THE MAP LEGEND

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DOE Satellite Begins Research Mission

MTI Satellite Image of "Big I" in Albuquerque

Sandia National Laboratories announced that the Department of Energy's (DOE's) Multispectral Thermal Imager (MTI) satellite has completed on-orbit checkout and is ready to begin its research and development mission.

The Air Force Space and Missile Center's Test and Evaluation Directorate launched the 1,300-pound satellite on March 12 aboard an Orbital Sciences Corporation Taurus rocket from Vandenberg Air Force Base (CA). Since then, the satellite has been undergoing normal checkout and calibration procedures.

The R&D satellite, developed by a Sandia-led government and industry team, carries an advanced ground-imaging system that very accurately measures the "brightness" of various features in 15 visible and infrared spectral bands (only three bands are visible to the human eye). The imaging instrument was assembled and tested at Sandia and calibrated at Los Alamos National Laboratory.

During the next three years MTI will collect images of volunteer ground sites located throughout the

(See DOE Satellite on page 8)

Inside This Issue

THE MAP LEGEND

Editor: Amy Budge

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From the President

Fall activities have engulfed the Council not unlike the crowning firestorm that swept down into Los Alamos last May! The focal point, of course, is our Fall Meeting in which we annually have user presentations and demonstrations from our members, usually centered around a currently popular theme. This year is no different. On Friday, 3 November, we will hear from many of you regarding your collective input into disaster response and remediation surrounding the Cerro Grande fire.

Critical analyses of various kinds of geographic and geospatial data (i.e., evacuations, wind, air, and fire monitoring, deployment of fire fighting personnel, monitoring and assessment of the fire on laboratory grounds in relation to locations of explosives and nuclear hazardous waste, etc.) played an integral part in the whole endeavor. (If only the U.S. Park Service had undertaken a critical examination of key geographic data prior to firing up their torches!) GIS has continued to play a large role in the aftermath what with continued monitoring and revegetation and other runoff abatement practices. All in all, the Fall Meeting should be quite a fascinating, behind the scenes overview of what happened before, during, and after one of the nation's worst wildfire disasters. I would encourage all of you who participated in any aspect of the Cerro Grande fire to present a poster or some other type of demonstration at the meeting. If you would like to do so, please contact our Meetings Coordinator. I certainly hope everyone will attend!

There are many, many other things going on this fall I'd like to tell you about. First, we will conclude our series of workshops on Internet Map Servers with a workshop provided to us by Autodesk on their IMS package on Thursday, 2 November. Like the previous IMS workshops by ESRI and Intergraph GeoMedia, this will be a free demonstration that many of you will find useful. More information and registration can be found on our website. Secondly, we have our annual student scholarship awards coming up. Students, submit a proposal!! We have up to $1000 awards available and would very much like to have (a) recipient(s). Faculty members, please encourage your students to participate. Leave a copy of the *Map Legend* in your student lounges when you're finished with it. Instructions for submitting scholarship proposals can also be found on our website.

Speaking of the website, the Board has decided to bring the Council into the 21st Century by relying more and more on digital media to address the membership. You will receive e-mail notification of upcoming events, meetings, etc. and you will soon be able to vote on-line. Now we realize that not everyone has e-mail so you will all still receive notices and information in the *Map Legend*, but we encourage you to utilize our website and visit it often as we will attempt to keep it fresh, interesting, and informative.

I would like to update you on the voting problems that I raised in the last *Map Legend*. Not only do we have to meet our deadlines for nominees and elections, we also need more participation from the membership in voting. The procedure as it is currently set up is self-defeating in this regard. Not only do we require you to mail in your ballot, incurring cost and effort on your part, we require your membership to be active in the early spring when the ballots go out. Herein lies the crux of the problem: not everyone (myself included at times) gets around to paying annual membership dues until they do so at the door of the Spring Meeting! To alleviate these problems and expedite the voting process (hopefully resulting in greater voter turnout), the Board will amend the Council's Bylaws to an annual vote prior to the Fall Meeting instead of the spring (beginning Fall 2001) and we will have the ballot on the web. While not all of the details have been worked out yet, hopefully we will greatly improve and automate the process. See you in November!

David J. McCraw
President

The Map Legend 2000 Publication Schedule and Deadlines

Winter Issue	Deadline for articles: January 15, 2001 Publication date: February 15, 2001
Spring/ Summer	Deadline for articles: May 15, 2001 Publication date: June 15, 2001
Fall Issue	Deadline for articles: September 15, 2001 Publication date: October 15, 2001

Editors of *The Map Legend* are looking for articles describing ongoing, recently completed, or recently awarded projects. "Newsy" items on your organziations, accomplishments of your personnel, event/ meeting announcements.....are all welcome. Your contributions should be sent to Amy Budge either by fax (505-277-3614) or by email to *abudge@spock.unm.edu* by the deadlines.

Do you have information about a project, new techniques, GIS and related issues, announcements, news, etc. that you would like published in the Map Legend?

Border Aquifers in Southwestern New Mexico Studied

Shared surface and groundwater resources along the boundary between southern New Mexico and northern Mexico present numerous problems to both countries. Rapidly increasing demand for groundwater to supply growing populations has resulted in declining groundwater levels. Contamination of surface and groundwater in the region is a continuing major concern. The solution to many of the problems will require the cooperation of both nations and an adequate understanding of these resources. As a first step to addressing these issues, the U.S. Environmental Protection Agency has funded two binational studies of the water resources along the transboundary corridor.

In the first study, the New Mexico Water Resources Research Institute cooperated with the Texas Water Development Board to undertake a study that characterized binational aquifers in parts of far west Texas, south central New Mexico, and northeastern Chihuahua, Mexico. Technical and administrative assistance and data were provided by the Comision Nacional Del Aqua, Junta Municipal de Aqua y Saneamiento de Ciudad Juarez, International Boundary and Water Commission, and Comision Internacional de Limites y Aquas. Results of the project, with detailed maps of the aquifers, are presented in the report, "Transboundary Aquifers of the El Paso/ Cuidad Juarez/Las Cruces Region," available from the WRRI.

More recently, the EPA funded a follow-up study to continue characterizing binational aquifers in southwestern New Mexico. Data were prepared for sharing through an international exchange with the Republic of Mexico. Both studies looked at quantifying the natural and induced chemical quality of each aquifer, determined the direction of groundwater flow, and developed Geographic Information System (GIS) coverages.

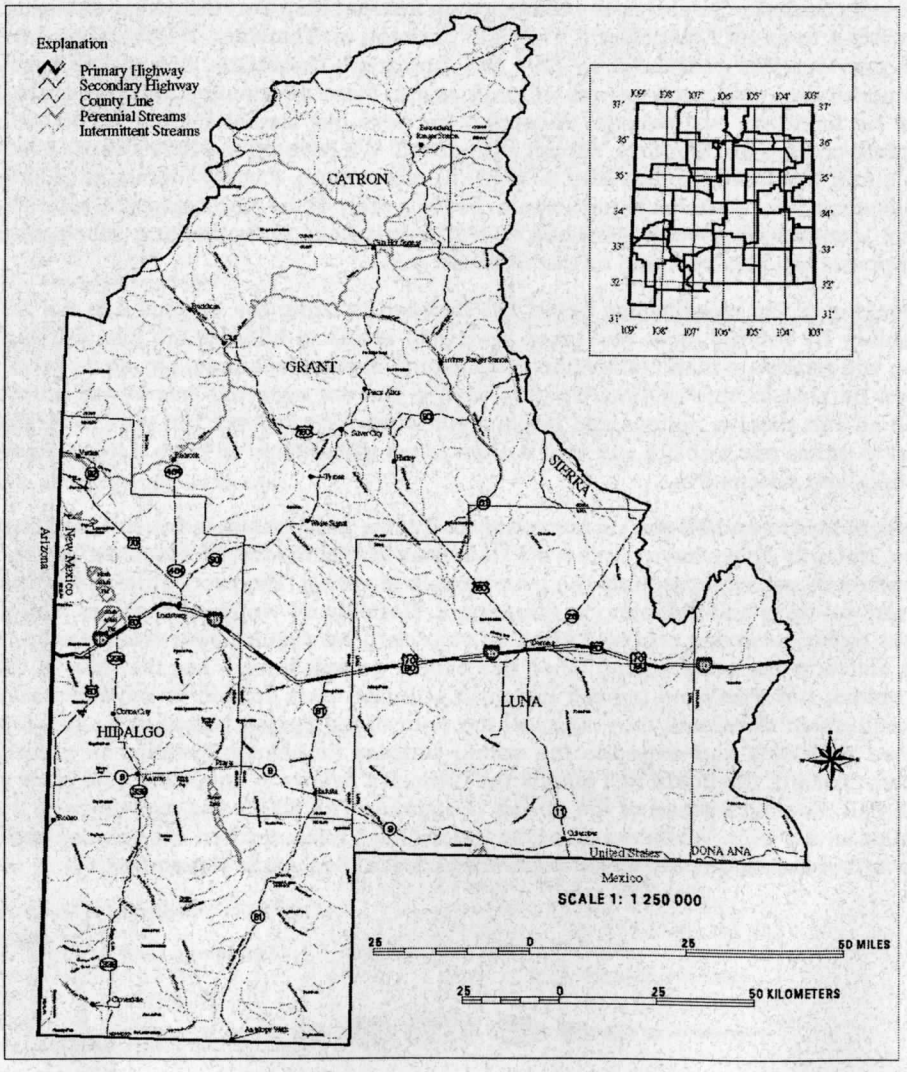
The report for the latest study, "Trans-International Boundary Aquifers in Southwestern New Mexico" contains 50 full-color maps depicting various characteristics of the study area. The report also comes with a CD-ROM containing data that were used to create the maps. The report also is available on-line at wrri.nmsu.edu in Adobe Acrobat (PDF) format.

John Kennedy, one of the principal investigators remarked, "Adequate data on groundwater resources in southwestern New Mexico were sorely lacking. For the first time, we were able to gather data from a number of state and federal agencies and incorporate the data into a digital format so that we could generate maps that were useful to the project team and to the water planners in the region. The USGS (U.S. Geological Survey) provided data from their groundwater monitoring program. The USGS data contain the location, physical characteristics, and in some cases water quality data for wells monitored in southwestern New Mexico. The Office of the State Engineer provided GPS (Global Positioning System) data for wells that it monitors for the purpose of water-level measurements."

The study demonstrated that only three aquifers, Mimbres, Hachita-Moscos, and San Bernardino, have significant trans-international boundary aquifer components. All pre-development or pre-1910 groundwater discharge was southward into Mexico and was estimated at 14,050 acre-feet annually. For most of the past century, a significant portion of that flow has been intercepted by irrigation wells in the Deming, Hermanas, and Columbus-Palomas areas. Current flow is estimated to be about 7,550 acre-feet annually.

The estimates of relatively good quality

(See Border Aquifers on page 8)



Using New Mexico State Plane Coordinates

The purpose of this brief article is to bring to light an apparently little-known aspect of the New Mexico Property Law that affects the usage of state plane coordinates. The State Plane Coordinate System (SPCS) was developed decades ago as a simplified means of expressing the horizontal positions of points and the positional relationships between points. Calculations done relative to a reference plane are considerably easier to perform and interpret than are those done in the three-dimensional, curvilinear space of the latitude/longitude system. Although it is a simplified system, SPCS provides consistent and rigorous results that support a wide range of geospatial activities, including surveying, GIS, and cartography.

Existing New Mexico Property Law (sections 47-1-49 to 47-1-56) defines the "New Mexico Coordinate System" (New Mexico's version of SPCS) and discusses its usage (see: www.law.cornell.edu/topics/state_statutes.html for a listing of state statutes). This definition includes the specification that the version of the system based on the North American Datum of 1927 (NAD27) shall utilize **feet and decimals of a foot** to express planar coordinates (i.e. x and y values) and that the version based on the North American Datum of 1983 (NAD83) shall utilize **meters and decimals of a meter** for the planar coordinates. Modern-day geospatial activities should, for many reasons, utilize the NAD83 (and preferably not the outdated NAD27) and, according to the law, this requires the usage of **metric** SPCS values.

In 1989, when the New Mexico Property Law was modified to include the NAD83 version of the SPCS, there was a fairly widespread effort at many levels of government to adopt the metric system to the greatest extent possible (this is one reason that the NAD83 SPCS metric requirement was specified). The last few years have brought about a tapering in this trend and we are now seeing, in some cases, a return to the imperial system by some agencies and organizations. For instance, the 1998 Transportation Equity Act for the 21st Century prohibits the U.S. Department of Transportation from requiring states to use the metric system. Each state now has the autonomy to decide whether to use the metric or imperial measurement system even for federally-funded transportation-related projects. New Mexico State Highway and Transportation Department (NMSHTD) Secretary Pete Rahn recently issued a memo stating the decision to revert to usage of the imperial system as the primary unit of measure for transportation planning, design, construction, and maintenance activities. This policy refers to work performed at or in support of NMSHTD.

The National Geodetic Survey (NGS) has a policy to provide geodetic control data only in the system(s) consistent with state statutes/laws. Thus, in keeping with the existing law, NGS currently publishes NAD83 SPCS values for all New Mexico horizontal control stations solely in metric units. NGS vertical control data are provided in both unit systems. In the event that the New Mexico Property Law is modified to allow NAD83 SPCS values in imperial as well as metric units, NGS is willing, if requested, to publish geodetic control data in both systems. NGS policy specifies three criteria that must be met by a state in order for such a request to be honored. These criteria are:

- The appropriate state contact, speaking for the majority of the state surveying and mapping community, requests in writing that NGS publish both meters and feet (this will be coordinated through organizations such as the New Mexico Professional Surveyors (NMPS), New Mexico Geographic Information Council (NMGIC), and the New Mexico GIS Advisory Committee (GISAC)).
- The request to NGS is consistent with the state's recommendation to USGS for use in the state/USGS cooperative mapping program (this will be coordinated through NMGIC's State Mapping Advisory Committee).
- The state has enacted SPCS legislation that specifically defines the conversion factor (for either the US Survey Foot or International Foot) to be used (this can be included with the changes to the law that allow the usage of NAD83 imperial units).

There are currently six states (CA, CO, MD, MA, SC, and TN) that have met all three of these criteria and have requested that NGS publish the NAD83 control data in imperial as well as metric units. Users in these six states can legally utilize and produce SPCS values in both metric and imperial units.

In summary, for organizations that want to use SPCS values in imperial units in New Mexico there are currently two complications - this is contrary to the property law and NGS NAD83 horizontal geodetic control data are not currently published in imperial units. Once the property law is modified to allow NAD83 SPCS values in imperial units and the above-mentioned criteria are met, NGS will publish the values in both metric and imperial units and users will be free, both technically and legally, to use whichever system they want.

For additional information, contact William Stone, NGS, at 505-768-3606 or stone-ngs@cabq.gov.

Bill Stone
Chair, GPS Committee
and NM Geodetic Advisor

What Has GISAC Been Doing?

The State of New Mexico Geographic Information Systems Advisory Committee (GISAC) is plugging away at GIS issues in state government. Most importantly, a new Chairperson has been elected ... Gar Clarke of the Office of the State Engineer ... (pending approval by the state Information Technology Commission). Gar is well-known and respected as a GIS leader throughout the state, and beyond. We're lucky to have a person with such energy, experience, enthusiasm, and GIS expertise.

It's hard to believe that a year has already passed since GISAC's rebirth as a functioning organization. GISAC holds monthly meetings in Room 2022 of the State Records Center and Archives in Santa Fe (on the 1st or 2nd Tuesday of the month, from 9:30am - 12:00pm). Anybody interested in GIS is welcome to attend; we'd especially like to get input from folks working with city and/or county governments. [Next meeting is November 7th !]

During the past year, GISAC has worked with RGIS to develop a GIS Inventory, focusing on data created by and available from state agencies. Make sure you visit the RGIS website (http://rgis.unm.edu) and investigate all the wonderful things one can find there (try clicking on the "GISAC Inventory" button, too). Thanks go to RGIS for all their hard work in organizing this effort.

Through the Western Governor's Association Geographic Information Council (WGA GIC), and in association with the NASA State & Local Government Initiative, New Mexico will be holding a Remote Sensing/Satellite Imaging (RS/SI) workshop in conjunction with the NMGIC Spring 2001 Meeting. NASA will contribute seed money for the workshop, which will be targeted at using remotely-sensed images in GIS applications. New Mexico has sent strong contingents to two other WGA GIC-related workshops this past year - one on cadastral applications of GIS (Salt Lake City), and a regional RS/SI workshop held in Sacramento in September.

Another major project is formulating a GIS Strategic Plan for state government GIS activities over the next five years. GISAC members have reviewed over a dozen examples of similar plans from other states, picking and choosing some of the best aspects of each, and incorporating ideas specific to our state's situation. The draft plan will be ready for public comment within the next month or so, and available at several websites for your convenience:

- http://cio.state.nm.us/itinitiatives.htm
- http://rgis.unm.edu
- http://nmgic.unm.edu
- ftp://www.emnrd.state.nm.us/Public/GIS/

Toward the end of November, look for a review copy at one of the sites; we welcome your feedback as we try to chart a course for improving communication amongst GIS practitioners, reducing costs by shared acquisitions, and in general providing better service to the citizens of New Mexico.

Rick Koehler
Out-Going GISAC Chair
Energy, Minerals and
Natural Resources Department

Don't Forget to Attend The NMGIC Fall Meeting

Mark Your Calendars for November 3rd!

The theme of the 2000 NMGIC fall meeting is the Cerro Grande fire. Many NMGIC members provided GIT support to assist fire crews in battling the enormous blaze. The program includes presentations by the support teams, as well as descriptions of post-fire modeling, restoration, and effects on wildlife.

See the NMGIC web site at http://nmgic.unm.edu for program details.

Ceremonial Cave....or is it?

If you've been to Bandelier National Monument and its visitor center along the Rito de los Frijoles, then you've probably taken the easy one-mile hike along the stream to Ceremonial Cave. Maybe you even braved the 150-foot climb up stairs and ladders into the cave itself, perhaps descended into the reconstructed pit structure, and wondered who lived there and what they did.

If you'd asked yourself, "What took place in this poorly accessible place?", your answer might have been the same as mine: "Ceremonies! Isn't it obvious? There's the kiva. And there's the name." .... And we'd be wrong.

According to Monument archaeologists and the Cochiti Indians descended from the residents along the Frijoles, the cave never was used for ceremonies; it simply was a residence, like so many other cliff dwellings along the canyon.

The Indians object to the name, claiming that to some people it connotes unholy rites. Among a people to whom religion is everything, they feel the name is an imposition upon their culture.

Therefore, the National Park Service at Bandelier is reactivating an earlier proposal to change it. The name proposed then referred to pines, for the ponderosas fronting the cave. The name proposed now is Alcove House, because it truly is an alcove more than a cave, and because it was used as a residence, a house. Besides, says Chris Judson of the NPS, the name Alcove House echoes the names of many other Ancestral Puebloan archaeological sites: Spruce House at Mesa Verde the "great houses" of Chaco Canyon, and more.

As of this writing, the formal Domestic Geographic Names Report has not yet been filed with the USBGN, mainly because a *lot* of homework should go into a proposal such as this, for many questions will be asked—by everyone.

For example, what's the name's history? Who bestowed the name Ceremonial Cave? It's been Ceremonial Cave for as long as most people have known it, and as a major feature in a highly popular national monument, the issue of the name isn't merely a local concern. It's been mentioned in countless publications and appeared on countless maps. This weighs heavily in the USBGN's decisions.

Note: Because this *is* a matter of national significance, *everyone* has a right to express an opinion. Express yours to me by contacting me at rjulyan@swcp.com or at the address in this newsletter.

Still, the USBGN has changed a well-known park name because it was misleading. In the early 1990s, the USBGN approved the NMGIC Geographic Names Committee's recommendation to change the name of New Cave in Carlsbad National Park to Slaughter Canyon Cave. The NPS said visitors were confusing New Cave, which is anything but new, with newly discovered Lechuguilla Cave. A few cavers nationwide objected, saying the name New Cave should be respected as being embedded in caving literature, but the NPS made a stronger case.

So, once the USBGN receives the DGNR, the long process will begin. Perhaps the proposal will glide through without a ripple—but don't bet on it.

Bob Julyan, Chair
Geographic Names Committee

RGIS News

Online access to RGIS data.....

The RGIS Program is upgrading and redesigning the RGIS web site to accommodate online access to data held in the Clearinghouse. The new web site will allow users to quickly identify, view, and download files. Users may also query the database, view thumbnail sketches, and access data via the FGDC gateway. Online access to data is expected to be available by January 2001.

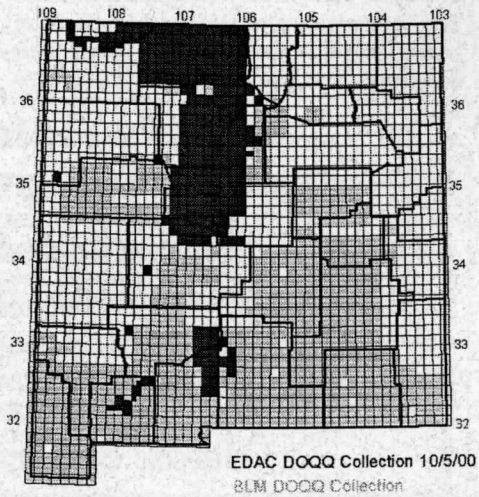
New data in RGIS Clearinghouse...

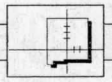
The RGIS Clearinghouse has acquired new and updated data in recent months. These include:

- National Elevation Dataset (NED) for New Mexico
- DRGs with the collar information
- DRGs without the collar information
- USGS National Hydrography Dataset
- Statewide PLSS (updated by BLM as of March 2000)
- Statewide Land Ownership (updated by BLM as of March 2000)
- Statewide Mineral Ownership for Federal Lands (updated by BLM as of March 2000)
- DOQQs (see map below)

RGIS is coordinating a statewide purchase of Landsat 7 TM data. Watch the RGIS and GISAC web sites for progress and updates regarding the acquisition.

RGIS web site: http://rgis.unm.edu





(DOE Satellite continued from page 1)
U.S. The sites will be instrumented by DOE's Savannah River Technology Center (SRTC) and other government agencies with sensors that collect simultaneous "ground truth" data.

Researchers then will compare the satellite data with the ground truth data to develop engineering, processing, and analytic techniques that could be employed in future satellite systems to address a host of national needs, ranging from military and treaty monitoring applications to hazardous waste site characterization and climate research.

Researchers at Sandia, Los Alamos, and SRTC will focus on treaty monitoring applications, while researchers at 50 other national defense and civilian organizations involved in the project will address applications of interest to their respective agencies.

The satellite also carries a High-energy X-Ray Spectrometer (HXRS) sponsored by the National Oceanic and Atmospheric Administration's Space Environment Center and the Czech Republic's Astronomical Institute of the Academy of Sciences, and developed by Space Devices, Ltd. of the Czech Republic. This R&D instrument will monitor the sun to collect data needed to better understand a rare species of solar flare associated with high-energy particle storms that can endanger astronauts and damage space equipment.

MTI is a jointly funded project. DOE's Office of Nonproliferation and National Security is the primary funding agency responsible for satellite and ground-component development, on-orbit operations, and treaty monitoring R&D. The Department of Defense funded the launch through the Air Force Space Test Program, and additional ongoing R&D funding is being provided to individual researchers by their respective agencies.

"For DOE, the successful transition of MTI to an operational status as an R&D system is of tremendous significance," says Sandia Senior VP for National Security and Arms Control Roger Hagengruber. "A whole new capability to investigate arms control and environmental monitoring approaches for the 21st century has been initiated. It is also a credit to the technical strength and teamwork of the DOE's multilab team.

"For Sandia as the system engineer and integrator, it is a tremendous credit to the men and women who worked day and night in pursuit of a dream and with a conviction," he adds. "Every piece of new data from the system is like an exciting new discovery."

Major project participants include Sandia, Los Alamos, SRTC, the Air Force Research Laboratory, Ball Aerospace, Raytheon, and TRW.

Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy under contract DE-AC04-94AL85000. With main facilities in Albuquerque, NM, and Livermore, CA, Sandia has major research and development responsibilities in national security, energy and environmental technologies, and economic competitiveness.

Media contact:

John German, jdgerma@sandia.gov, (505) 844-5199

Press Release
Sandia National Laboratories

(Border Aquifers continued from page 4)
groundwater stored in the basins is a little over 30 million acre-feet. This may be a high estimate because at many locations, the upper basin-fill of the aquifer is fine grained and semiconfined to confined, which limits the amount of water that can be recovered with current water-well technology. The recharge to these aquifers is estimated to be 90,000 acre-feet annually, indicating that only 0.2% is being replenished.

Generally, the groundwater quality of the aquifers is fairly good. However, the rock types create a complex and highly variable environment that contributes to irregular distributions of salinity. Analysis of groundwater samples for these aquifers is very limited and insufficient time-series data make it difficult to evaluate trends. Data collection efforts will need to be expanded as well as long-term monitoring programs.

The New Mexico Water Resources Research Institute is a nonprofit organization that funds water-related research projects at New Mexico's universities. For more information on the aquifer study of southern New Mexico or for general questions about the WRRI, call (505) 646-4337 or check the WRRI web site at wrri.nmsu.edu.

Cathy Ortega Klett

NM Water Resources Research Institute

GIS Day Nov 15, 2000

GIS Day is a grassroots event that opens users' and vendors' doors to schools, businesses, and the general public to showcase real-world applications of this important technology. The event is principally sponsored by the National Geographic Society, the Association of American Geographers, University Consortium for Geographic Information Science, the United States Geological Survey, The Library of Congress, and ESRI.

In New Mexico, open houses are planned at: University of New Mexico, City of Albuquerque, Indian Health Service, Sandia National Labs, Bernalillo County, Community & Regional Planning Program, Earth Touch Solutions, Animas Foundation, Northern NM Community College, Conlee Elementary School, Santa Fe County, Pojoaque High School, and the Nature Conservancy.

Attention Students in GIT Classes.....

NMGIC offers a scholarship worth up to $1000 to students majoring in geographic information technologies (GIT).

See the NMGIC web site at http://nmgic.unm.edu for details and application form.

Cool Internet Web Sites

For this edition of Cool Websites, I've chosen to focus on wild fire-related sites. These are sites that helped many during the Cerro Grande Fire near Los Alamos, NM in May 2000. This may not be an exhaustive list and as always, if you have any additions to this list, please feel free to contact me at *drbleak@sandia.gov*.

- Bureau of Land Management, NM, KS, OK, TX — *http://www.nm.blm.gov/www/new_home_2.html*
- BLM New Mexico Wildland Fire Information — *http://www.nm.blm.gov/fire/fire.html*
- US Forest Service Southwest Area Wild Land Fire Operations — *http://www.fs.fed.us/r3/fire/*
- Weather.com lightning strike web site — *http://www.weather.com/golf/maps/uslightning2.html*
  (This is one of the neatest maps on the web, showing real time lightning strike data, updated every 5 minutes. A service of the Weather Channel.)
- National Weather Service Lighting Links — *http://www.srh.noaa.gov/ftproot/ssd/html/lightnin.htm*
  Information about lightining, lighting strikes and lighting data.
- Wild fire Research — *http://www.mmm.ucar.edu/science/fire/firehome.html*
  WILDFIRE RESEARCH in the Mesoscale and Microscale Meteorology Division, National Center for Atmospheric Research
- Wildfire Home Page — *http://www.cnr.colostate.edu/~ravera/wildfire.htm*
  Designed to provide helpful information to the wildland firefighter and to anyone interested in the topic of wildland fire.
- University o f Iowa Center for Global and Regional Environmental Research, Maps and References web site. This site has one of the most amazing collection of map links ever compiled. — *http://www.cgrer.uiowa.edu/servers/servers_references.html*

Workshop Information.....

Call for Workshop Ideas

If you have a topic you would like to see offered as a workshop, please contact the NMGIC Workshop Coordinator, Bobby Creel using the online form on the NMGIC web site. The form can be accessed at *http://nmgic.unm.edu*.

NMGIC wants to respond to the needs of its members, so please share your desires concerning these workshops.

Metadata Workshops

RGIS and NMGIC will be sponsoring one day hands-on workshops on the ArcView Metadata Collector Tool. The classes are limited to 10 people. A nominal fee will be charged per person to cover costs of workbooks. No specific dates have been selected yet, but the target time frame is winter 2000-2001.

If you would like to attend a metadata training class, please indicate your interest by contacting the NMGIC Workshop Coordinator, Bobby Creel using the online form on the NMGIC web site. The form can be accessed at *http://nmgic.unm.edu*.

News and Announcements From Our Corporate Sponsors

From ESRI....

ESRI GIS Training Courses

Instructor-led ESRI GIS Training Courses are available in Albuquerque, New Mexico. Courses scheduled for this year are listed below. For more information, please visit ESRI's web site (www.esri.com/training) or contact Paige Hayes at ESRI-Denver (phone# 303-449-7779). Please register ASAP; training course size is limited.

October 23 – 27 Introduction to ArcInfo using ArcMap, ArcCatalog, and ArcToolbox.

November 6 – 8 Working with the ArcView Spatial Analyst.

November 9 – 10 Introduction to Avenue.

Web-based ESRI GIS Training Courses are also available through the ESRI Virtual Campus. The courses offered via the Virtual Campus are very popular – check it out! For more information, visit the ESRI Virtual Campus (campus.esri.com).

Calendar

Web-Based Applications of GIS Workshop, November 2, 2000. Presented by AutoDesk; sponsored by NMGIC. Albuquerque, NM. Contact: Bobby Creel, NM WRRI, NM State University, Box 30001, MSC 3167, Las Cruces, NM 88003-8001. Phone 505-646-4337; Fax 505-6418. Email: bcreel@wrri.nmsu.edu. Web: http://nmgic.unm.edu.

NMGIC Fall 2000 Meeting, November 3, 2000. Albuquerque, NM. Contact: Bob Bewley, Bureau of Land Management, PO Box 27115, Santa Fe, NM 87502. Phone 505-438-7481; Fax 505-438-7524. Email: bbewley@nm.blm.gov. Web: http://nmgic.unm.edu

ESRI Southwest User Group (SWUG) 2000 Conference, November 6-9, 2000. Moab, UT. Contact: Kevin Sato, City of Murray, MIS Dept., 4646 S 500 W, Murray, UT 84123. Phone 801-270-2460; Fax 801-270-2450. Email: ksato@ci.murray.ut.us.

ESRI GIS EXPO in New Mexico, November 14, 2000. Crowne Plaza Pyramid, Albuquerque, NM. Contact: Dave Fosdeck, ESRI-Denver, 4875 Pearl East Circle, Suite 200, Boulder, CO 80301-6103. Phone 303-449-7779; Fax 303-449-8830. Email: dfosdeck@esri.com. Web: http://www.esri.com.

GIS Day 2000, November 15, 2000. Web: http://www.gisday.com

Practical Applications in the Geospatial Information Sciences, December 1-6, 2000. Rhode Island Convention Center/ Westin Providence, Providence, RI. Contact: Providence 2000, 6220 Montrose Road, Rockville, MD 20852. Fax: 301-984-9441. Web: http://www.asprs.org/providence

Water, Growth and Sustainability: Planning for the 21st Century, December 4-6, 2000. 45th Annual New Mexico Water Conference. Hyatt Regency, Albuquerque, NM. Contact: NM Water Resources Research Institute, MSC 3167, NM State University, PO Box 30001, Las Cruces, NM 88003. Web: http://wrri.nmsu.edu.

2001: A Geospatial Odyssey, March 4-7, 2001. GITA Annual Conference and Exhibition. San Diego Convention Center, San Diego, CA. Contact: GITA, 14456 East Evans Ave, Aurora, CO 80014. Phone: 303-337-0513. Email: staff@gita.org. Web: http://www.gita.org.

2000 Corporate Sponsors

Thank you for your support!