

Texas Tech News

UNIVERSITY NEWS AND PUBLICATIONS/P.O. BOX 4650/TEXAS TECH UNIVERSITY/LUBBOCK, TEXAS 79409/(806) 742-2136

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SPECIAL TO THE CHRONICLE OF HIGHER EDUCATION

CONTACT: Preston Lewis

LUBBOCK--Bill Gustafson had a problem. Whenever he wanted to discuss home financing in his family finance class, he usually spent the night before incorporating current interest rates and housing prices into a set of overhead visuals. Even so, his presentation lacked flexibility.

John Marx had a problem, too. His personal science fiction library had grown too large to be manageable for his own use, much less for the science fiction course he teaches. He needed some organization.

The Texas Tech University Library, through its Texas Instruments Computer Learning Laboratory, is helping Gustafson, Marx and other university faculty solve their individual problems or improve their computer literacy.

And, with 35 microcomputers, including 10 for three-day home loans, the library is helping Texas Tech cope with a problem facing all higher education -- how to integrate the computer into academic areas across the board.

Texas Tech Academic Affairs Vice President John R. Darling said requests for computer facilities had been springing up all over campus. Although pockets of computers existed in some colleges and departments, they were not adequate to meet the need.

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COMPUTER LAB/ADD ONE

"The computer is central to everything we are doing in Academic Affairs," he said. "We have to be willing to address current and future computer needs not only in subject matters but also in implementation devices for facilitating academic programs and research projects.

"By and large, computer science has been viewed simply as a subject matter," Dr. Darling indicated. "But more and more, computer science is changing from just a subject matter to an integral part of the educational delivery system.

"We fully intend to integrate it as a core element. In a sense, the computer is a learning device, and we thought it important to tie in with our central learning resource -- the library."

Other reasons made the library the final choice for the laboratory site. First, its regular hours are longer than in any academic building on campus. Second, continuous staffing in the library helps increase the security. And third, the laboratory, by being in the library, is equally accessible to all faculty and departments on campus.

The computer laboratory is equipped with 35 TI-99/4A Home Computer Systems and auxiliary hardware and software. Auxiliary hardware eventually will include 25 solid state speech synthesizers, 10 solid state printers and five video controllers. Software includes several sets of more than 25 computer programs.

Twenty computer systems are situated in one room open to faculty and students. Five more enhanced systems with the extensive auxiliary hardware are available to faculty and faculty designates in a restricted room. The final 10 units are available for home use, a checkout service that may be a first among university libraries in the nation.

COMPUTER LAB/ADD TWO

Classes have top priority in the larger room with a 40-student capacity, or 22 and 18 students when it is partitioned. When the room is not taken by classes, it is open for general faculty and student use.

Made possible by a gift of microcomputer hardware and software from Texas Instruments, the laboratory opened June 1 after two weeks of faculty orientation sessions between the spring semester and the summer term.

Dr. Jerry D. Ramsey, associate vice president for academic affairs, chaired the academic computer users committee which planned and implemented the computer laboratory. When the laboratory was ready for use, Ramsey was uncertain what the faculty response would be, particularly during the break between classes.

"We didn't know what to expect," he said, "but with the interest it generated among the faculty, we had to double the number of classes to meet demand."

More than 130 persons, almost a tenth of the university's 1,400 faculty, attended sessions. Ramsey said orientation participants reflected a cross section of academic disciplines, not just mathematical, scientific or business fields.

After the orientation, faculty were encouraged to increase their skills on the system through self-instruction booklets available for checkout and to develop microcomputer uses tailored to their classroom needs.

Ray C. Janeway, director of Library Services, said faculty interest in the facility has continued since orientation.

COMPUTER LAB/ADD THREE

"We've already found out that if we had three times as many microcomputers and the day was 72 hours long, we'd still be pressed to meet the need," Janeway said. "The 10 units for loan have stayed out. Already we've passed the point where we had to stop renewals so more faculty could use them."

Laboratory summer classes included math, industrial engineering, home economics education, educational curriculum and instruction, and family management, housing and consumer science. By the end of the first month of operation the large room had been reserved for several classes in 1983 and had been requested for classes as far as four years in advance. The university's Division of Continuing Education has used the facility for several classes, including a summer program bringing talented 10- through 15-year-olds to campus for advanced instruction.

Besides the classroom applications, the computer laboratory's advanced computer equipment will allow faculty to develop computer instructional materials just as they might write illustrated textbooks in their fields, Ramsey said.

The newly developed video controllers will be a boon to producing computer-aided instructional materials, he said. A video controller allows an operator to key a video cassette to the computer.

"The video controller can combine the logic, branching and bookkeeping abilities of the computer with the richness of video," Ramsey said. "In regular computer-aided instruction, the written materials and simple graphics are great, but it is very hard and costly to program more complex graphics. The video controller changes that by allowing you to use videotape graphics."

COMPUTER LAB/ADD FOUR

Now it will be feasible to develop a programmed textbook keyed to the actual videotape of a surgical procedure, for instance, or of other areas where it was impossible for computer-generated graphics to be effective, he said.

Some of the more common uses of microcomputers also are provided for in the Texas Instruments gift. In addition to programs for statistics, budget management, home finance, nutrition, personal reports and weight control, programs for games such as Hunt the Wumpus, Tombstone City, Zero Zap and Munchman were provided.

"Basically, this is a learning laboratory, but we do allow games," Ramsey said. "We recognize that adventure and logic games can be part of a formal education experience, but games have the lowest priority among uses."

Under rules worked out by the academic computer users committee and the library staff, games are permitted as long as microcomputers are available. Once all stations are occupied, the game playing is suspended. The rules have worked without problem to date, reported Dr. Stewart W. Dyess, assistant director of library services and library coordinator of the computer laboratory.

Through the lab's first two months of use, faculty were discovering more uses for the microcomputers than just games. For Dr. Gustafson, an associate professor of Family Management, Housing and Consumer Science, his lectures on home financing now have a spontaneity that sparks discussion. He can check out a microcomputer with a home financing program and hook it up to television monitors in his classroom.

COMPUTER LAB/ADD FIVE

"Usually, someone in the class has been pricing homes," Gustafson said. "Right there in class I can punch in that purchase price, a standard downpayment, current interest rates and various components of amortizing a mortgage. The microcomputer will then feed back the house payment, the appreciation and other factors.

"Generally, the students can't believe the high cost of housing at current interest rates, so I punch in the same figures except for a lower interest rate someone suggests. When students compare the results, I make my point about the high cost of money."

While Gustafson previously owned a home computer, Dr. Marx, an associate professor of chemistry, did not. His 15,000-volume science fiction library convinced him he had better look into computers.

"I'd been thinking along these lines, but the library's computers provided the spark to get me going," Marx said. "I've checked a unit out two times. My computer knowledge is minimal and I've got a long way to go, but I'm trying to evaluate if I can organize my collection on this type of system or if I must go to a larger system."

Eventually, Marx foresees purchasing a personal computer to organize his science fiction collection, do some household budgeting -- a selling point with his wife, and handle some work for his chemistry classes.

Although the library-based computer laboratory has solved individual pedagogic problems for Texas Tech faculty, Ramsey sees the facility as but one major step to keep pace with the mushrooming computer technology.

COMPUTER LAB/ADD SIX

"This is not the end of the road for us," he said, "but it gives us a level of exposure in addressing computer age needs in higher education. I eventually see microcomputers located all over campus, not in every department perhaps, but in most. The TI Computer Lab will help fill the gaps until we reach that point."

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CONTACT: Rebecca Rhoten

LUBBOCK--When voters make decisions at the polls, they are voting more for the image than for the candidate or his policies, say two Texas Tech University faculty members.

Robert A. Rooker, of the mass communications faculty, has served as a political campaign consultant on 16 campaigns, 14 of which were won by his candidate.

"A candidate is often sold much like a can of peas. He is just a product to be advertised in hopes that the public will buy the projected image," Rooker said.

Today, media emphasis is placed on name identification, which is expensive, Rooker said.

"New technology in the media has made it unbelievably expensive to run for public office," he said. "In West Texas, it costs between \$20,000 and \$25,000 to run in a city council race and about \$280,000 for a congressional race. These figures don't even include the costs if there is a runoff."

Dr. Murray C. Havens, chairman of the Texas Tech Political Science Department, said emphasizing name instead of issues is one reason for criticism of media campaigning.

"The voter needs to become more aware of why he is voting for a particular candidate. Voters should not choose a candidate because he has a nice slogan," Havens said.

However, media campaigning, or advertising for office, is a necessary evil in getting voters to the polls, Havens said.

"The media is superficially helpful in voter awareness," Havens said. "But it harms the voter to read only about the image of a candidate such as Ford skiing or Reagan on a horse."

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CONTACT: Preston Lewis

LUBBOCK--The six-shooter may have tamed the West, but the railroads civilized it.

The iron reach of the railroads and their settling influence on the Southwest will be examined Sept. 17 during the third annual symposium of the Southwest Collection at Texas Tech University.

Speakers on "The American Southwest: Its Railroads" will include railroad historian David F. Myrick, Dr. Keith L. Bryant Jr., dean of the Texas A&M College of Liberal Arts, and Dr. Albro Martin, Oglesby Professor of American Heritage at Bradley University.

Also speaking will be Bill Billingsley, associate professor of history at South Plains College, and Dr. Donovan L. Hofsommer, research historian for the Southern Pacific Railroad.

The symposium will begin at 9:30 a.m. Friday, Sept. 17, in The Museum of Texas Tech University. A buffet lunch will be served at the adjacent Ranching Heritage Center. Except for a \$6.25 charge for the meal, the symposium is open free to the public.

Myrick, author of four books on southwestern railroads, will discuss the railroad as industry in the Southwest. Martin will examine the overall significance of the railroad industry in American history.

Bryant, author of a history on the Santa Fe railroad, will lecture on the Panhandle-Santa Fe lines. Billingsley, who is researching the Fort Worth and Denver Railroad records, will talk on that railroad line. Hofsommer will present an overview of the many short line railroads and their historical significance to the region.

RAILROAD SYMPOSIUM/ADD ONE

Myrick is a former executive of Southern Pacific Railway. He is the author of "Railroads of Nevada and Eastern California," "New Mexico's Railroads--An Historical Survey," "San Francisco's Telegraph Hill," "Rails Around the Bohemian Grove" and "Railroads of Arizona." He has written numerous articles on railroad history and been active in several railroad historical organizations.

Martin is author of "Enterprise Denied: Origins of the Decline of American Railroads, 1897-1917" and "James J. Hill and the Opening of the Northwest." He has received the Allan Nevins Prize in American Economic History, the Binkley-Stephenson Prize of the "Journal of American History," and was named distinguished lecturer at the centennial celebration of the city of Spokane, Wash.

Bryant, former history department chairman at Texas A&M, serves on the board of editors for "Railroad History" and "Southwestern Historical Quarterly." He wrote "History of the Atchison, Topeka and Santa Fe Railroad," "Alfalfa Bill Murray," "Arthur E. Stillwell" and "Promoter with a Hunch."

A former associate professor of history at Wayland Baptist College, Hofsommer is author of "Katy Northwest: The Story of a Branch Line Railroad." He also is editor of "Railroads of the Trans-Mississippi West: A Selected Bibliography" and "Railroads in Oklahoma."

Billingsley has been awarded a faculty development merit leave from South Plains College to do railroad research during 1982-83. He has specialized in frontier, military and railroad history. His articles have appeared in the "Journal of Texas Military History."

RAILROAD SYMPOSIUM/ADD TWO

The Southwest Collection symposium is the third in a series of seven planned annually through the 1986 celebration of the Texas Sesquicentennial.

The symposium is made possible in part by a grant from the Texas Committee for the Humanities, a state program of the National Endowment for the Humanities.

A regional repository of documents and other material related to the development of the American Southwest, the Southwest Collection has extensive holdings on ranching, agricultural and oil industry history.

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CONTACT: Carrie White

ATTENTION: Agricultural Editors

LUBBOCK--Playa lakes may be manageable both for water storage and as productive wildlife habitat, says Dr. Eric G. Bolen, Texas Tech University Horn professor of range and wildlife management.

"By terracing just half a playa lake, benefits to farmers could include continued storage of runoff irrigation water for use again. And, with the littoral zones still functioning, waterfowl still would be attracted to the area, providing farmers an added income by leasing playa land to hunters," Bolen said.

Clay-lined pits known as playas serve as the major source of surface water for the Southern High Plains. Littoral zones -- areas of plant growth near the shore -- are important areas of biological productivity, including protein sources for waterfowl and other wildlife.

Today, playa lakes are modified into steep-sided pits to produce a favorable surface-area volume for water storage. This reduces evaporation and increases pumping efficiency for recycling irrigation runoff. However, that modification reduces the littoral zones and unfavorably alters aquatic plant life, Bolen said.

"Playa lakes have been caught in the middle of advancing agricultural technology and resource preservation," Bolen said. "These problems could be resolved by appropriate design of the pits so that, in part, littoral zones are maintained for wildlife while still fostering water storage for agriculture."

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TERRACING PLAYAS/ADD ONE

In West Texas, agricultural practices are based largely on the waters of the Ogallala Aquifer, which extends from Texas to northern Nebraska. Irrigation and municipal users are gradually depleting the aquifer, making playa lakes a more valuable water resource.

"The terraced design was selected because a definable and sufficient area of littoral zone remains in place at any water level. With the design, the large surface area of each terrace remains individually covered by a water column of the same depth," Bolen said.

As a winter habitat in the Central Flyway, the Southern High Plains is second in importance to the Texas Gulf Coast. Approximately 54 percent, or 100,000, of the green-winged teal in the flyway winter in the Southern High Plains, he said. It is also a major wintering area for pintails, mallards and wigeons^{cg}, all ducks.

"Mid-winter census figures for the region reflect boom or bust in waterfowl numbers dependent on the amount of available surface water. One way to protect wildlife and their habitat is to make it something of value," Bolen said.

Leasing the modified playas to hunters is one way to establish that value, he said.

Initially, three lakes will be modified for the research. One playa, in Castro County, Texas, has already been terraced and is ready for study.

"Documentation of the evaporation, both from soil and plants, as well as an economical analysis will be made so that landowners can assess their direct and indirect costs for adopting the new design," Bolen said.

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CONTACT: B. Zeeck

LUBBOCK--"Museums and the Law," a reference work by Marilyn E. Phelan, is the first in a management series of books published by the American Association for State and Local History.

The hardback handbook examines the major legal concerns of public and private institutions, and it is the outgrowth of a course initiated and taught by Phelan for Texas Tech University graduate students.

Chapters in the book cover organizational structure of museums, museums and the Internal Revenue Service, legal liability of museums, rights of artists in their works, museum acquisitions, employee relations and duties of museum directors and trustees.

Phelan interprets laws pertaining to each issue for institutional management and legal advisers.

Phelan is general counsel for Texas Tech University and Texas Tech University Health Sciences Center. She also is a member of the Texas Tech Law School faculty and the faculty for the Museum Science Program. That program, which makes extensive use of The Museum of Texas Tech University, leads to the master's degree in museum science.

"The book should be particularly useful to administrators of museums and historical agencies," Phelan said, "but legal advisers should also find it helpful in that it is a compilation of the special legal issues relating to museums.

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"I tried to find such a compilation when I began teaching museum science students six years ago. I could find nothing like this; and so I began my own compilation. The book is a result of that work," she said.

Phelan is the author also of "Meeting Reporting Requirements for Tax-exempt Organizations" and co-author of West's "Federal Taxation."

She is a Certified Public Accountant who holds a doctor of business administration degree from Texas Tech University as well as the law degree, awarded with honors by the University of Texas. She was named to the Order of the Coif in the law school and outstanding doctoral candidate by the Texas Tech University College of Business Administration.

She also has been recognized as Woman of the Year at Texas Tech University where she was associate dean of the Graduate School before being named general counsel.

"Museums and the Law" includes sample forms and documents, a glossary of legal terms, selected cases and statutes and a bibliography. The cost is \$21, with a discount for members of the American Association for State and Local History. It may be purchased from the association, 708 Berry Road, Nashville, Tenn. 37204.

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MICRO TYROS--These beginners experiment with microcomputers in the Texas Instruments Computer Learning Laboratory in the Texas Tech University Library. Opened June 1 to all Texas Tech students and faculty, the center is one way Texas Tech is providing computer access to all academic departments on campus. (TECH PHOTO)

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COMPUTER TUTOR--Students in a Texas Tech University education class improve their computer literacy as they learn how to incorporate microcomputers into future classrooms of their own. The class is one of several taking advantage of the new Texas Instruments Computer Learning Laboratory in the University Library. (TECH PHOTO)

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CONTACT: Carrie White

LUBBOCK--A Wisconsin Supreme Court Justice and an astronaut will discuss non-traditional careers for women at Prime Time for Women IV Nov. 6 at Texas Tech University.

Justice Shirley S. Abrahamson of the Wisconsin Supreme Court and Dr. Mary L. Cleave, an astronaut with the National Aeronautics and Space Administration, are scheduled symposium speakers.

Prime Time for Women, an annual event, is an all-day symposium, exploring a wide range of topics focused on the opportunities, challenges, problems and satisfactions of being a woman.

The Texas Tech Division of Continuing Education sponsors the conference which will be held on campus in the Hemmle Recital Hall.

As part of the program, hour-long presentations will be made by four distinguished women in non-traditional careers. Those talks will be followed by a panel discussion and an audience question-and-answer session.

Justice Abrahamson's participation in Prime Time for Women will be preceded by an appearance in the Law School Enrichment Series Nov. 5.

Justice Abrahamson, 48, is an honors graduate of New York University. She was first in her class at Indiana University School of Law and went on to earn a Doctor of Juridical Science at the University of Wisconsin Law School. She was later appointed to the faculty there.

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PRIME TIME/ADD ONE

In 1977 Justice Abrahamson was appointed lecturer at Marquette University School of Law. Previously she had spent 14 years as a partner in the law firm of LaFollette, Sinykin, Anderson and Abrahamson.

She has served on numerous professional and community committees, boards and commissions. Under President Jimmy Carter, Justice Abrahamson was appointed to the Advisory Board of the National Institute of Justice of the United States Department of Justice.

She holds two honorary law degrees from Williamette University and Ripon College and, in 1982, was awarded the Freedom of Information Award from the Milwaukee Chapter of the Society of Professional Journalists.

Justice Abrahamson was appointed to the Wisconsin Supreme Court in 1976. In 1979, she was elected to a full 10-year term.

Dr. Cleave was named an astronaut candidate by NASA in 1980. In 1981 she completed training and evaluation, making her eligible for assignment as a mission specialist on future space shuttle flight crews.

Cleave received a bachelor's degree from Colorado State University and master's and doctoral degrees from Utah State University.

As a student at Utah State, Cleave held graduate research, research phy^{cg}chologist and research engineer assignments in the Ecology Center and the Utah Water Research Laboratory.

The 35-year-old Cleave is a member of three professional organizations and has published numerous scientific papers.

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CONTACT: Jerrold Broussard

LUBBOCK--The district "Make It With Wool," a sewing, knitting and crocheting competition, is scheduled Nov. 20 in the Texas Tech University Home Economics Building.

The annual "Make It With Wool" contest is sponsored by the Women's Auxiliary of the National Wool Growers Association and the American Wool Council to recognize the beauty and versatility of wool and to encourage its use.

All entries must be made from loomed, knitted or felted fabric or yarn of 100 percent wool or of a minimum of 60 percent wool and no more than 40 percent synthetic fiber. The garment judging is based on coordination, design, appearance and workmanship.

Contest categories are pre-teen, 10-13; junior, 14-16; senior, 17-24; and adult, over 24. Competition is open to all American citizens, male and female.

District winners in the junior and senior categories will be eligible for state competition in Denton, Dec. 4. A junior and senior state winner will be chosen to represent Texas at the national finals in Oklahoma City, Okla., Jan. 25-28. Special incentive scholarships will be offered for garments winning with 100 percent wool fabric or yarn.

Entry forms can be obtained from Lillian Kountz, Department of Clothing and Textiles, College of Home Economics, Texas Tech University, Lubbock, Texas, 79409. Forms should be completed and returned by Nov. 15.

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CONTACT: B. Zeeck

LUBBOCK--Dr. James A. Goss has announced his resignation as director of The Museum of Texas Tech University and as chairman of the Department of Museum Science.

Goss, an anthropologist, said he would return to full-time teaching and research. His special field of interest is linguistics, with a strong emphasis in native American languages. He came to Texas Tech University in 1978 as chairman of the Department of Anthropology. He has been museum director for the past year.

Dr. John R. Darling, vice president for Academic Affairs, said he anticipates that an acting director will be appointed for The Museum by Sept. 1. Goss will serve as director until the acting director is named, he said.

"Dr. Goss has served the university well, both as director of The Museum for the past year and as chairman of the departments of Anthropology and Museum Science. In addition, he has held several other administrative duties."

This service has had to take time from his scholarly work, Darling said. Goss had published a score of articles which had been well received by colleagues, and his work was building for him a highly regarded position among his fellow scholars.

"The university's system is flexible enough that we can and will continue to encourage our faculty to undertake a variety of challenges," Darling said. "At the same time we have deep respect for a scholar's wish to give first priority to teaching and research."

Darling said a committee will be named in early August to initiate a nationwide search for Goss's successor.

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CONTACT: Cheryl Duke

LUBBOCK--Adjusting to diabetes--a life altering condition--means handling the disease, watching the diet and, for some, nurturing a marriage in the process.

Texas Tech researchers want to help. To do so they need at least 50 volunteer couples in the coming year to complete a study on the interrelationship of diet, diabetes and marriage.

Jennie Langerhans, research coordinator for the project, said, "We hope the research will eventually aid diabetic couples in overcoming the problems which may arise from strict diets."

The research involves professors, doctors and graduate students in the Food and Nutrition, Home and Family Life, and Internal Medicine departments. The team will be looking at both the physical and emotional results of following a strict, diabetic-controlled diet.

Langerhans said volunteer couples should be 21-55 years old and married. One partner must be insulin dependent. She said the team is seeking couples within a 100-mile radius of Lubbock and it is helpful to have more than one couple per town.

Participants will follow one of two prescription diets with some slight diet alterations throughout an 11-week period. Diets will be prescribed by the diabetic's physician or Dr. Carlos Menendez at the medical school. The doctors will also handle periodic lab work for the diabetic partner.

Couples will keep food diaries and insulin records. They will fill out marital forms on emotional and interactive responses during the dieting period.

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DIABETES/ADD ONE

A student from family studies and one from food and nutrition will pay a weekly meal-time observation visit to the couples.

Langerhans will meet all volunteers and provide them with information on all phases of the research including a follow-up phase after the initial study.

She said participants will receive a small cash payment, bonus passes for recreation and items such as cookbooks to assist in the diet.

The three-year research project is funded by the National Institute for Child Health and Human Development and directed by Dr. Judith L. Fischer, Home and Family Life professor.

Fischer says the particular research is important because no one has studied the marital relationship of diabetics while they are under a supervised dietary regime.

To volunteer or for more information, contact Langerhans, at (806) 742-2877.

ATTN: PSA Director

DIABETES RESEARCH

WHEN DIABETES OCCURS, A CHANGE IN FAMILY LIFE PATTERNS RESULTS. RESEARCHERS AT TEXAS TECH UNIVERSITY ARE INVESTIGATING THESE CHANGES AND HOW MARRIED COUPLES HANDLE THEM. THE NATIONALLY FUNDED RESEARCH PROJECT SEEKS VOLUNTEER MARRIED COUPLES BETWEEN THE AGES OF 21 AND 55 WHERE EITHER SPOUSE IS AN INSULIN-DEPENDENT DIABETIC. VOLUNTEERS WHO MEET THOSE QUALIFICATIONS AND WOULD LIKE TO ASSIST IN THIS IMPORTANT STUDY SHOULD CONTACT JENNIE LANGERHANS (LONGER-HONS) AT 742-2877.

NOTE: Researchers will be looking for volunteers through July 1983, and need approximately 50 volunteers to complete the study. If you could run this at different times during the day till July 1983, it would be greatly appreciated. Thank you.

TO: Lea Ann

FROM: Gary B. *G.B.*

SUBJECT: Diabetes Research PSA

Send Diabetes Research PSA to the following stations in addition to local stations:

KKUB Radio
1722 Tahoka Rd.
Brownfield, Tx. 79316

KLVT Radio
Box 1230
Leveland, Tx. 79336

KKYN Radio
Box 147
Plainview, Tx. 79072

KVOP (AM) & KATX (FM) Radio
Box 1420
Plainview, Tx. 79072

KCLR Radio
Box 669
Ralls, Tx. 79357

KCAS Radio
Box 279
Slaton, Tx. 79364

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CONTACT: B. Zeeck

LUBBOCK--While most of the semi-arid plains are plagued with too little water, Texas Tech University has the problem of a campus with too much.

The university has approved a contract for Hi-Plains Drilling Co. of Abernathy to drill an emergency well to provide a temporary solution to a rising water table under Jones Stadium where subsurface moisture could damage the Astroturf.

The university is in the unusual situation of sitting atop an underground dome of water that has risen about 2 feet per year over the past few decades. Engineers report that other urban areas on plains terrain could be subject to the same problem and, consequently, whatever solutions Texas Tech finds will be important elsewhere.

The well to be dug in August should pump about 600 gallons per minute to drop the water level in the stadium area. Some of the water will be used for watering lawns, but for the short term the balance will be pumped to Lake No. 3 in an eight-lake chain running through the Lubbock portion of Yellow House Canyon. Eventually the stadium water would flow into the recreational Buffalo Springs Lake, also a part of the Canyon. Water in the Yellow House Canyon, or draw, eventually feeds into the Double Mountain Fork of the Brazos, Texas' longest river.

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WATER/ADD ONE

John Carroll, systems analyst in the Texas Tech planning office, said the quality of water under the campus "more than meets" standards set by the city for the artificial Canyon Lakes. Quality, however, is an important factor in deciding what to do in the long term about the rising water -- whether the water should be put to irrigation, industrial, domestic or recreational use.

Quality is one factor of a groundwater management study undertaken by Camp Dresser & McKee Inc. (CDM) at the behest of the Texas Tech University regents. The Austin engineering company has made extensive studies of the Ogallala Aquifer which holds the water dome under the campus -- the same aquifer that stretches to parts of eight Great Plains states.

"What happens in one part of the Ogallala is not always happening throughout the aquifer," Carroll cautioned. The Texas Tech problem is not unique but probably is duplicated only in some other urban areas. The water we are dealing with is not perched on top of the Ogallala although it is being held in a small area of that formation.

"Water under the ground behaves as it does on the surface," he explained, "but it could not really be seen as an underground lake, river or stream. It is held in soil and, although it seeks its own level, the underground movement is much slower than it is with free-flowing water."

Carroll said this is particularly true when the water is in clay soils like the material holding some of the dome under the campus.

WATER/ADD TWO

"It is fairly easy to pump water out of sandy soil," he said. "If the water is in clay, you almost have to wring it out. The amount of water wells yield can decrease to a trickle rather quickly. as soon as water in their immediate vicinity is pumped out. Five years later, the water may be there again; so pumping out this dome is not as easy as some might think."

Carroll explained that the well to pull water out from under Jones Stadium cannot be used to drain all parts of the campus.

"In fact, we have two wells on the main campus already pumping water to irrigate campus grounds," he said, "Yet they cannot begin to solve the complex problem."

When buffalo roamed the plains, whatever water fell as rain drained into intermittent lakes called "playas" or into stream beds like the one that formed Yellow House Canyon. Some water seeped from playas into the Ogallala.

With agricultural development came irrigation. In that era, rainfall was spread over a large permeable area. Some seeped into the ground and some evaporated and some soaked back into the ground.

With the building and paving of urbanization, less area is permeable and so less water can soak into the land. Playas into which runoff flows have been modified, so that more water is concentrated in less space. This allows less evaporation. In addition, the playa modifications can increase seepage into the soil.

In Lubbock's case, the top of the underground dome of water is at a lake near Slide Road and U.S. 82 on the western edge of the city. There are only two ways to reduce the dome -- pump it out or let it seep outward from the center until it finds its own level.

WATER/ADD THREE

Engineers have discovered that the water is seeping from southwest to northeast, toward the Yellow House Canyon where it should find its natural outlet. As it reaches the canyon area, however, the underground water level is lower than the artificial lakes already in the draw.

The water behaves, Carroll said, as if it were moving up against a wall, and it flows back to increase the dome under the campus.

Once the dome builds upward to a level higher than the Canyon Lakes, springs would form in the Yellow House and the water would flow out naturally into the draw. By that time, however, the dome would be much higher than the stadium floor and even higher than some Texas Tech building foundations.

The reason the water is closer to the stadium floor than to most building foundations, he said, is that the campus was excavated for the stadium, putting the floor at 25.5 feet below ground level while the water level is 27.5 feet below the land surface at the stadium site.

"The well we expect to construct in August," Carroll said, "gives us management only of the Jones Stadium problem. In the long range, we have to find a cost effective, permanent water management plan."

He said that water quality over time is important. The water pumped out of the dome, to date, has a high mineral content. If it is used for irrigation and allowed to return to the Ogallala, the mineral content could increase and the quality of the aquifer could suffer. It might also, in the long term, harm plants. On the other hand, quality might improve with long-term pumping.

WATER/ADD FOUR

"We think the water would have to have some treatment for almost any use to which we put," Carroll said.

"We expect the CDM study to give us some answers, and we think our answers might well be useful to other urban areas which develop similar problems."

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ATTENTION: BUSINESS EDITORS

LUBBOCK--Frank W. Mayborn, a well-known business and civic leader in Central Texas, has given through his fund at the Communities Foundation of Texas, Inc., \$600,000 to Texas Tech University to endow a chair within the College of Business Administration.

The chair will be designated the Frank M. Burke Chair in Taxation for Mayborn's long-time business adviser and friend. Burke is a partner and national director of Peat, Marwick, Mitchell & Co.'s Energy and Natural Resources Practice, chairman of Peat Marwick's International-Energy Group and a member of the firm's Board of Directors. Burke earned bachelor's and master's degrees in business administration from Texas Tech as well as a law degree from Southern Methodist University.

In naming the chair after Burke, Mayborn said, "He is a man who understands the philosophy behind taxes and tax policy better than anyone I've ever known."

Dr. Carl H. Stem, Dean of Business Administration at Texas Tech, said the demand for graduates specializing in taxation is strong within the accounting profession, large corporations and the estate-gift planning field.

"This chair will enable us to attract one of the nation's outstanding authorities in the field and to make Texas Tech one of the academic leaders in taxation and taxation accounting in the nation," Stem said.

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MAYBORN GIFT/ADD ONE

In naming the chair for Burke, Mayborn has recognized an international authority in taxation, Stem said. A national search to select the first holder of the Frank M. Burke Chair in Taxation in time for the 1983 fall semester will be headed by Dr. Gary E. White, Director of Accounting Programs for the college.

Mayborn, Burke and their wives will be honored at Texas Tech Sept. 16-17.

From the time he purchased the Temple Daily Telegram in 1929, Mayborn has helped shape the face of Central Texas. He was instrumental in the U.S. Army's establishment of Fort Hood, the largest military facility in the western world, in Central Texas. In 1979 he received from the Association of the United States Army the General Creighton W. Abrams Medal for significant contribution to the U.S. Army.

Earlier this year, Mayborn was presented a special award by the Texas Daily Newspaper Association for his contributions to the newspaper industry during the past half century. A native of Ohio, Mayborn graduated from Oak Cliff High School in Dallas and earned a bachelor's degree from the University of Colorado.

Burke, namesake of the new Texas Tech chair, received the university's first Distinguished Accounting Alumnus Award in 1980. Burke earned degrees from Texas Tech in 1960 and 1962 before joining Peat, Marwick, Mitchell & Co. Only five years after joining the firm, he was admitted as a partner.

Burke has written three books and is a widely published author of journal articles on accounting and taxation subjects.

SLIM HOPES--Dieting has become an obsession for many overweight people. And the American marketplace is responding with all kinds of fad diets. Advertisements for starch blockers and herbal products are but a few of the remedies now attracting attention. Texas Tech nutrition expert Clara McPherson warns would-be dieters to watch out. Not all of these diets are nutritionally safe. For the facts, call Dr. McPherson at 742-3059.

WET SKIES--The season's heavy rains have passed leaving a legacy of spoiled crops and muddy fields. But is the wet weather really over? Dr. Richard E. Peterson of Atmospheric Science can give you an expanded weather outlook through August. His number is 742-3418.

*DIABETIC VOLUNTEERS--Texas Tech researchers are looking for 50 volunteer couples to participate in an unusual experiment this fall. They want to find out the effects of diet and diabetes on married life. It's no secret that mood swings of a diabetic are often caused by what he or she eats. The Tech scientists hope to find out how diet can be adjusted for a more harmonious marriage. Jennie Langerhans, research coordinator for the project, will provide details. Her number is 742-2877.

WHAT, ME WORRY?--For some, worry is a debilitating addiction. In fact, worrying can become self-fulfilling prophecy that may actually bring on the dreaded event. Psychologist James E. Maddux says nothing can be gained by stewing over a problem that may or may not happen. But some creative avenues exist by which people can cope with anxiety. Dr. Maddux will discuss the issue at 742-3711.

*Background story included in packet.

For assistance in developing these
and other story ideas, contact Dave
Clark or Gary Bloodworth at University
News and Publications, 742-2136.