF THE LAND

On June 21, 1788, New Hampshire became the ninth state to ratify the Constitution, making it our new form of government. It was not until July 2, 1788, that the President of Congress received this news and announced that the Constitution was now the official law of the land.

To celebrate Independence Day and the ratification of the Constitution, a Grand Federal Parade was held in Philadelphia on July 4, 1788. This year a recreation of that parade is planned for July 4 in Washington, D.C.

## SEWRPC CONSERVATION NOTES

The March-April 1988 Newsletter of the Southeastern Wisconsin Regional Planning Commission (SEWRPC) contains several excellent articles on soil erosion and stormwater management planning. For further information, call (414) 547-6721, or write SEWRPC, Old Courthouse, P.O. Box 1607, Waukesha, WI 53187-1607.

## DANE COUNTY SOIL EROSION CONTROL PLAN

Wisconsin counties have been developing plans for control of soil erosion over the last several years, as mandated by state legislation and administrative rules. A variety of methods have been used to produce these plans, which are subject to review at both state and local levels.

Dane County's plans represents a technological breakthrough. It uses automated methods of storing and manipulating geographic data to form the basis for developing and implementing the plan. As an alternative to the traditional paper documents of descriptions, tables, and maps, the Dane County Soil Erosion Control Plan is a system that can be adapted to changing needs of the Land Conservation Field Office. The Plan is an outgrowth of research conducted through the Dane County Land Records project and the CONSOIL Project at UW-Madison.

A limited number of copies of the Plan document are available. Contact Steve Ventura at the UW-Madison Land Information and Computer Graphics Facility at (608) 263-5534.

*A UNIVERSITY OUTREACH PUBLICATION DISTRIBUTED FREE UPON REQUEST*

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

PLEASE SEND ALL COMMENTS, CORRECTIONS, AND NEWS ITEMS TO: STATE CARTOGRAPHER'S OFFICE, 155 SCIENCE HALL, MADISON, WI 53706-1404, 608/262-3065.



## CENSUS BUREAU ANNOUNCES PROGRAM TO AID 1991 VOTER REDISTRICTING

In 1989, the U.S. Bureau of the Census will provide an opportunity for Wisconsin counties and municipalities to take part in a program designed to facilitate the 1991 voter redistricting process.

Formally called "Phase 2 of the 1990 Census Redistricting Data Program," this program asks county and municipal representatives to inform the Census Bureau in 1989 of the boundaries of their local election districts. In return, the Census Bureau will include population counts for these election districts in the voter redistricting data file planned for release on April 1, 1991.

Initial steps have been taken in Wisconsin to assist those counties and municipalities wishing to participate in this voluntary program. The work is being coordinated by the Department of Administration's Demographic Services Center with the assistance and cooperation of the Wisconsin Counties Association, the University of Wisconsin-Madison Applied Population Laboratory, and the League of Wisconsin Municipalities.

As currently planned, the Census Bureau will provide Wisconsin with two copies of computer-generated maps for all participating areas next spring. These maps will show the statistical data collection and tabulation areas for the 1990 Census (Blocks, Tracts, and Block Numbering Areas) and the January 1, 1988, political boundaries of counties, cities, villages, towns and American Indian reservations.

The state will package the appropriate sets of maps and forward them to the designated contact persons in participating counties. Instructions for delineation of election districts will be included. Each county's designated contact person will then work with the participating municipalities in the county in drawing the boundaries of local election districts (wards, aldermanic districts, and supervisory districts) on the census maps. The maps must be returned to the state, which will check the boundary outlines to ensure that they conform to the Census Bureau's instructions.

More news of this important program is expected later this year. For now, questions about participating in the "Phase 2 Redistricting Data Program," should be addressed to either of the following persons:

Paul Voss, Applied Population Laboratory, UW-Madison, 1450 Linden Dr., Madison, WI 53706; phone 608/262-9526; or Nadene Roenspies, Demographics Services Center, Wisconsin Dept. of Administration, P.O. Box 7868, Madison, WI 53707-7868, phone 608/266-1755.

(source: *Wisconsin Counties*, June 1988)

## NEED FOR A STATE PROGRAM FOR THE REVISION AND UPDATING OF THE 7.5-MINUTE TOPOGRAPHIC MAP SERIES

In 1985, the series of 1154 large-scale topographic maps were completed giving the state of Wisconsin a standard base coverage at identical scale and contour interval. This series of 7.5-minute quadrangle maps was a cooperative program with the U.S. Geological Survey beginning in 1970 and cost the state in matching funds \$3,280,000.

As the graphic on the facing page illustrates, the map series is becoming out-dated and is in need of massive revision. The last revision was the Fond du Lac quad in 1985. Since that time neither the U.S. Geological Survey or the state of Wisconsin has authorized or funded any revision activity. In summary, the graphic shows that:

- a. 424 quads are dated 1980 or later ..... ( 36.8%)
- b. 628 quads dated between 1970 and 1979.. ( 54.4%)
- c. 102 quads are pre-1970 ..... ( 8.8%)

The funding for the initial production came from contributions to a mapping program from the Dept. of Transportation, Dept. of Natural Resources and the Geological and Natural History Survey. These funds were General Purpose Revenue funds. The program was managed by the State Geologist by statutory authority, and assisted by the Wisconsin Topographic Mapping Committee. The Committee had members from the contributing agencies and was augmented by a professor from the UW-Madison Civil and Environmental Engineering Dept., a representative of the Dept. of Administration, and the State Cartographer.

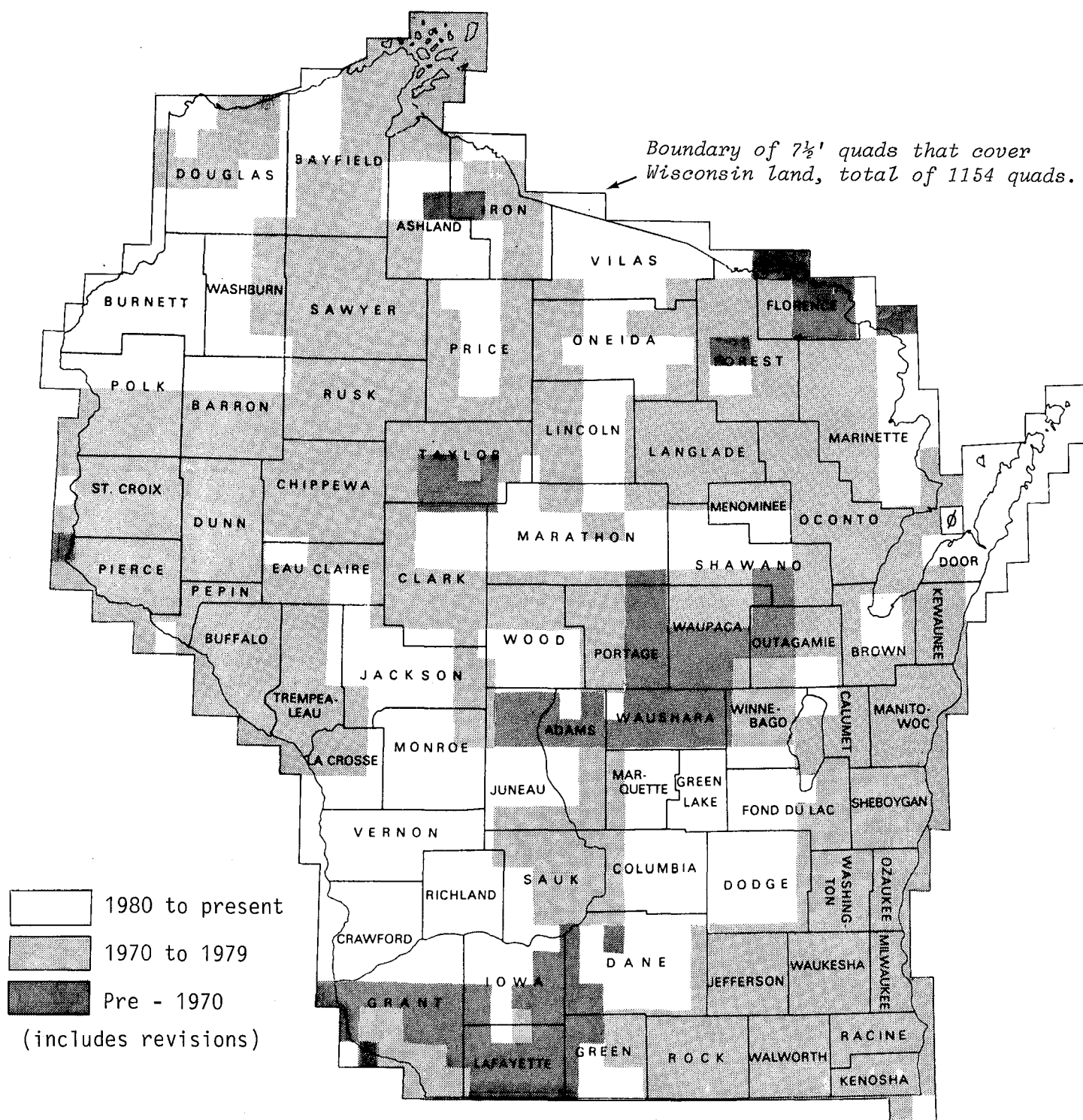
Since the completion of the coverage, the funding agencies have not allocated support to a revision program for various reasons. These include not having a definitive program objective and questioning the statutory authority to commit funds to an updating program.

The State Geologist, Dr. Meredith Ostrom, and the State Cartographer are developing criteria for a proposed updating program. As an initial investigation, we are looking at 5-year revision cycles for urban/suburban areas, a 10-year cycle for rural land and a 20-year cycle for natural areas such as forested tracts. Other considerations are suburban development, major highway construction, changes in recreational areas and specific needs of natural resources.

A revision plan is being developed with a target of a draft publication for the fall of 1988. If you are interested in commenting, the State Geologist or the State Cartographer would be happy to consider your suggestions. Dr. Ostrom can be reached at the WG&NHS, 3817 Mineral Point Road, Madison, WI 53705. The State Cartographer's address is the same as the Wisconsin Mapping Bulletin.



# CURRENCY OF THE U.S.G.S. 7.5-MINUTE TOPOGRAPHIC QUADRANGLE SERIES



**date:** June 1988

**source:** Wisconsin Geological & Natural History  
Survey & State Cartographer's Office



NATIONAL OCEAN SERVICE  
CHARTING AND GEODETIC SERVICES  
NATIONAL GEODETIC SURVEY  
Information Flyer 88-12

**NGS TO CHARGE FOR  
GEODETIC INFORMATION  
BY TELEPHONE**

(Effective July 1, 1988)

The National Geodetic Survey (NGS) provides point-specific information by telephone for the horizontal and vertical control stations of the National Geodetic Reference System. Horizontal control information is available for the North American Datum of 1927 (NAD 27) and the North American Datum of 1983 (NAD 83). Vertical control information is available for the National Geodetic Vertical Datum of 1929 (NGVD 29).

This information includes adjusted and unadjusted control point positions, elevations, azimuths, station descriptions, recovery reports, reference mark information, and distance and direction values from field observations. NGS also provides adjusted lengths and location descriptions for calibration base lines which NGS has established throughout the United States. For the recently completed NAD 83, NGS provides coordinate data including station identifier, station name, latitude, longitude, northing, easting, plane coordinate zone, convergence of the meridians at each station, scale factor at the station, elevation, geoid height, and position quality (order of accuracy).

Beginning July 1, 1988, NGS will charge for geodetic information provided to telephone callers. Customers requesting geodetic information by telephone will be charged \$6.00 for every 15 minutes NGS needs to provide the requested information. We will accept credit card payment for these information requests, using either VISA or MasterCard. These charges do not apply to telephone calls to NGS to order geodetic data.

If an information request is extensive, we recommend that the customer purchase printed or digital geodetic information as outlined in the current listing of NGS products and prices. NGS will continue to provide, at no charge, general information concerning the availability of its products and services, as well as flyers, brochures, and the publication catalog.

For information call (301) 443-8631, or write:

National Geodetic Information Branch  
N/CG174, Rockwall Building, Room 24  
National Geodetic Survey, NOAA  
Rockville, MD 20852

June 1988  
N/CG17

*The State Cartographer's Office will continue to service requests for geodetic information held in our files, without charge. However, since the above letter applies to everyone, including this Office, we must limit our contacts with the National Geodetic Survey.*