The MAP LEGEND

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Public Lecture Series Brings Geography to the Forefront

A new public lecture series began this spring as a collaborative effort by the University of New Mexico Department of Geography and the Earth Data Analysis Center. Dr. Stan Morain, EDAC Director and Chair of the Department of Geography, was instrumental in starting this new colloquium series. The series is held on Tuesday evenings once a month from 7:00 to 8:00 p.m. at the UNM Science and Technology Park in the auditorium at 800 Bradbury SE, Albuquerque. The 2004 series has already included two NMGIC members. William Stone, noted landscape photographer and Chair of the NMGIC Global Positioning Systems Committee, provided a presentation in late January on his new book, *New Mexico Then and Now*. Kurt Menke, Secretary of the NMGIC Board, spoke on "Conservation GIS in New Mexico" in early February.

A forthcoming lecture on March 9 will be presented by Bob Julyan, author and Chair of the NMGIC Geographic Names Committee, who will address the fascinating history of geographic names in his talk titled "New Mexico's Evolving Namescape" (see sidebar announcement). Bob also has authored a thought-provoking article for this edition of *The Map Legend* (see Page 4) about the impact of GIS technology on the field of toponymy.

On April 13, Dr. Ray Williamson addresses "Science, the Public Good and America's Earth Observing Industry." Dr. Williamson is Professor of Space Policy and International Affairs in the Space Policy Institute of the George Washington University, where, among other research, he directs the Project on Socioeconomic Benefits of Earth Science research.

Mark your calenders!

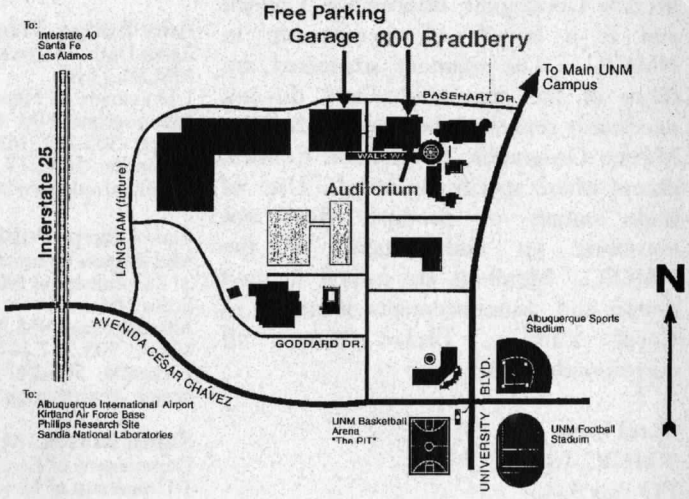
Department of Geography and Earth Data Analysis Center

Spring Public Lecture Series

March 9, 7:00 PM, Bob Julyan, "New Mexico's Evolving Namescape: How Washington Pass Became Narbona Pass, Why Rio de Arenas did not Become Whiskey Creek, And More True Tales from the Files of the NM Geographic Names Committee"

April 13, 7:00 PM, Dr. Ray Williamson, "Science, the Public Good and America's Earth Observing Industry"

UNM Science and Technology Park
800 Bradbury SE (see map below)
Auditorium



Inside This Issue

The Map Legend

Editor: Carol Earp
Public Relations

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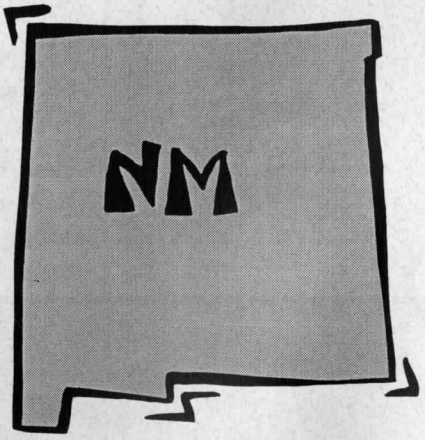

Notes From Our Immediate Past President and President

From the Outgoing President . . .

My favorite time of the year is right around the corner along with our Spring meeting planned for Thursday, April 15th. The most exciting aspect of this meeting is celebrating the 20th anniversary of the founding of the New Mexico Geographic Information Council. We have invited a wide variety of professionals to come and give their perspectives on how the GIT industry has progressed over the last two decades, what's happing currently, and where our industry is heading in the future. I hope all my fellow NMGICers will show their support and be able come to our meeting.

I would like to take this opportunity to thank everyone for letting me participate as President of NMGIC over the last year and I am glad to serve as Vice President for the coming year. Rick Koehler will be announced at this meeting as our new President. I wish him all the best for this very demanding role. I want to let him know the Board will support him as much as possible.

I look forward seeing everyone in April and keep on making maps.

Bart Matthews
NMGIC Vice President

From the Incoming President . . .

It's a new year, Spring is coming, and of course, each Spring all our thoughts turn to ... GIS. And the 2004 NMGIC Spring Meeting. Well, maybe not just GIS. The theme this Spring is "NMGIC's 20th Anniversary Celebration: GIT Then and Now". Please do join us in saluting twenty wonderful years of NMGIC. We hope to make the Spring Meeting a memorable occasion, with presentations by folks who've seen it all through the years, and folks who may provide some glimpses of the future, too.

Spring is all about revitalization, and the NMGIC Board is very much interested in enlivening NMGIC and making sure NMGIC serves the New Mexico GIS community. To that end, we have some initiatives underway that we hope will enhance your membership experience and build upon the previous 20 years of success.

We are in the process of "freshening" the NMGIC website. There will be some added features, especially along the lines of integrated membership services / user interaction and automated functions like workshop registration and voting. It is a little premature to delineate all the changes, but ***now*** is the time to send feedback to the Board concerning the website. Useful ideas are always welcome. We look forward to having it up and running soon for you to take a test drive.

The NMGIC Board has been conducting a membership drive to reach out into the community. We encourage you to write, phone, or email anyone serving on the Board, and tell us what we could do better. Are there meeting topics that you'd like to see, workshops that would be useful to you, do you feel that some segment of the NM GIS community is underserved? Please let us know. Do you know a co-worker or colleague, friend or neighbor that has an interest in GIS? Encourage them to join.

Most importantly, we need student members. We need your vitality, your ideas, your energy, your optimism, and your participation in the greater GIS community. To those of you who are current student members, thank you for joining us. I ask that you do two things: 1) let us know how we can serve you better; and, 2) talk to your friends about joining NMGIC.

GIS should be a part of one's professional development, no matter what the discipline. It is not the sole domain of geographers and behind-the-scenes IT professionals. It is a valuable tool to be wielded by natural scientists, economists, health and family workers, business people, - you name it; it cuts across "departmental" boundaries.

Our student membership fee is just $10 yearly. Yes, sometimes an extra $10 is hard for a student to come by, and instead could provide a good pizza or a ticket to the movies (along with about half a small box of popcorn). But your $10 student membership does get you into our two meetings each year, a subscription to the Map Legend, the opportunity to network and see what other folks are doing, and, two primo box lunches!

Also, remember that NMGIC annually awards the Jesse Rossbach Memorial Scholarship (http://nmgic.unm.edu/nmgcscho.html), worth up to $1000 to students in geographic information science who are attending institutions of higher education in New Mexico. It is an opportunity for the NM GIS community to help someone to conduct meaningful GIS research and continue their studies. Take advantage of it, give it a try ... it could be you accepting "the giant check".

Have a great year, and see you at the Spring Meeting in April!

Rick Koehler
NMGIC President
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TOPONYMY AND TECHNOLOGY

CHANGE SOMETIMES IS LIKE AN OCEAN WAVE: IT SEEMS AN INSIGNIFICANT SWELL ON THE FAR HORIZON—THEN SUDDENLY IT RISES UP AND CRASHES ON THE SHORE. THUS IT WAS WITH GIS AT COGNA 2003.

For years the GIS wave has been advancing upon the shores of geographic names, and at the 2003 Council of Geographic Names Authorities (COGNA) conference in California the wave crashed. After years of being a mere footnote, GIS suddenly was everywhere. The keynote address was by the head of one of the largest GIS firms; ESRI was an exhibitor and one of its representatives made a presentation; and the National Map, a far-reaching GIS project bruited last year in Baltimore by Barbara Ryan of USGS, has emerged to give new importance and urgency to Geographic Names Information System (GNIS).

Actually, GIS was conspicuous even before the COGNA conference officially began. At the meeting of the California Resources Agency Advisory Committee on Geographic Names, people working professionally with GIS made up most of the committee's members. Nowhere to be seen were fusty old historians and linguists traditionally associated with geographic names; these were agency people whose workaday language includes words like spatial data analysis, data sets, polygons, metadata, Arc Info, Intergraph, and so forth, and who don't need translations for acronyms such as FGCD, NSGIC, URISA, USADATA, and what's more, the board considered and accepted a name proposal made primarily on the basis that it was needed for a GIS data layer. That was a first for me.

I've long been interested in the interaction between GIS and geographic names. For one thing, GIS dominates NMGIC, which has seen its ugly duckling finally come to exhibit some swanlike traits after all. But I am not a GIS person, neither by training nor by temperament.

So the GIS presence at COGNA—and the realization that GIS is here to stay—has forced me to confront issues I've heretofore managed to dodge and to do some hard thinking about the future of toponymy in this new era.

Apparently I'm not alone. Here are two comments I recorded at the California board meeting. "Are we making names decisions for people who use computers, or people who use maps?" And "If you let a database rule your life, do you lose all that geography?"

"Are we making names decisions for people who use computers, or people who use maps?" And "If you let a database rule your life, do you lose all that geography?"

Good questions. Within a GIS, geographic names are of value primarily as locations, points. And they're treated primarily in aggregate, not individually. No one puts a name in a GIS because it has an

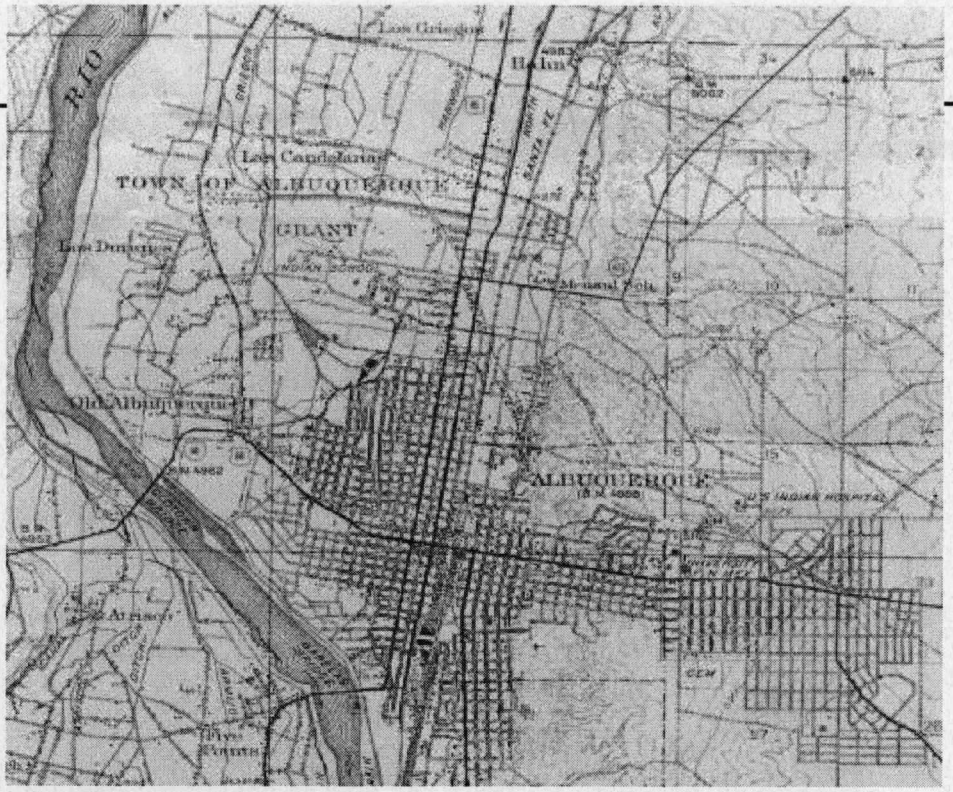
About Bob . . .

Bob Julyan has been involved with geographic names for more than twenty-five years. He has written three books about place names:The Place Names of New Mexico, The Place Names of the White Mountains, New Hampshire, and Mountain Names. He is a longtime member of the American Name Society, and has contributed articles and reviews to its scholarly journal, Names.

In addition to this, for the past fifteen years Bob has been chair of the Geographic Names Committee (GNC) of the N.M. Geographic Information Council. The GNC has been given formal responsibility for the state's geographic names and makes recommendations to the U.S. Board on Geographic Names regarding new names, name changes, or controversial names. The GNC has dealt with such name issues as incorrect Spanish (San Acacia), misspellings of early settlers' names (Burcher Flat), commemorative names (Mount Barker), name conflicts (Rio de Arenas vs. Whiskey Creek), and names with objectionable cultural associations (Satan Pass and Washington Pass).

While a staff member at the Earth Data Analysis Center, Bob headed a three-year project, funded by the U.S. Geological Survey, that inventoried all the state's place names, estimated to total more than 50,000.

Bob has attended meetings of the U.S. Board on Geographic Names and has observed the evolution of toponymy from when it was solely the province of history and linguistics to today when geographic names have become an essential layer in GIS technology.



This is a portion of the Albuquerque, N.M., USGS 15' quad sheet dated 1934. Seventy years later we can still recognize the area as our nascent city. The consistency in use of geographic names has helped to carry forward our historical landscape.

unusual origin. The name records in the (GNIS) database, an important GIS data layer, rarely include cultural, historical, and even linguistic information. GNIS never was intended to be cultural-historical reference, but clearly this aspect of toponymy is receding.

I've also been suspicious of GIS because it's another layer separating us from the immediate reality of the landscape. The images on the screen become more real than what they're intended to represent. GIS practitioners work in offices, not in the field. I recall the comments of a member of the N.M. Geographic Names Committee during the First Gulf War. This woman is a GIS specialist, but she was deeply troubled by how many of her colleagues, sitting before their computer screens, saw the war as a neat technological challenge—even an opportunity—and how technology had removed them from the brutal reality of the battlefield.

But perhaps my main reservation stems from my suspicion that while GIS stands for *Geographic* Information Systems, GIS really isn't about geography but rather about computers and technology. When I eavesdrop on GIS people talking, I don't hear references to landforms or climate or nations or cultures; rather I hear them talking about data transfer and pixels, operating platforms. (We all have our tribal languages; at COGNA the talks by academics were thick with words like semiotics, ontology, hermeneutics, etc.)

At COGNA I shared my GIS reservations with Will Tefft, who shares some of my retro temperament yet because of his affiliation with Maplink, which distributes and produces maps, he also lives in the milieu of high-technology geography. I sought him out because I know he thinks about such issues.

He conceded that the current emphasis in GIS is on technology rather than geography. But he observed that this is always how it is when a powerful new technology arrives. People become excited exploring the limits and potential of the new tools, and in the development of still more powerful tools. That's the phase GIS is in now. What's happening now is what should be happening. Later, when the dust has settled, the emphasis will return to the original objects of study—with much more powerful tools.

I thought, there's no denying that GIS technology has brought new energy, new ideas, and new people to the field of toponymy. Sure, much cultural and linguistic work remains to be done, but much already has been done. The challenge now is to integrate and interpret it—and GIS excels at integration at least.

So maybe I was being grumpy because there's a national GIS Day but no National Names Day.

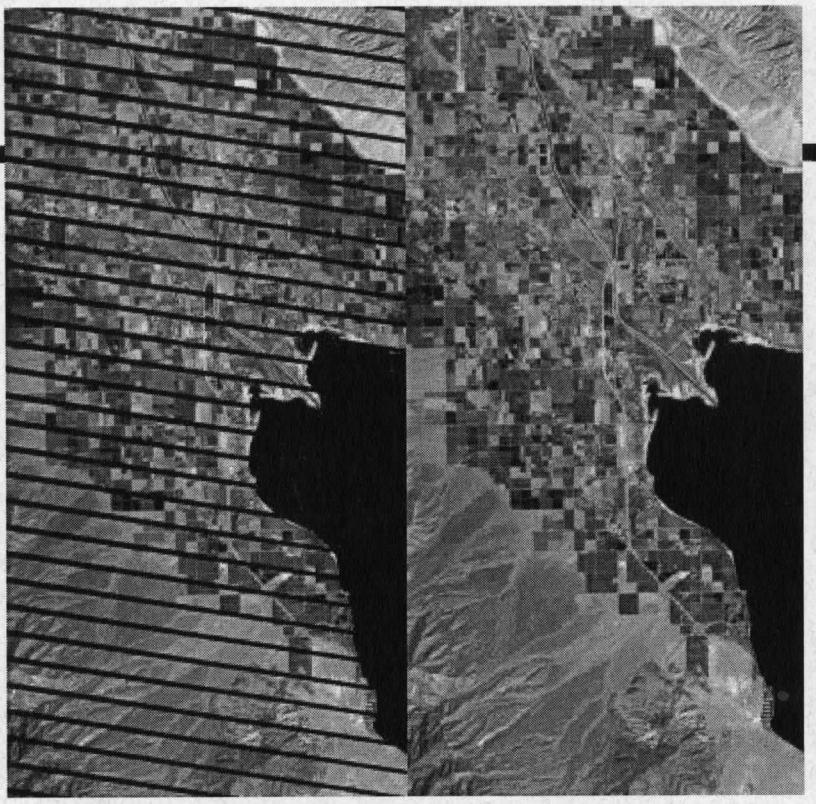
I left COGNA 2003 wondering what COGNA 2113 will be like.

GNIS MAINTENANCE

But if toponymy and GIS are to assimilate happily, then it's time that people in the names community listen to the elders of our tribe, specifically Lew McArthur, for decades the authority on Oregon geographic names. At COGNA 2003, as at past COGNA conferences, he rose

(CONTINUED ON PAGE 9)

Landsat 7 Sensor Malfunction



Since it's launch in late 1999, the Landsat 7 satellite and its Enhanced Thematic Mapper sensor (ETM+) have proven to be one of the major data collection systems for the world-wide remote sensing community. On May 31, 2003 a malfunction occurred on the satellite which will affect the ETM+ image quality for the rest of the satellite's life. On that day unusual artifacts began to appear within all images collected by the sensor. These artifacts apparently are the result of a failure of the sensor's scan line corrector (SLC). The SLC is an electro-mechanical device that compensates for the forward motion of the spacecraft.

The spacecraft itself and the ETM+ appear to be in no danger and are working properly. The failure of the SLC and its impact on future images appears to be permanent, however. The image artifacts consist of a series of data gaps throughout the entire image that start near the center of the image and expand outward to the edges. The gaps get wider as they extend out from the center. An example of a portion of a Landsat 7 image is shown on the left in the figure above. The center 20% of the image is unaffected. A number of attempts have been made to correct this problem but none have been successful and the condition of the sensor anomaly is considered to be permanent.

To compensate for the loss of Landsat 7 data during the sensor test phase, Landsat 5 acquisitions have been increased and a number of international cooperators are preparing to acquire and process Landsat 5 data. Although it was launched in 1984 with an expected life span of approximately 5 years, Landsat 5 still has the capability to collect 30 meter imagery of excellent quality. However, due to its longer than expected life span, the long term reliability of Landsat 5 to continue to collect images will always be a concern.

Since the determination that the SLC problem is permanent, the US Geological Survey has moved ahead and developed a series of imagery products using the SLC-off imagery. One of those products is shown on the right side of the figure above. This technique uses the existing SLC-off imagery but "fills in" the gaps by using radiometrically and geometrically corrected archival Landsat 7 imagery. While the resulting image cosmetically "looks good", its usefulness to the scientific community is yet to be evaluated and it may not be suitable for many applications. Along with Landsat 5, Landsat 7 has been returned to its active image collection status with the SLC off.

With the problems experienced by Landsat 7 the future of medium resolution image acquisition remains in a troubled state. Landsat 5, while still collecting excellent quality images, cannot be relied upon for long term service due to its old age. There is a plan by NASA and USGS to continue the acquisition of Landsat-like imagery called the Landsat Data Continuity Mission, or LDCM. LDCM's mission is to extend the Landsat record of multispectral, 30-meter resolution, seasonal, global coverage of the Earth's land surface. However, neither NASA nor the USGS will produce, procure, or operate a spacecraft. Rather, science data will be procured from a vendor who fulfills the requirements of the LDCM Data Specification. One of the potential vendors, DigitalGlobe, withdrew from the competition. The only bid submitted in response to the RFP came from RESOURCE21, and that bid was rejected by NASA and USGS. This decision, amplified by the current technical problems with Landsat 7, places continuity of the 30+ year Landsat observation record in limbo. If you would like to keep current with the situation of Landsat 7 and a potential data continuity mission you can check the website at http://landsat7.usgs.gov.

This article was compiled from several USGS news releases.

Thomas K. Budge
Manager, Image Processing Services
Earth Data Analysis Center, UNM

GIS Professional Certification

GIS professional certification is now officially underway as of January 1, 2004

Many NMGIC members remember the presentation about GIS certification several years ago by a representative of the Urban and Regional Information Systems Association (URISA) at a NMGIC meeting. At that time the certification program consisted of a pilot program for GIS professionals in Georgia. At URISA's 2003 Annual Conference in Atlanta, Georgia, twenty nine individuals were recognized by the GIS Certification Institute (GISCI, www.gisci.org) as Certified GIS Professionals (GISP). The certification process is now open to all professionals and the GISCI is encouraging potential applicants to familiarize themselves with the program and begin collecting documentation for their application.

What is certification?

Certification helps employers evaluate job applicants, select contractors, and motivate employees to enhance their GIS skills. Certification shows commitment to the profession and recognizes competency. The program as administered by GISCI, an independent certifying body, is a portfolio based program emphasizing three areas:

1) Educational Achievement
2) Professional Experience
3) Contributions to the Profession.

There is no examination required.

How does the program work?

The program is a point-based system whereby a minimum number of points in the three areas must be achieved. Many types of educational achievements, professional experience, and professional development activities are recognized and eligible for accumulating points.

Where can I find information?

Applicants are encouraged to visit the website www.gisci.org to get more information. There is a PowerPoint presentation about the program available on the site with 83 slides. This is also downloadable as a .pdf file. In addition, the application, a procedures manual, the GISCI Code of Ethics (required for certification), and an applicant payment form are available. Applications and portfolios are submitted to the GISCI, along with a payment of $250, to be reviewed for certification.

What is the "grandfather" provision?

Many NMGIC members have considerable experience using geographic information technologies. During the first five years of the program applicants may be "grandfathered" into the program by meeting specific requirements in the Professional Experience category only. This grandfathering provision is based solely on experience. Examples of the type of experience which would earn a minimum number of points to be eligible for the grandfathering provision include: 8 years of experience in a GIS position of data analysis, system design, programming or similar; or 13 years in a GIS position of data compilation, teaching, or similar; or 20 years in a GIS user position. More information on the grandfathering provision is found in the GISCI Procedures Manual.

Whether one is interested in pursuing GIS professional certification or not, it is probably an excellent idea to be informed on the program. Opportunities only exist now, and for the near future, for practicing professionals to meet the grandfathering provision. Many in the field for years have no formal education in GIS which could earn points in the educational achievement category, but certainly have the knowledge and experience to be recognized in a certification program.

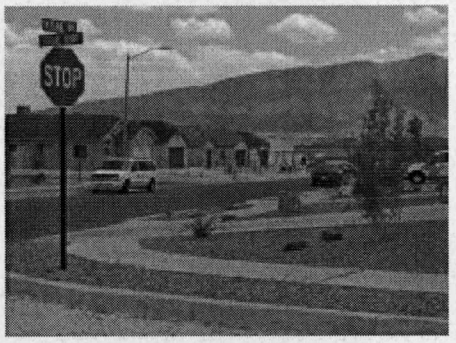
What do we think in New Mexico?

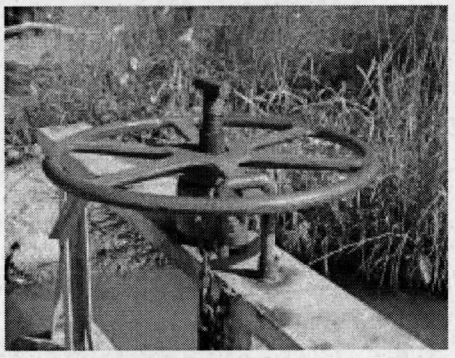
This program is new and only recently available for applicants world-wide. It will be interesting to see if GIS professionals in New Mexico are interested in certification and pursue recognition as a GISP.

Carol H. Earp
NMGIC Public Relations

Visualizing the Alternatives:
Water Allocation in the Middle Rio Grande

Allocation of resources among competing uses is a central concern of economics. Sometimes the market solves this problem well: when low-carbohydrate diets became popular, many food manufacturers reallocated productive resources toward developing and producing low-carbohydrate products. An increase in demand provided an incentive for producers to increase supply. Sometimes, though, markets can't or don't allocate resources very well. Water in the Middle Rio Grande Valley is just one example. More water can not be produced easily when demand increases, and there are reasons to question the wisdom of using a market to allocate water to the highest bidder. However, given the scarcity of the resource, coupled with growing demand from a growing population, addressing allocation issues is critical. This has led an interdisciplinary team of researchers at the University of New Mexico to begin investigating preferences for water allocation in the Middle Rio Grande Valley.

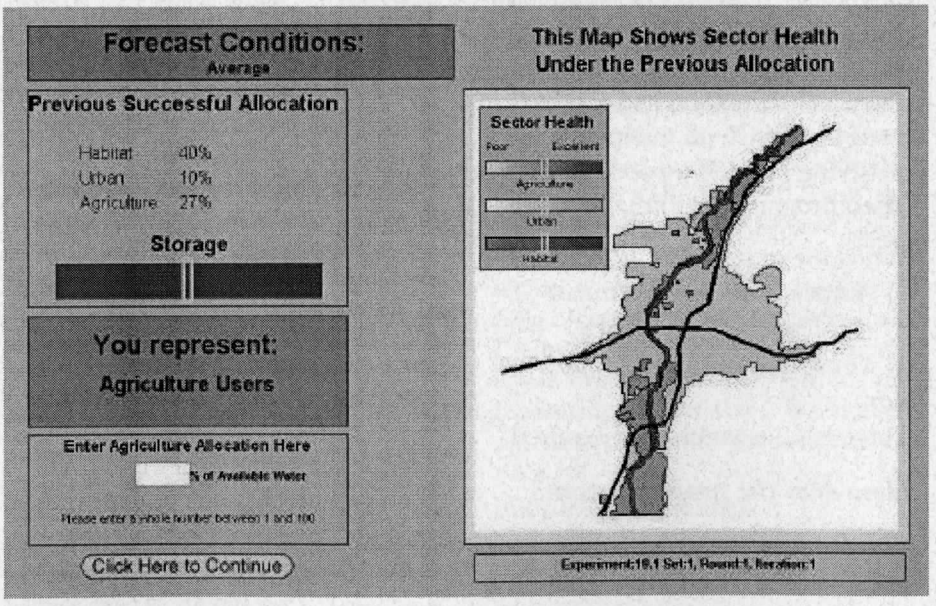




Residential development and agriculture are just two competing demands on scarce water resources.

When economists cannot learn about consumer preferences by observing market purchases, they often turn to experimental methods. Economic experiments can place participants in simulated markets and ask them to make choices that yield economic consequences. Because the settings are simulated, participants can make choices over situations that they cannot directly choose in the outside world. Because they offer the potential to measure preferences for non-marketed goods, experiments seemed to be a promising way to consider alternative allocations of water. The team set out to design an economic experiment in which stakeholders in the Middle Rio Grande Valley could make choices about how to allocate water by "virtually" moving water among competing uses, and then observing the consequences of those allocations.

Figure 1. Start Screen for experiment participants



Ann Demint, a graduate student in the department of Civil Engineering at UNM, worked under the direction of faculty member Julie Coonrod to combine a hydrological model of the Middle Rio Grande with economic models developed by Janie Chermak, David Brookshire and Kate Krause of the Department of Economics. This interdisciplinary model calculates the estimated physical and economic effects of increasing or decreasing the amount of water available to various users in the valley. To make the decisions meaningful, though, participants had to be able to "see" the allocations and the con-

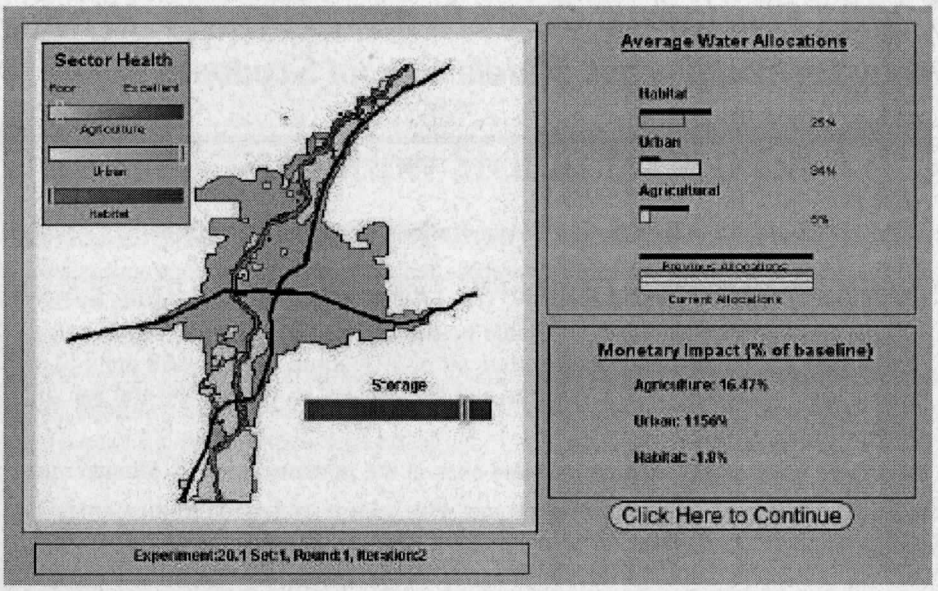


Figure 2. Results page with feedback participants receive from model

sequences of their decisions. Rick Watson and Karl Benedict of the Earth Data Analysis Center at UNM developed maps and graphical displays that provided rich visual information and feedback to meet this need.

Experiment participants, seated at computers, were assigned to one of three Middle Rio Grande user groups: urban, agricultural, and habitat. Information about the starting status of the river, from the perspective of each user group, appeared on each participant's monitor in the format shown in Figure 1. Participants submitted their allocation decisions to the underlying hydrological/economic model, the model aggregated the decisions and calculated the results, and a visual display of the physical and economic consequences of the collective decisions was returned to each participant's screen [Figure 2]. By interacting with this computer program, participants could make water allocation choices and adjust their decisions in response to information-rich feedback.

An experiment lab is not designed to, and will never be able to, replicate all of the real-world effects of economic decisions. However, better information and feedback enhances the quality of the decisions made in the artificial environment of the lab. Linking geographic information and displays with the underlying physical and economic models allowed the researchers to show stakeholders from the Middle Rio Grande Valley how alternate water allocation scenarios would play out.

Kate Krause
Associate Professor, Department of Economics
University of New Mexico

TOPONYMY AND TECHNOLOGY
(CONTINUED FROM PAGE 5)

like a biblical patriarch and in prophetic tones admonished everyone if not to repent at least to get serious about GNIS maintenance.

GNIS Phase II soon will be complete. The first states were done almost 20 years ago. In that time the states' namescapes have changed and grown—schools, hospitals, parks, dams and reservoirs, even new counties and administrative units. And some former names have gone out of existence or been changed. Almost 20 years and counting. How many GIS people would use computers that are 20 years old? Yet the GNIS data layer is rusting before our eyes. Even a project as important and all-encompassing as the National Map will use obsolete data. It's like buying a new Lexus and discovering it has a Corvair transmission.

Others besides Lew know this, but he remains the only one talking about it. In part that's because it can only be done, like GNIS itself, on a state by state basis. And in part it's because it would require at least some funding. But sometimes I suspect no one's interested because it can only be done the old-fashioned way—with field work, pencil work, and typing at a keyboard. Name by name by name. Still, the availability of relatively inexpensive digital maps does help dramatically.

So, as with GIS and toponymy, it's my hope that the arrival of GIS will force a serious, sustained discussion of GNIS maintenance.

Bob Julyan
Chair, Geographic Names Committee
NMGIC

NMGIC 2003 Educational Grant Award Brings GPS Technology to Albuquerque Middle School Students

Roger Kramer was awarded a $1000 NMGIC Educational Grant in 2003. The following article is an update by Mr. Kramer on how the grant funds were used in the classroom.

The $1000 grant presented to me, Roger Kramer, Earth Science teacher at Desert Ridge Middle School, was used to purchase ten GPS units for use in training students and teachers in GPS technology. Through an additional award made by the Sandia Labs and money made available by the Desert Ridge Parent Teacher Organization, I was able to purchase a class set of 29 Garmin, ETrex, GPS units. To date I have trained over 375 students and 40 teachers in the history and use of GPS.

Following extensive training, students have used these units to plot erosion problem sites in the northeast area of Albuquerque and incorporate these plots into their project reports. In working on a cooperative project with science and social studies, student-dents are using the GPS units to locate and plot historical sites, and places of interest in New Mexico, on state maps.

Due to my efforts to bring GPS technology to my students and fellow teachers, I was asked to present my program to my fellow science teachers at the regional National Science Teachers Association convention in Reno, Nevada in December, 2003. I presented two sessions and both were well attended. There is great interest but little practical information for teachers in this subject area. My program included the history of, funding of, and project ideas for the use of GPS in the science and general education classroom.

Roger Kramer
Earth Science Teacher,
Desert Ridge Middle School, Albuquerque

Grant Provided for Underground Mapping of Mines

New Mexico was recently awarded a grant of $50,000 from the U.S. Department of Labor's Mine Safety and Health Administration (MSHA). The purpose of the grant is to establish an electronic system of digitizing underground maps for abandoned mines with the goal of ensuring miner safety.

The MSHA granted almost $4 million to mining states for the collection, scanning, georeferencing of mine maps to adjacent mines, electronic sharing of mapping, and archiving of original maps. The funding will allow states to provide information to mine operators electronically about the location of abandoned mines. Nine miners were trapped in the Quecreek coal mine in Pennsylvania for 3 days in 2002 by in-rushing water. The mine operator had an inaccurate map of a nearby, abandoned underground map.

"This is good new for the mining industry as we may now begin to tackle this serious problem in earnest," said Dave D. Lauriski, assistant secretary of labor for mine safety and health. "States receiving these funds not only have a large number of mines, but have demonstrated a commitment to address the problem of inaccurate underground mine maps to prevent another Quecreek-type situation."

MSHA is asking anyone who has an old mine map to call 1-888-753-9427. Maps will be copied and the original returned to the provider.

Additonal information can be found at MSHA website at www.msha.gov.

This article was compiled from MSHA Press Release and website.

Carol H. Earp
NMGIC Public Relations

NMGIC Opportunities . . .

Attention Students and Educators in GIT . . .

NMGIC offers an award worth up to $1000 to students majoring in geographic information technologies (GIT) or to educators involved in GIT.

Through the Jessie Rossbach Memorial Scholarship, NMGIC annually awards a scholarship or an educational grant worth up to $1000. Scholarships are available to students in geographic information technologies who are attending institutions of higher education in New Mexico. The intent of the award is to support student or educational projects in geographic information technologies.

To be considered for the award, students or educators must submit an application, a brief description of a project for which they intend to use the award money, a detailed, itemized budget, resume, and two (2) letters of support to the NMGIC Scholarship Committee.

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

and Responsibilities . . .

It's time to renew your NMGIC membership for 2004. This can be done using the form below

2004 Membership Dues

New Mexico Geographic Information Council, Inc.

$25 Regular Dues; $10 Students (with ID); $100 Corporate Dues

Name: _____

Organization: _____

Business Address: _____

_____

City: _____ **State:** _____ **Zip:** _____

Phone: _____ **Fax:** _____

Email: _____

Enclosed is my: ☐ Check ☐ Purchase Order

Please make check payable to: NMGIC Inc. Payment should be mailed to: NMGIC, Inc., P.O. Box 9445, Albuquerque, NM 87119-9445.

Cool Websites: GIS Portals

Compiled by Denise Bleakly

For this edition of Cool Websites, I've chosen to focus on GIS Portals. GIS Portals are websites that link to sources of metadata and actual data. The amount of geospatial data on the web is increasing every day. This selection is based on reviews of the sites in various trade magazines and links from other sites. This may not be an exhaustive list and as always, if you have any additions, please feel free to contact me at drbleak@sandia.gov or 284-2535 – Denise Bleakly.

Geospatial One Stop *http://www.geodata.gov/gos*

The one stop for federal state & local geographic data. Currently, this site contains metadata on where to find the actual data. This site has been active since August 2003, and has new data added every day!

Starting the Hunt *http://mama.indstate.edu/users/morgan/hunt.html*

Guide to Mostly On-line and Mostly Free US Geospatial and Attribute Data - a whole host of links to data sets from across the US - some have mapping engines, some do not.

GIS Monitor *http://www.gismonitor.com/reference/portals.php*

"Ultimate Map/GIS Directory" GIS Portals website - has links to GIS web portals in other languages.

Bill Thoen's GIS Website links *http://www.gisnet.com/notebook/*

Bill was one of the first guys to compile lists of GIS sites - he has his picks for "The Best GIS Resource Lists" And Delivering GIS Via the web. The site has not been updated in a while.

GIS.com resource website *http://www.gis.com/resources/library/directories.html*

Thailand Environmental Institute GIS Websites *http://www.tei.or.th/eic/gis_list.htm*

University of Utrecht GIS Master List *http://www.frw.ruu.nl/nicegeo.html*

International geography related websites

The University of Edinburgh GIS WWW Resource List *http://www.geo.ed.ac.uk/home/giswww.html*

Detailed list of international GIS resources alphabetically listed

Center for Advanced Spatial Technologies (CAST) GIS List and Pointers *http://www.cast.uark.edu/local/links/gis/*

They have a specific listing of Interactive Mapping Sites -- primarily in the Eastern US

US EPA Region 2 GIS Resources and Links http://www.epa.gov/region02/gis/links.htm

GIS Internet Addresses *http://www.joffes.com/GIS/websites.html*

Department of the Army, Integrated Training Area Management, GIS Links *http://www.army-itam.com/gis/page5.html*

YAHOO GIS links *http://dir.yahoo.com/Science/geography/geographic_information_systems__gis_/*

Ligon Middle School GIS Links page *http://www.ncsu.edu/midlink/gis/links.htm*

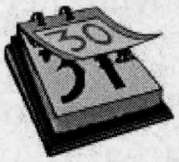
What makes this site so interesting, is that is a website developed by a Middle School teacher who uses GIS/GPS in the classroom and it has a whole lot of "GIS Projects listed" of actual GIS applications on the internet.

Top 100 Map Sites *http://www.100topmapsites.com/*

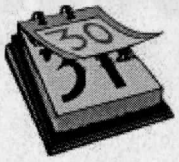
Believe it or not there is a company that compiles this! Links to the most popular and used mapping websites on the internet -- Map Quest, National Geographic Map Machine, Expedia, MapBlast, etc.

The GIS Workshop *http://www.gisws.com/gis_data.htm*
A private consulting firm that has compiled a great deal of GIS related information

Harvard Design & Mapping The GIS Portal http://www.gisportal.com



Calendar



ArcSDE Administration for SQL Server, February 23-27, 2004. Computer Corner, Albuquerque, NM. Contact website at: http://www.esri.com/company/regions/denver/training.html

URISA's IT/GIS in Public Works Conference, February 25-27, 2004. The Westin Charlotte, Charlotte, NC. Contact website at: http://www.urisa.org/PublicWorks/publicworks.htm

Introduction to ArcGIS I, March 1-2, 2004. Computer Corner, Albuquerque, NM. Contact website at: http://www.esri.com/company/regions/denver/training.html

Introduction to ArcGIS II, March 3-5, 2004. Computer Corner, Albuquerque, NM. Contact website at: http://www.esri.com/company/regions/denver/training.html

Geography Lecture Series: New Mexico's Evolving Namescape: How Washington Pass Became Narbona pass, Why Rio de Arenas Did Not Become Whiskey Creek, and More True Tales from the Files of the NM Geographic Names Committee, (Robert Julyan), March 9, 2004, 7:00-8:00 pm. UNM Research and Technology Park Auditorium, 800 Bradbury SE, Albuquerque, NM. Contact website at: http://nmgic.unm.edu.

Building Geodatabases I, March 22-24, 2004. Computer Corner, Albuquerque, NM. Contact website at: http://www.esri.com/company/regions/denver/training.html

Building Geodatabases II, March 22-24, 2004. Computer Corner, Albuquerque, NM. Contact website at: http://www.esri.com/company/regions/denver/training.html

Geography Lecture Series: Science and America's Earth Observing Industry (Dr. Ray Williamson), April 13, 2004, 7:00-8:00 pm. UNM Research and Technology Park Auditorium, 800 Bradbury SE, Albuquerque, NM. Contact website at: http://nmgic.unm.edu.

NMGIC Spring Meeting: 20th Anniversary, April 15, 2004. 801 University Blvd SE (Rotunda), Albuquerque, NM. Contact website at http://nmgic.unm.edu.

GITA's Annual Conference and Exhibition: "Information, Strategy, Vision...Building Performance for a New Age," April 25-28, 2004. Washington State Trade and Convention Center, Seattle, WA. Contact website at: http://www.gita.org

ASPRS 2004 Annual Conference, May 23-28, 2004. Denver, CO. Contact website at: http://www.asprs.org/denver2004/index.html

URISA's 3rd Annual Public Participation GIS Conference (PPGIS), July 18-20, 2004. University of Wisconsin-Madison, Madison, WI. Contact website at: http://www.urisa.org/ppgis.htm

ESRI International User Conference, August 9-13, 2004. San Diego Convention Center, San Diego, CA. Contact website at: http://www.esri.com/events/uc/index.html

SPRING MEETING and VENDOR EXHIBIT

GIT Then and Now

Thursday, April 15, 2004
8:30 a.m. to 3:30 p.m.
UNM Science and Technology Park
801 University SE, Rotunda
University Blvd. NE
Albuquerque, NM

Please join us at this very special Spring Meeting and Vendor Exhibit to celebrate 20 years of sharing geographic information and technology in New Mexico

Keynote Speaker
Dr. Keith Clark

Professor and chair of the Geography Department at the University of California at Santa Barbara, author of the textbooks *Analytical and Computer Cartography* (1995) and *Getting Started with GIS* (2003), and since 1997, the Santa Barbara Director of the National Center for Geographic Information and Analysis (NCGIA).

And for those of you who remember . . .
Dr. Dennis Fitzsimons

Professor in the Department of Geography at Humboldt State University, Cartography Editor of the *ANNALS of the Association of American Geographers,* and formerly of the UNM Geography Department.

And . . .

The program will take a look back at the founding and history of NMGIC, an historical perspective on GIT and the development of the field locally from a user perspective, and a panel discussion on the evolution of the GIT industry from a vendor perspective and featuring local representatives.

And, not to be forgotten . . .
Special anniversary events!

Watch the website at http://nmgic.unm.edu for more details

The Map Legend 2004 Publication Schedule and Deadlines

Winter Issue

Deadline for articles: January 15, 2004
Publication date: February 15, 2004

Spring/ Summer Issue

Deadline for articles: May 15, 2004
Publication date: June 15, 2004

Fall Issue

Deadline for articles: September 15, 2004
Publication date: October 15, 2004

Editors of *The Map Legend* are looking for articles describing ongoing, recently completed, or recently awarded projects. "Newsworthy" items on your organziations, accomplishments of your personnel, or event/meeting anouncements....are all welcome. Contributions should be sent to Carol Earp (cearp@mrcog-nm.gov).

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?

2003-04 Corporate Sponsors

Thank you for your support!