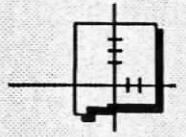


The Map Legend

New Mexico Geographic Information Council, Inc.

...reporting on geographic information for and about the Land of Enchantment...



Volume 3, Number 4

Summer 1992

GLOBAL POSITIONING COMMITTEE UPDATE

The Global Positioning Systems (GPS) Committee has recently been involved in two main endeavors: the establishment of the New Mexico GPS Reference Network and the development of an active GPS control station.

The New Mexico GPS Reference Network (NMGRN) is a statewide network of 45 survey monuments accurately positioned by utilizing GPS technology. All field work contributing to the establishment of the NMGRN is complete and the results have been submitted to the National Geodetic Survey (NGS). NGS personnel at the agency's headquarters in Rockville, Maryland, have completed the final analysis and report preparation. The positions for all points in the NMGRN meet the target relative accuracy level of one part per million.

In order to ensure the consistency between the NMGRN and the existing classically-surveyed geodetic control network in New Mexico, GPS ties are being made between the two networks. These connections will allow for a readjustment of the existing network based on the high accuracy framework provided by the NMGRN. These ties should be completed later this year with a statewide readjustment following shortly thereafter.

The GPS Committee will be publishing and distributing a brochure detailing information about NMGRN. More detailed information including descriptive and coordinate data will also be available.

Work is progressing toward the establishment of an active GPS control station to be located at Albuquerque International Airport. The station will consist of a GPS receiver operating continuously and automatically, with the capability of remote control and monitor by a system manager. Data will eventually be made available to the general public, most likely on a dial-up basis through a personal computer. The base station will support a variety of applications, including geodetic accuracy positioning, data collection for various aspects of GIS projects, orbit determination, and crustal motion studies.

Funding for the base station is being provided by the New Mexico State Highway and Transportation Department (NMSHTD). NMSHTD entered into a contract with the Applied Research Laboratories (ARL) at the University of Texas at Austin to develop the software to develop the remote control and monitor of the station. Additionally, ARL has integrated the various hardware components that comprise the base station. Most of the technical development is complete. We are hoping for rapid resolution of the remaining hurdles which are bureaucratic.

During the first year or so of the base station operation, the data will be kept primarily for in-house testing and applications. During this time, we hope to develop the mechanism allowing for easy public access of the data.

For more information on these and other GPS-related items, contact:

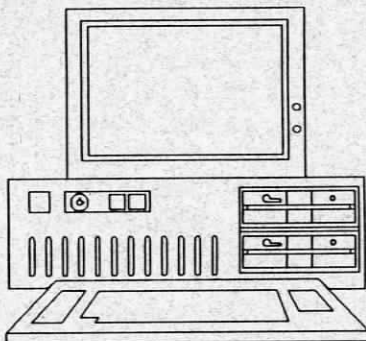
William Stone
Chairman, NMGIC GPS Committee
New Mexico State Geodetic Advisor
National Geodetic Survey
% City of Albuquerque Public Works/Survey
400 Marquette NW, Room 304
Albuquerque, NM 87102
505/768-3606

Bill Stone, Chair, Global Positioning Committee

REMOVAL FROM MAILING LIST

The NMGIC Executive Board would like to assure members that the NMGIC membership mailing list is kept confidential. The only people with access to the list are Sustaining Members of NMGIC. If you would prefer that your name and organization NOT be available even to corporate members of NMGIC, please notify Amy Budge at Technology Application Center, 277-3622.

The Map Legend

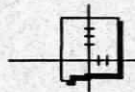


Editor: Heather Rex
Assembly: Amy Budge
Desktop Publishing:
Jeanette Albany

The Map Legend is published quarterly by the New Mexico Geographic Information Council and is a benefit of membership in NMGIC. The opinions expressed are those of the contributors and do not necessarily represent the views of the New Mexico Geographic Information Council, except where specifically noted. The mention of trade names or products does not constitute an endorsement of the NMGIC. Members are invited to send articles and announcements of interest to the editor by the following deadlines: September 1, December 1, March 1, June 1. Please direct all correspondence to:

Heather Rex
 MAGIC/Centennial Library
 University of New Mexico
 Albuquerque, NM 87131-1466

NMGIC Board of Directors



Tom Henderson (President)
 NM State Highway and
 Transportation Department
 1120 Cerrillos Road
 P. O. Box 1149, Room B-31C
 Santa Fe, NM 87504-1149
 Telephone: 827-5185
 Fax: 827-3214

Rich Friedman (Vice President)
 McKinley County-Rural Addressing
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 Gallup, NM 87305
 Telephone: 863-9517
 Fax: 863-6362

Mike Inglis (Secretary)
 Technology Application Center
 University of New Mexico
 Albuquerque, NM 87131-6031
 Telephone: 277-3622
 Fax: 277-3614

Amy Budge (Treasurer)
 Technology Application Center
 University of New Mexico
 Albuquerque, NM 87131-6031
 Telephone: 277-3622
 Fax: 277-3614

Stan Grochowski
 GSD/ISD
 715 Alta Vista
 Santa Fe, NM 87503-0350
 Telephone: 827-2106
 Fax: 827-2998

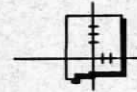
Dave Love
 New Mexico Bureau of Mines
 Campus Station
 Socorro, NM 87801
 Telephone: 835-5146
 Fax: 835-6333

John Peterson
 NMERI
 Campus Box 25, Univ. of New Mexico
 Albuquerque, NM 87131
 Telephone: 272-7295
 Fax: 272-7203

Al Peters
 New Mexico State University
 Campus Box 3AB
 Las Cruces, NM 88003
 Telephone: 646-1892
 Fax: 646-6096

Ted Talmon
 General Services Department/ISD
 P. O. Drawer 26110
 Santa Fe, NM 87503
 Telephone: 827-2047

NMGIC Committees



Public Awareness Committee

Heather Rex
 MAGIC
 Centennial Library
 University of New Mexico
 Albuquerque, NM 87131-1466
 Telephone: 277-5513
 Fax: 277-0702

State Mapping Advisory Committee

Dave Love
 New Mexico Bureau of Mines
 Campus Station
 Socorro, NM 87801
 Telephone: 835-5146

Global Positioning Systems

Bill Stone
 National Geodetic Survey
 % Albuquerque Public Works
 600 2nd Street NW, Suite 400
 Albuquerque, NM 87102
 Telephone: 764-1584

Geographic Information Systems Committee

Mike Zeiler
 2521 Camino Entrada
 Envision Utility Software
 Santa Fe, NM 87505
 Telephone: 471-2170

Geographic Names Committee

Bob Julian
 Rural Route 5
 31 Avenida Almendro
 Albuquerque, NM 87123
 Telephone: 298-8420

Local Government Land Records Committee

Tom Henderson
 NM State Highway Department
 P. O. Box 1149, Room B-31C
 Santa Fe, NM 87504-1149
 Telephone: 827-3214

**FROM THE PRESIDENT
TOM HENDERSON**

At the May 21, 1992, NMGIC Board Meeting, the Board decided to make available to NMGIC Sustaining Members, on request, the mailing list for the NMGIC membership. This would be done once per calendar year—before the Spring General Meeting. Sustaining Members will be restricted from distributing or selling the list to other commercial enterprises. Regular NMGIC members who do not wish to have their names and addresses made available, may remove them from the distribution list simply by notifying Amy Budge at 277-3622. It will be assumed that if you do not contact her, you approve of allowing your name to be sent out.

The purpose of all this is to provide our Sustaining Members with another way of reaching our members directly to inform them of products and services. NMGIC now has 14 Sustaining Members and hopes to attract more. The intent is not to put more "junk" mail in your mail boxes, but to further the underlying foundation of NMGIC: communication.



The Local Government Land Records Committee is still in need of a new chairperson. It has been some time now that Santiago Romero has stepped down from that position and the Committee has consequently become dormant. Anyone now working in a local government environment who would like to take an active role in furthering communication and cooperation among local governments in geographic information use and sharing, PLEASE come forward and take the lead. This should be one of NMGIC's most active committees given the revolution in information technology that is permeating the local levels. The pressing issues of large scale GIS databases simply cannot be addressed properly without input from the local level, and the Local Government Land Records Committee is a logical group to provide that input.

NMGIC ELECTION RESULTS

The members of the NMGIC Board of Directors recently elected to serve the 1992-1994 term are: Amy Budge, Tom Henderson, Dave Love, John Peterson, and Ted Talmon.

LANDSATS 6 AND 7

President Bush has written Landsat 7 into the 1993 budget and projected launch will be in 1997. EOSAT Corporation, in the President's plan, retains full commercial discretion in Landsat's operations.

However, on the other side of the Capitol, HR 3514 (National Land Remote Sensing Policy Act) introduced by Rep. George Brown (D-Calif.) specifies a shorter time frame for Landsat 7's procurement and launch. Included in Brown's bill is the establishment of a Joint Program Office between NASA and the Defense Department to have administrative responsibility for Landsat.

Brown's bill specifies that Washington will be actively seeking others who might compete with EOSAT in the market place for products and services. HR 3614 recommends that Landsat 7 be made capable of 5-meter resolution and that a two-tiered pricing structure be implemented for data products. One price, established for governmental and non-profit American users would cover only transmission and duplication of data, whereas the second price would reflect current (higher) market conditions for private and out of country users.

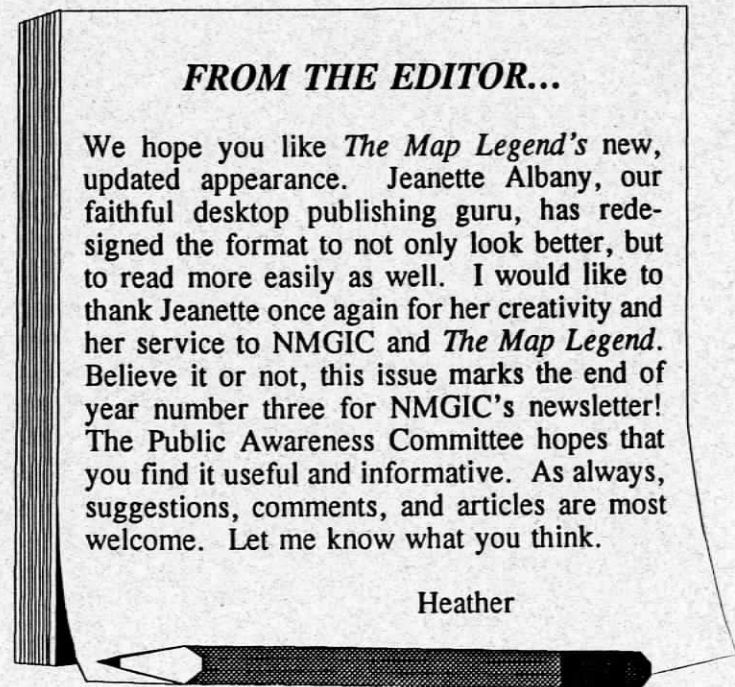
The long wait for Landsat 6 is nearing an end. For years the U.S. remote sensing program has been lucky that Landsats 4 and 5 far outlived their expected operational lifetimes. By the end of 1992 Landsat 6 should be launched and operating. It will offer high resolution imaging (15-meter black and white).

*From "Remote Sensing News" by Ben Sherman
Wisconsin Mapping Bulletin, April 1992.
Used with permission.*

FROM THE EDITOR...

We hope you like *The Map Legend's* new, updated appearance. Jeanette Albany, our faithful desktop publishing guru, has redesigned the format to not only look better, but to read more easily as well. I would like to thank Jeanette once again for her creativity and her service to NMGIC and *The Map Legend*. Believe it or not, this issue marks the end of year number three for NMGIC's newsletter! The Public Awareness Committee hopes that you find it useful and informative. As always, suggestions, comments, and articles are most welcome. Let me know what you think.

Heather



GEOGRAPHIC NAMES NEWS

Two important geographic names issues in New Mexico appear near resolution.

In 1991, Dr. Wiley Barker proposed renaming 11,180-foot Spring Mountain in the Pecos Wilderness east of Santa Fe to Mount Barker, to honor his uncle, Elliot Barker, the noted New Mexico outdoor writer and conservationist whose family homestead was located near the peak. Elliot Barker was among the founders of the National Wildlife Federation. In New Mexico his leadership is credited with the survival of such species as mountain sheep. He died in Santa Fe in 1988 at the age of 101.

This proposal drew widespread support in New Mexico, including from Gov. Bruce King and U.S. Senator Pete Domenici. The numerous responses to letters-to-the-editor in local newspapers seeking public opinion showed a clear majority favoring honoring Elliot Barker in this way.

Still, problems existed. One was that the renaming would displace a long-standing existing name, one that Elliot Barker himself thought appropriate.

Second, some persons felt it was wrong to honor just Elliot Barker when other Barker family members also were notable. Elliot Barker's brother, S. Omar Barker, who died in 1985 at the age of 90, wrote thousands of stories, novelettes, and poems about the American West, including "A Cowboy's Christmas Prayer." And their father, Squire Leander Barker, who established the Barker family in the Pecos area, also made many contributions to local history.

And finally, the renaming would violate U.S. Forest Service and U.S. Board on Geographic Names (USBGN) policy against creating new names in wilderness areas.

When the New Mexico Geographic Information Council (NMGIC) Geographic Names Committee (GNC) discussed this issue at our April 22 meeting, we saw a compromise that seemed to address all the above issues. We noted that just three miles south of Spring Mountain is an 11,455-foot summit one mile west of Elk Mountain. This summit lies outside the wilderness area; it is still near the Barker homestead and would certainly have been familiar with Elliot and the other Barkers; and despite being a significant feature is unnamed. Naming this summit Mount Barker would seem to meet the objectives of the proposer and at the same time avoid the objections various people have raised.

When Wiley Barker was asked about this alternative, as well as amending his proposal to include not just Elliot Barker but also the other illustrative members of his family, he responded positively.

Thus lacking further opposition, the NMGIC GNC will recommend naming this unnamed summit Mount Barker, and it is expected the USBGN will approve the recommendation.

The second important issue is the longstanding one of renaming Washington Pass in the Chuska Mountains. The present name honors Col. John Washington, whose troops in 1849 killed the Navajo leader, Narbona, at the pass; Narbona had been an advocate of peace. Navajos find the present name extremely offensive and for several years have sought to rename the pass to honor Narbona.

This proposal has had widespread support in New Mexico, and all that has been lacking has been the formal approval of the Navajo tribal government. In May, after months of hearings by various Navajo governmental groups, this approval finally came.

The NMGIC GNC is expected to recommend the renaming, and when the USBGN met in Santa Fe in September 1991 its members heard Navajo representatives argue eloquently for the renaming, so little USBGN opposition is expected.

When this renaming takes place, it will mark the first time a Native American group has formally renamed a feature within its territory to honor a tribal leader. As Native Americans are increasingly concerned that their history and cultures receive wider recognition, this renaming in New Mexico likely will be an extremely important precedent.

Bob Julyan, Chair, Geographic Names Committee

BOOKS OF INTEREST

State Geographic Information Activities Compendium. By the Council of State Governments, Iron Works Pike, P.O. Box 11910, Lexington, KY 40578-1910. The most comprehensive guide to state GIS efforts ever published, the book contains information on each state's GIS activities, history, organization, interagency coordination, index of 2,000+ state GID id, and more. 616 pages. Perfect bound. \$79.00. Call 1-800-800-1910. Ask for publication C-002-91-03. (Announcement from Ted Talmon)

Guide to GIS Selection. By The American Planning Association. Primary audience is planners and planning agencies. Includes appendices, glossary of terms, and a model Request for Proposal for needs assessment services. 26 pages. Price is \$12 for PAS subscribers; \$24 for nonsubscribers, plus \$4.50 shipping/handling. Order from APA's Planners Press, 1313 E. 60th Street, Chicago, IL 60637. Credit card orders: (312) 955-9100. (Source: *Wisconsin Mapping Bulletin*, April 1992; *ARC NEWS*, winter 1992).

WHAT IS GISAC?

The New Mexico Geographic Information Systems Advisory Committee (GISAC) was established by the New Mexico Information Systems Council in 1990 with responsibility to recommend GIS policy to the Council, establish GIS standards, and conduct GIS procurement on behalf of the Council and the state of New Mexico. The state GISAC is open to one member from each department or agency of the Executive Branch of state government and any other organization when deemed appropriate by the GISAC. Executive Branch of state government representatives to the GISAC have been: Game and Fish Department; Economic Development Department; State Engineer Office; State Records and Archives; Office of Cultural Affairs; General Services Department; New Mexico Mortgage and Finance Authority; Department of Environment; Department of Finance and Administration; State Land Office; Secretary of State; Department of Public Safety; Corrections Department; Taxation and Revenue Department; New Mexico Bureau of Mines and Mineral Resources; Energy, Minerals, Natural Resources Department; New Mexico State Highway and Transportation Department; New Mexico Public Service Commission; New Mexico Information Systems Council; Department of Labor; Department of Education; City of Albuquerque; Resource Geographic Information System (RGIS) Program; New Mexico Geographic Information Council; New Mexico Association of Counties; New Mexico Association of Regional Councils; New Mexico Municipal League; and the New Mexico State Geodetic Surveyor.

Within the GISAC is a Steering Committee. The Steering Committee is made up of six members and a non-voting chair. The chair of the Steering Committee is appointed by the General Services Department Information Systems Division (GSD/ISD) Director. The Steering Committee presents decisions and policy recommendations of the GISAC to the Information Systems Council and also represents the Executive Branch of state government on GIS activities to organizations outside the Executive Branch. Steering Committee members include representatives from the following state agencies and departments: General Services Department; Department of Environment; State Land Office; Energy, Minerals, Natural Resources Department; New Mexico Public Service Commission; Office of Cultural Affairs; and the Game and Fish Department.

There have been several major accomplishments of the GISAC:

1. Creation of a Sub-committee on Procurement. This subcommittee developed specification for a statewide Request for Proposals (RFP) for GIS software and services for New Mexico. Award of contract was given to the Environmental Systems Research Institute

(ESRI), Redlands, California. The price agreements are for six years with one year renewable options.

2. Established a Sub-committee on GIS Standards. The sub-committee working with the New Mexico Geographic Information Council's (NMGIC) Sub-committee on Standards completed the New Mexico GIS Standards and Guidelines. Adoption of these standards and guidelines was approved by the ISC in September, 1991.
3. A sub-committee was established to investigate archivable GIS data. The sub-committee will research the legality and archivability of GIS databases.
4. The State Engineer Office pilot project for groundwater drawdown monitoring the Pecos River Basin in south-east New Mexico using GIS software was completed with a report describing the results of the project.
5. A GIS application project for Economic Development Department's Housing Authority was initiated and completed by the RGIS Program. This project involved the development of methodologies to utilize GIS technology for the application of federal funding for low income programs totaling \$14 million to the state of New Mexico.
6. A GIS application project was initiated during this reporting period for the Economic Development Department's Trade Division. This project will provide geographic data for international trade partners and border crossing development in southern New Mexico. Completion of this project is scheduled for the end of September, 1992.
7. GSD/ISD staff sponsored a training course in the use of ESRI's ARC/INFO.

If you have any questions about GISAC, ARC/INFO software training or need a copy of the New Mexico GIS Standards and Guidelines, please contact Ted L. Talmon, State GIS Manager, GSD/ISD, P.O. Drawer 26110, Santa Fe, NM 87502-6110. Telephone 505/827-2047.

Ted Talmon

Missed the Spring, 1992 NMGIC meeting? Videos of meetings are available to members for a two-week checkout period for the cost of postage. Contact Amy Budge, NMGIC Treasurer, at Technology Application Center, 277-3622.

1992 Spring Meeting

Another very successful spring meeting of the NMGIC was held in Albuquerque on April 17. The meeting featured a keynote address by Jack Dangermond—internationally recognized for his contributions to GIS theory and application—as well as vendor exhibits and a panel discussion on the future of computer hardware.

The exhibits opened at 8 am, an hour prior to the beginning of the Business Meeting, giving the members an opportunity to visit with vendors. Tom Henderson, President, presided over the meeting. The results of the elections were announced by the chairperson of the nominations committee. The new Executive Board members, Amy Budge, Tom Henderson, Dave Love, John Peterson, and Ted Talmon, were introduced. Each will serve a two year term. Tom Henderson, on behalf of NMGIC, presented Laura Gleasner and Jeanette Albany with plaques expressing appreciation for their volunteer work for NMGIC.

Reports from each committee on their activities since the Fall meeting were given. NMGIC committees continue to be very active: the GPS reference network is nearing completion; the NM aerial photography and map survey results are ready for analysis; the *Sourcebook for New Mexico Geographic Data* is printed and available for sale (\$5 each); two important geographic names issues are nearing resolution; and the continued progress of the GIS Committee in identifying GIS standards for New Mexico.

Sam Bardelson, the first USGS Field Office Manager for New Mexico, outlined the responsibilities of this new office. Sam will be responsible for many of the USGS mapping activities within the state and their coordination with state programs and agencies.

Jack Dangermond, President of ESRI, gave the keynote address—a refreshing look at how he views GIS in the future. Mr. Dangermond foresees the continued and accelerated integration and management of all resources, natural and cultural. GIS is the mechanism which is making this happen. With the advances in user friendly software and the expansion of networks, GIS will extend beyond the organizational level and to the individual.

The lunch break gave the members a good opportunity to again visit the exhibits. Box lunches were available and are becoming more popular. Ten vendors were present with demonstrations of their hardware and software applications as well as services. The afternoon panel session consisted of four vendors discussing the "Future Directions in Hardware." It was clear that the rapid increases we have seen in hardware speed and capability will continue. The Spring meeting was excellent—don't miss the Fall Meeting on November 20, 1992.

A SPECIAL THANKS . . .

NMGIC extends its appreciation to the following 1992 Corporate Members for their support:

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Suite J
Santa Fe, NM 87501

CORPORATE PROFILE

NMGIC would like to welcome a new Sustaining Member, Terra Imaging Corporation.

Terra Imaging Corporation
3700 Osuna Road NE, Suite 502
Albuquerque, New Mexico 87109
(505) 345-9654

Terra Imaging is an engineering firm whose primary purpose is to provide engineering and consulting services in GIS and remote sensing. Additionally, various levels of hands-on training in GIS and remote sensing are offered that provide users with a reasonable degree of proficiency. Some specific services include:

- ◀ Data encoding and digital image processing
- ◀ Relational database design, management and updating
- ◀ Quantitative modeling of natural resources applications

GIS and remote sensing applications range from environmental impact analysis and modeling to urban planning and resource management. The use of quantitative, digital data providing detailed, multi-spectral information will benefit numerous GIS end users with accurate, high-resolution images coupled with extensive database attributes. Combined with advanced remote sensing and image processing algorithms, this technology allows users to accurately extract specific information based on spectral values of surface features found within the images. For further information contact Raul Campos-Marquetti or Randy Apostalon.

1992 SOUTHWEST ARC/INFO USER GROUP CONFERENCE

SEPTEMBER 23-25, 1992

PICACHO PLAZA HOTEL
SANTA FE, NEW MEXICO

For more information, contact SWAIUG 1992, % Amy Budge, Technology Application Center, University of New Mexico, Albuquerque, NM 87131-6031.

CALENDAR

August 2-8, 1992. **ASPRS/ACSM Technical Meeting and Exposition.** Washington, DC. Contact: Registration Coordinator, ASPRS/ACSM, 5410 Grosvenor Lane, Bethesda, MD 20814-2122. 303/493-0200.

August 2-14, 1992. **XVII ISPRS Congress.** Washington, DC. Contact: XVII Congress, % Galaxy Registration, P.O. Box 4088, Frederick, MD 21701.

September 16-18, 1992. **Institute of Navigation (Satellite Division) Fifth International Technical Meeting. ION GPS-92.** Albuquerque, NM. Premier GPS event of the year. Tutorials presented by Navtech Seminars will precede the conference September 14-15. Contact: William Stone, % City of Albuquerque, Public Works Department, 400 Marquette Avenue, NW, Room 304, Albuquerque, NM 87102. 505/768-3606.

September 23-25, 1992. **Southwest ARC/INFO User Group Conference.** Santa Fe, NM. Contact: Ted Talmon, GSD/ISD, P.O. Box 26110, Santa Fe, NM 87502. 505/827-9811.

October 14-15, 1992. **GIS in the Rockies.** Golden, CO. Contact: GIS in the Rockies, P.O. Box 150020, Lakewood, CO 80215.

October 21, 1992. Albuquerque, NM. **URISA Workshop. Introduction to Spatial Analysis.** Workshop conducted by Michael Goodchild, National Center for Geographic Information Analysis, University of California, Santa Barbara. Details to follow via special announcement to NMGIC members.

November 10-12, 1992. **GIS/LIS '92 Annual Conference and Exposition.** San Jose, CA. Contact: GIS/LIS '92, 5410 Grosvenor Lane, Suite 100, Bethesda, MD 20814-2122. 301/493-0220. Fax: 301/493-8245.

November 20, 1992. **New Mexico Geographic Information Council, Inc. Fall Meeting.** Albuquerque, NM. Contact: Amy Budge, Technology Application Center, 2808 Central SE, Albuquerque, NM 87131. 505/277-3622.

MARK YOUR CALENDAR!

FALL MEETING - NMGIC, INC.
NOVEMBER 20, 1992
DETAILS IN FALL MAP LEGEND