

WESTERN MICHIGAN UNIVERSITY WESTERN NEWS

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Room and board rates on March 16 agenda

A recommendation to increase room and board and apartment rental rates for 1990-91 is on the agenda for the Friday, March 16, meeting of the Board of Trustees.

The meeting will begin at 10:30 a.m. in the Board Room of the Bernhard Center. Action on the increase is expected to be tabled until the Board's April 27 meeting to allow time for student input.

The Board also is expected to consider a recommendation to increase the University's graduate application fee. Other agenda items include personnel, gift and grant reports as well as recommendations on naming memorials and facilities and on awarding two construction contracts.

These Board committee meetings also are scheduled for Friday in the Bernhard Center: Academic and Student Affairs at 8:30 a.m. in Room 204; and Budget and Finance at 9:15 a.m. in Room 205.

The new committee assignments for the Board of Trustees are: **Academic and Student Affairs** -- Lana L. Boldi of Kentwood, chairperson; members are George A. Franklin of Kalamazoo, Winifred D. Fraser of Northville and Geneva J. Williams of Detroit; **Budget and Finance** -- Alfred L. Edwards of Ann Arbor, chairperson; members are James S. Brady of Grand Rapids, Richard Y. St. John of Kalamazoo and Carol A. Waszkiewicz of Kalamazoo.

Thompson to speak on impact of research

"The Positive Impact of WMU's Research Activity" will be the focus of the next breakfast meeting for alumni and friends of the University Tuesday, March 27.

Donald E. Thompson, vice president for research, will address the group. The meeting will begin at 7:30 a.m. at the Kalamazoo Country Club.

Thompson has been in his present position since July 1989, when President Haenicke created the vice presidency to recognize Thompson's leadership in the research area and to underscore his emphasis on the link between research and teaching.

Thompson came to WMU in 1985 as



Two faculty members honored as 'Women of the Year'

Two faculty members have been selected to receive the "Woman of the Year" award presented by WMU's Commission on the Status of Women.

Barbara S. Havira, history, and Shirley A. Van Hoeven, communication, will be recognized at a luncheon at noon Friday, March 30, in the West Ballroom of the Bernhard Center. Eight other nominees for the award also will be honored. The speaker will be Beverly A. Moore, social work, who is vice mayor of Kalamazoo.

The award, which has been given annually since 1978, is intended to recognize outstanding women employees and students at WMU and to increase awareness of the variety of their achievements.

Havira has been a WMU faculty member since 1969 and has directed the Women's Studies Program since 1987. She has taught classes on such subjects as "Women: Past, Present and Future," "The Status of Women" and "Women and Health."

From 1981 to 1983, she served as president of the Commission on the Status of Women and was a member of its grievance committee from 1979 to 1981 and 1983 to 1984. Havira has been a member of the Women's Studies Program Advisory Committee and was chairperson of the Women's Studies Curriculum Revision Project.

In 1987, Havira served on the Task



Havira



Van Hoeven

Force to Advise the President on the Future of the WMU Women's Center. In addition, she has served on several Faculty Senate councils and committees. Also active in state organizations, she has been a member of the review committee for candidates for the Michigan Women's Hall of Fame in Lansing.

The author of several articles and of numerous papers presented at professional conferences, Havira's research has focused on such topics in women's history as the role of women factory workers at the turn of the century. Last year, she was chief editor of "The History of Women in Education in Greater Kalamazoo," a tabloid published in celebration of national Women's History Month. This year, she served on the publication's steering committee and editorial staff.

Havira has been awarded a sabbatical for 1990-91 to study "A Social History of Western State Normal School, 1903-1927: Perspectives on Gender and Class."

Van Hoeven has been a WMU faculty member since 1970 and has directed the Department of Communication's graduate program since 1979. She has taught classes ranging from "Interpersonal Communication" to "Power and Leadership in Organizational Communication," a graduate-level course she designed and developed. In 1976, Van Hoeven received the WMU Alumni Teaching Excellence Award for her superior classroom skills.

Also active in many departmental, college and University committees, Van Hoeven chaired the 1987 Task Force to Advise the President on the Future of the WMU Women's Center. She later served on the search committee to select a new

director for the center.

She has been a member of several thesis and dissertation committees, and has served as a mentor in the Minority Mentor/Mentee Program for the past seven years. From 1983 to 1985, she was chairperson of the College of Arts and Sciences' Affirmative Action Task Force. She also has chaired the Faculty Senate's Campus Planning Council. In the 1970s, she was a member of the University's Title IX Committee, working in cooperation with the Athletic Board to develop the equality of women's sports at WMU.

In 1985-86, Van Hoeven received a Post-Doctoral Research Fellowship Award from Purdue University, where she did research while on sabbatical leave from WMU. She reviewed articles last year for "The History of Women in Education in Greater Kalamazoo" publication.

She has written several papers for professional journals and has spoken at numerous conferences. Her research interests include the impact of communication on power, leadership and conflict. She also has studied the role of communication in peace and global futures.

The eight other nominees who will be honored are: Paula J. Boodt, Graduate College; Carolyn E. Cox, environmental health and safety; Donna A. Fitch, paper and printing science and engineering; Judy A. Lem, Valley III dining services; Leslie H. Leighninger, social work; Erika Loeffler, anthropology; Judith Stone, history; and Christine G. Zimmer, University Wellness Programs.

Persons may make reservations for the luncheon, which is open to the public, by sending a check, payable to the Women's Commission/WMU, for \$6.50 per person by Monday, March 26, to Natalie R. Philander, international student services.

Special insert published

This issue of *Western News* contains an insert produced by the Office of Public Information. *Pursuit* will be published periodically to provide an in-depth look at research and economic development activities at the University.

'Stand and Deliver' teacher here to stress importance of education

Jaime Escalante, the California high school teacher profiled in the 1988 film, "Stand and Deliver," will speak at the University Saturday, March 24.

He will discuss "The Importance of a Higher Education in the Global Market" at 1:15 p.m. in 3770 Knauss Hall. His speech will follow an 11:30 a.m. showing of "Stand and Deliver" in the same room.

Escalante has taught mathematics at Garfield High School in East Los Angeles since 1974. Using teaching methods that stress hard work and self-confidence, he has enabled record numbers of underprivileged and Hispanic students to excel in mathematics. The students in his school have been ranked seventh in the country in their knowledge of calculus.

A mathematics and physics teacher in Bolivia for 11 years, Escalante immigrated to the United States in 1964. After earning an associate's degree in electronics, he worked for the Burroughs Corp. while earning his bachelor's degree in



Escalante

mathematics. He took a substantial pay cut to teach at Garfield once he earned his U.S. teaching credentials.

In addition to being profiled in the film by actor Edward Olmos, Escalante has been the subject of a book, "Escalante: The Best Teacher in America." The Public Broadcasting Service is planning to do a series on him in the fall.

Recently, Escalante was one of 23 persons appointed by President George Bush to serve on the President's Education Policy Advisory Commission. He also has been recognized this year as one of six people to receive the Common Wealth Award and as the winner of the American Education Award from the American Association of School Administrators.

The showing of "Stand and Deliver" is part of a Spanish film festival organized by the Hispanic Student Organization. Two other films will be shown in 3770 Knauss Hall on Friday, March 23: "Half of Heaven" at 7 p.m.; and "Women on the Verge of a Nervous Breakdown" at 9 p.m. Both will be in Spanish with English subtitles.

Escalante's visit is being sponsored by the Hispanic Student Organization, the Student Budget Allocation Committee and the Division of Minority Affairs.



HONORARY DEGREE -- Yehudi Menuhin, right, world renowned violinist, conductor and teacher, was presented with an honorary doctor of fine arts degree from WMU during a concert of the Kalamazoo Symphony Orchestra he conducted March 2 in Miller Auditorium. Presenting him with the honor were, from left: President Haenicke; Geneva J. Williams of Detroit, chairperson of the Board of Trustees; and James S. Brady of Grand Rapids, vice chairperson of the Board of Trustees. Menuhin was in Kalamazoo for a residency arranged by the Julius Stulberg Auditions Inc. in conjunction with the Kalamazoo Symphony Society and the Bullock Music Performance Institute in the WMU School of Music.



WOMEN'S STORIES TOLD -- Those who participated in the second annual edition of the tabloid, "The History of Women in Education in Greater Kalamazoo," were honored at a reception March 1. Among those feted during the event, which kicked off Women's History Month activities at the University, were, from left: Alan D. Meyer, a graduate student from Kalamazoo, who wrote an article on Lois M. Clark; Willie Mae O'Neal, University libraries, who wrote an article on Phyllis Ash Seabolt; Carson J. Leftwich, a senior from Kalamazoo, who wrote an article on Merze Tate; and Mary Frances Fenton, College of Education, who was the project director. The tabloid, which contains articles that portray individuals and programs that laid foundations for the character of Southwest Michigan, was published as an insert to the Feb. 28 Western Herald. It was a project of the Women's History and Research Network, an association of researchers from Kalamazoo area colleges and the community. Additional copies are available from the Women's Center.

Senior Prom turns back the clock

This spring's WMU "Senior Prom" is expected to attract about 300 seniors -- and that's not counting the students who plan to attend.

Students at the University are planning a Wednesday, March 21, Senior Prom to bring students and area senior citizens together for an evening of Big Band music, dancing and reminiscing about bygone days. The event will be from 7 to 10 p.m. in the South Ballroom of the Bernhard Center.

This is the second year for the dance at WMU. Last year's successful prom was attended by more than 250 senior citizens and 75 students. Based on the response from those who attended last year and many students and seniors who were not able to make it, student organizers are planning for a turnout of about 450 people.

"We're very excited about this year's event and are planning on more senior citizens and lots more students," says Karrie A. Moore, a student program coordinator and vice president of Draper-Siedschlag residence halls, which is one

of the sponsoring organizations. "We had such positive feedback from senior citizens last year. Many of them were ready for another prom the following week."

The free event will feature music of the swing era played by Nite Life, a Lansing dance band that appeared last year. There also will be refreshments and photo keepsakes for those attending.

For planning purposes, students are asking that those who wish to attend call in their reservations to Moore at 7-6701 or to the Draper-Siedschlag desk at 7-4784.

The event is being sponsored by Draper-Siedschlag halls, the Office of the Vice President for Student Services, the Residence Hall Association, the Office of Residence Hall Life, the Western Student Association, the Office of the Dean of Students, the McKee Alumni Center and the Kalamazoo Jaycees.

Novelist Fernandez to give reading from works

Cuban-born novelist Roberto G. Fernandez is on campus March 12-31 as part of the Martin Luther King Jr./Cesar Chavez/Rosa Parks Visiting Professors Program.

He will give a free public reading of his work at 7:30 p.m. Thursday, March 22, on the 10th floor of Sprau Tower.

Fernandez, an associate professor of modern languages at Florida State University, has written novels in both Spanish and English. He is the author of "La Vida Es Un Special," "La Montana Rusa" and "Raining Backwards." All three

Faculty Senate approves new mission statement

The Faculty Senate March 1 approved without change a mission statement for the University that sets out "five major goals to guide its development during the decade of the 1990s."

The statement, developed by Provost George M. Dennison, calls on the University to:

"1. Offer instructional programs of academic excellence reflecting the high quality of the faculty and students, the depth and breadth of the curriculum, the enhancement of facilities and learning resources and the continuing assessment of the learning process.

"2. Increase the graduate enrollment, expand external support for research, facilitate scholarship and creative activity and reward professional accomplishment by faculty and students.

"3. Assist regional and state economic development through on- and off-campus instruction, applied research centers and technical assistance to business, industry, government and schools.

"4. Meet the needs of the people through leadership, sponsorship and participation in cultural events and civic activities.

"5. Increase the diversity of the student body, faculty and staff and enhance the multicultural nature of the University community."

The statement, a revision of the University's existing mission statement, will be sent to President Haenicke for his consideration and then to the Board of Trustees for final approval. The statement was last revised in 1982.

In other action, the Senate approved a recommendation that no 500-level course be required of undergraduates, as is the case in some instances now.

The issue was presented to the Senate

last year by Dennison. He pointed out that, as a result of the practice, the University loses "a substantial number of graduate credits" when credit hours are reported to the state.

Under the state's "dominant student level" rule, the credit hours are reported as undergraduate credits. "It seems irrefutable that current practice does serious damage to our graduate standing," Dennison said.

Departments can and will continue to be able to recommend 500-level courses as substitutes for 300- and 400-level course requirements, subject to the approval of a dean.

Requests for exceptions under the new practice would be reviewed through the normal undergraduate and graduate curriculum process, the Senate recommendation stated. The Senate considered motions of both the Undergraduate Studies Council and the Graduate Studies Council on the matter. The recommendation now goes to Haenicke for his consideration.

The Senate also approved a recommendation of the Professional Concerns Committee to create a non-tenure appointment type called "teaching fellow." Candidates would be recent graduates who have the terminal degree of the graduate program in the department in which the appointment is made.

Such appointments "would provide recipients with the sort of post-terminal degree experience befitting the expanding research and graduate study emphases of the University," said Alan H. Jacobs, anthropology, chairperson of the committee.

Establishment of this appointment type is subject to approval by Haenicke and negotiation between the University and the WMU chapter of the AAUP.

Economist to discuss market discrimination

"Evidence of Labor Market Discrimination" is the title of a lecture to be presented at WMU Wednesday, March 21.

Marianne A. Ferber, professor of economics at the University of Illinois at Urbana-Champaign, will deliver the address at 8 p.m. in 3750 Knauss Hall. She also will lead a seminar



Ferber

that day on "Career Plans and Expectations of Young Women and Men: The Earnings Gap and Labor Force Participation" for faculty members, graduate students, undergraduate economics majors and other interested persons at 3 p.m. in 3760 Knauss Hall.

The free talks are part of the Department of Economics' 26th annual lecture-seminar series on "The Economics of Discrimination."

In addition, Ferber will speak as part of Women's History Month activities at noon Thursday, March 22, in Red Room A of the Bernhard Center. She will discuss "The History of Women in the Labor Market: How Present Day Conditions Evolved."

Ferber has taught at Illinois since 1956 and was director of women's studies there from 1980 to 1983. She is the co-author of the 1986 book, "The Economics of Women, Men and Work" and the author of the 1987 publication, "Women and Work, Paid and Unpaid: An Annotated Bibliography."

Holocaust observances set

The worldwide commemoration of the Jewish plight during the Holocaust and its 6 million victims will be observed locally Tuesday and Wednesday, April 3-4.

Preceding the actual observance will be a special lecture by Raul Hilberg, the John G. McCulloch Professor of Political Science at the University of Vermont. He will speak on "The Holocaust Today" at 8 p.m. Tuesday, March 20, in 2302 Sangren Hall. He is the author of the three-volume work, "The Destruction of the European Jews."

Other activities will include a lecture on "When Light Pierced the Darkness" by Nichama Tec, professor of sociology at the University of Connecticut, at 8 p.m. Tuesday, April 3, in Stetson Chapel at Kalamazoo College. A Polish Jew who lived through Nazi occupation, Tec has conducted research on compassion, altruism and Jewish rescue during World War II.

There also will be an interfaith service at 8 p.m. Wednesday, April 4, at the St. Thomas More Student Parish.

The events are being sponsored by the Kalamazoo Consortium for Higher Education, the Kalamazoo Jewish Federation, the Congregation of Moses and the Temple B'nai Israel. Hilberg's talk also is being sponsored by the Department of Sociology and the Lee Honors College.

South Africa is topic of March 21 talk

Anti-apartheid activist Dumasani Kumalo will speak on "Toward a Just, Free and Non-Racial Society in South Africa" at 7:30 p.m. Wednesday, March 21, in 2750 Knauss Hall.

That day marks the 30th anniversary of the Sharpeville massacre when 63 blacks involved in a non-violent demonstration against apartheid were killed by the South African military.

Kumalo, who works for the American Committee on Africa in New York City, just returned from South Africa. His address is being sponsored by WMU's South African Solidarity Organization II.

WESTERN MICHIGAN UNIVERSITY
WESTERN NEWS

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WMU Institute for Water Sciences launches third year of research

WMU's water research professionals could have paused last fall to celebrate the second anniversary of the founding of the Institute for Water Sciences, but they were too busy to take time to note the occasion.

In two short years, the institute has become one of the largest interdisciplinary endeavors at the University, generating more than \$1 million in external funding annually. Institute activities involve efforts by faculty and staff members in seven different academic departments, seven University centers and programs and WMU's Division of Continuing Education.

The institute's three purposes — research, education and public service — are keeping WMU's water experts busy and a series of recent developments has set the direction for the institute's next several years of work in all three areas.

The institute's first full-time director has been named, (see box, this page) and the institute's interim director has moved into a new leadership role as coordinator of the Groundwater Education in Michigan (GEM) Regional Center that was funded last year by a \$570,000 grant from the W.K. Kellogg Foundation of Battle Creek.

"What distinguishes us in the field of water research and service," says Dr. Richard N. Passero, who served as the institute's interim director for its first two years of existence, "are the large number of faculty members actively involved in groundwater research at a single institution and the type and quality of field equipment available to those faculty members and their students."

Research initiatives under the institute's auspices include classification, mapping and inventory of Michigan wetlands as well as laboratory and field studies related to leaking underground storage tanks. Also under investigation are specific groundwater contamination cases, the spatial and temporal variability of groundwater contaminants, aquifer

vulnerability mapping, and continuation of a long-term project to evaluate hydrogeologic conditions and groundwater quality and quantity in the Schoolcraft aquifer system.

WMU water research has been enhanced by the University's close ties to the National Council for Air and Stream Improvement, a non-profit environmental research organization with a regional research center located on the WMU campus. Funded by members of the forest products industry, that center conducts solid waste and groundwater-related research and is considered an integral part of the institute.

Water research across the University also has been enhanced by the existence of such resources as a state-of-the-art water quality laboratory and ERDAS (Earth Resources Data Analysis System) which gives researchers access to current satellite imagery combined with computerized mapping of surface and subsurface information.

Academically, the institute has become home base for about 40 graduate students studying hydrogeology, geology, earth science, environmental earth science and geophysics. A doctoral degree in hydrogeology is now in the planning stages. Graduate student involvement in research projects is widespread and student involvement in water research at the University extends even to the ranks of undergraduate students. This summer, institute researchers will introduce groundwater issues to gifted high school students from around the state during WMU's Summer Institute for the Gifted and Talented.

In the public service sector, 19 of Michigan's 83 counties and the Michigan Department of Public Health are now members of WMU's Michigan Groundwater Survey — a five-year-old initiative designed to gather and computerize existing groundwater data and put it into a format that local government

officials can employ when making land use decisions. City officials and business leaders from around the state have been attending institute seminars in their home areas to receive answers to questions about such topics as site assessment and environmental liability in property transfers, hazardous waste management and the dangers of leaking underground storage tanks. In coming months,

New IWS head has national reputation

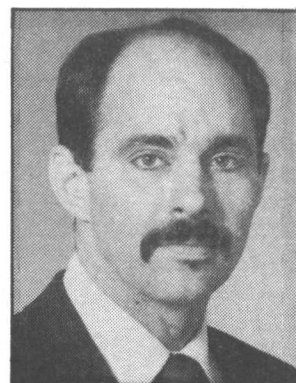
A scientist who specializes in water chemistry, groundwater contamination and hazardous and solid waste management took over the reins of WMU's Institute for Water Sciences on Jan. 1.

Dr. Michael J. Barcelona's appointment as director of the institute and professor with tenure in the Department of Chemistry was approved in November by the WMU Board of Trustees. He was formerly head of the Aquatic Chemistry Section of the Water Survey Division of the Illinois Department of Energy and Natural Resources (ENR) and was based in Champaign, Ill.

In his position at the ENR, Barcelona was responsible for supervision of 21 chemists, geochemists and engineers in a multidisciplinary program of environmental chemistry and water treatment research and services for the state of Illinois.

In addition to his duties at the ENR, Barcelona has served as consultant to the Italian National Research Council, the U.S. Environmental Protection Agency's Superfund Technical Oversight Committee and a number of private firms and industrial groups. Last fall he traveled around the country offering a series of two-day seminars coordinated by the EPA's Center for Environmental Research Information. The seminars were aimed at improving the level of training of resident site managers and officers at EPA Superfund projects. In past years, he has served as an expert witness for the Illinois Attorney General and as a consultant for the U.S. Department of Justice and the EPA Office of Solid Waste.

The author of more than two dozen papers published in peer-reviewed professional journals, Barcelona serves as a reviewer for a number of such publications. He also reviews proposals for the National Science Foundation's Marine Chemistry Program, the University of Illinois' Water Resources Center and the U.S. Geological Survey's Office of Water Research as well as for other state and national agencies.



Barcelona

Introducing Pursuit

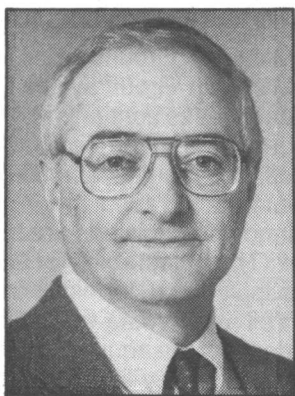
This is the first issue of *Pursuit*, a publication of the WMU Office of Public Information. The purpose of *Pursuit* is to provide an in-depth look at research and economic development activities at the University. For more information about the publication, contact Cheryl Roland, assistant director of news services in the Office of Public Information, at (616) 387-4100.

Geologist gets award for Aquipro model

Dr. Richard N. Passero, WMU professor of geology, was awarded one of six 1989 Groundwater Education and Protection Awards at a fall ceremony in Lansing.

The award, sponsored by the W.K. Kellogg Foundation's Groundwater Education in Michigan (GEM) program, was presented to Passero by Michigan Senate Majority Leader John M. Engler during a statewide GEM Celebration held at Lansing's Radisson Hotel.

Passero received the award for work in developing Aquipro, a computerized groundwater model that translates basic



Passero

(Continued on following page)

Six Michigan nature centers selected for WMU/GEM project

Six Michigan nature centers have been selected to use as development models in WMU's new Science for Citizens Center project that will incorporate groundwater education into the programs of nature centers around the state.

The three-year project is a collaborative effort between the University, the Kalamazoo Nature Center and the Coalition of Michigan Nature Centers. The project is being supported by a grant for \$138,945 to the Science for Citizens Center and a grant for \$112,825 to the Kalamazoo Nature Center. Both grants were awarded by the W.K. Kellogg Foundation of Battle Creek through its Groundwater Education in Michigan (GEM) program.

Dr. Donald J. Brown, head of the Science for Citizens Center, is the project director of the effort that includes staff members from both the nature center and the University. Dr. Willard M. Rose, executive director of the Kalamazoo Nature Center, directs the nature center grant activities.

Six very different nature centers have been chosen for the project and model groundwater education programs will be built around the unique features and service areas of each. The six centers are: the Chippewa Nature Center in Midland, Sarett Nature Center in Benton Harbor, Kensington Metro Park's Nature Center in Milford, Seven Ponds Nature Center in Dryden, the Gillette Nature Center in Muskegon and the Howard Christensen Nature Center in Grand Rapids.

The centers were chosen because they served differing populations, geographic locations, and had differing resources and program approaches. Selection criteria called for centers that served urban and rural populations, a center that served a largely transient clientele and centers with both large and small staff and funding resources.

Each selected center has also committed itself to continuing groundwater education as an integral part of its programs after the present GEM project is completed.

Early in the project, each of the selected participating centers will be visited by a team of project personnel accompanied by a geologist. The visiting teams will be collecting pertinent site information about each location that can be used to tailor the groundwater education activities to each participating center. During the next three years, the project director and staff will design and conduct outdoor and action-oriented learning experiences for youth, individual citizens in the

community and local officials and decision makers.

The intent of the project is to merge the technical expertise of University and other groundwater professionals with the community-based educating skills of those who staff Michigan nature centers, according to Brown. The goal is to improve public understanding of groundwater issues and to help individuals initiate or support groundwater protection activities.

Brown says the project will use hands-on learning experiences to emphasize the prevention of pollution and the importance of responsible individual and collective action.

"Nature centers provide a natural vehicle for the delivery of individual, family and community education concerning groundwater," Brown says. "They involve all age levels and have a variety of program delivery mechanisms already in place." Brown notes that classes, youth camps

and clubs, lectures and presentations, newsletters, tours, special projects, libraries, reading centers and speakers bureaus are all effective tools to use in providing the public with groundwater education opportunities.

"Most importantly," he says, "nature centers provide opportunities for learning through observation, experimentation and experiential contact with the the natural environment in a way that is particularly effective in delivering educational programs like this one."

Learning activities at the six individual nature centers will use existing groundwater education materials as well as new ones developed by the program, Brown says. Local experts will be used and local hydrogeologic features will be identified to customize the program to the area served by individual nature centers. Although the groundwater education programs will be designed for citizens of all ages, Brown says a major component of the project will be working

with teachers, many of whom already use their local nature center as an outdoor classroom for their students.

Institute

(Continued from previous page)

special teacher training seminars on groundwater issues will be under way and a three-year project to utilize Michigan's network of nature centers to educate citizens of all ages about groundwater will be in full swing. Last spring, the institute was named home base for a Groundwater Education in Michigan (GEM) Regional Center, designed to provide groundwater education programs to private citizens and officials in nine southwest Michigan counties.

Major funding for the institute and its objectives has come from the state's Research Excellence Fund (\$212,238 just confirmed for this year), from the Environmental Protection Agency, from the University and from private industry. The Kellogg Foundation's \$570,000 grant to fund the GEM Regional Center also is administered under the auspices of the institute, and, while the GEM and the institute budgets are separate, many of their goals are common and supportive of each other.

In keeping with its leadership role in the study of groundwater issues, the institute played host last fall to the 34th Annual Midwest Groundwater Conference which attracted more than 200 federal, state and local government officials, university researchers and representatives from private industry. The event marked the first time in 25 years that the conference had been held in Michigan. Water research professionals from 11 states attended the two-day event at WMU's Fetzer Business Development Center.

Aquipro

(Continued from previous page)

groundwater data into a prediction of an area's vulnerability to contamination.

"The awards are an opportunity not only to recognize outstanding groundwater activities during the past year, but to involve legislators and other key leaders in the effort to create a greater awareness about groundwater in the state," said Dr. Jon Bartholic, associate program director of the Kellogg Foundation and director of the foundation's GEM activities.

The Aquipro model was developed at WMU with the assistance of Kalamazoo area computer consultant Sylvia Dulaney and a team of WMU graduate students. It was designed to make use of the computerized data base of the Michigan Groundwater Survey, based at WMU, and the Michigan Groundwater Data Base. Together, those two data bases contain information on more than 57,000 Michigan wells. The Aquipro program allows local government officials using microcomputers to have easy access to information about groundwater vulnerability in an area when land use decisions are being made.

The vulnerability of an area's aquifer -- its groundwater supply -- is determined and displayed by combining existing well record data with a formula that takes into account the depth of the aquifer and the thickness of protective layers of clay and clay-like glacial sediments that protect the aquifer.

Passero has mapped several counties in Southern Michigan using Aquipro and correlated the system's predictions with data on known glacial land systems. He has also correlated the vulnerability scores with well data at known contamination sites.



TARGETING MICHIGAN NATURE CENTERS — These six Michigan nature centers will serve as developmental sites for a model groundwater education program being developed by WMU's Science for Citizens Center and the Kalamazoo Nature Center with funds from the Kellogg Foundation's Groundwater Education in Michigan (GEM) Program.

New tool measures underground petroleum spills

Sandbox may lead to cleaner environment

A WMU researcher's work in a basement sandbox has led to a tool that will make it easier to clean spilled or leaked petroleum products from the nation's groundwater.

Dr. Duane R. Hampton, assistant professor of geology, set out to streamline the cleanup process that must take place after an individual or business sullies the environment with leaking underground storage tanks. One of his main research tools is a plexiglass sandbox that measures 4 feet by 4 feet by 1 foot and is located in the basement of WMU's Rood Hall.

Hampton was awarded a \$10,000 grant from the Amoco Oil Co. and a \$17,000 contract with the U.S. Environmental Protection Agency last year to build and test a probe that can measure the volume of recoverable petroleum product that has leaked from an underground storage tank or pipeline and saturated the earth just above the water table. Preliminary work and testing was completed in September and Hampton is continuing development of the tool.

A patent search for the tool, called an Aquifer Dipstick, has been launched and electronic and mechanical refinements are being made before the tool is turned over to a private firm for commercial production. Hampton hopes to see the device available commercially within the next year.

On Nov. 8-9, Hampton, at the request of the EPA, demonstrated the device at a special workshop in Tucson to which four representatives from each of the 50 states were invited. Also at EPA request, Hampton has written a summary of his research results to be distributed to state and federal personnel and to consultants as one issue in a topical bulletin called "Tank Issues."

Hampton says that while it is fairly easy to detect whether or not a leak has occurred, until now it has not been possible to get an accurate estimate of the amount of contaminant that has to be removed or to be certain that a cleanup project is complete.

"One of the real risks of this business" Hampton says, "is that since we don't know what's happening down there, we can't say for sure that a spill has been cleaned up. Regulators, because of their concern for public health, are reluctant to call a halt to cleanup operations."

Working with Dr. James A. Howell, professor of chemistry, and Ross B. Wagner, a geology student from Holland, Hampton developed a probe that is literally pounded into the ground at a leak site. The stainless steel rod assembled in 5-foot segments, holds a chemical indicator strip that measures the thickness and position of the contaminated layer of soil. It could replace the method that is currently the most widely used for estimating the volume of spilled petroleum products.

That current method involves drilling a monitoring well at the spill site and measuring the thickness of the petroleum

product that seeps into the well and floats on top of the water. It has long been known that in such situations, the petroleum product thickness in the well will be far greater than the thickness of the surrounding contaminated soil. Just how much greater is not known.

"The rule of thumb," Hampton says, "is that the amount in the well is about four times the thickness of the actual contaminated area."

As rules of thumb go, he says, that figure is better than nothing but not accurate enough to use when designing a cleanup system.

"A lot of dollars have been thrown away on cleanup systems that were overdesigned for the size of the problem on which they're used," Hampton says. "They work for a few days and then they stop working."

Because regulatory agencies' expectations for site cleanup are high — particularly when a cleanup system has been put into place — the failure of the system is not just a money loss. It can cause strained relations between the contaminator and the regulatory agency responsible for overseeing the cleanup.

Hampton came to WMU three years ago after a stint as a hydrogeologist with an environmental consulting firm located in Colorado. It was during field work for that firm that he first developed an interest in measuring petroleum spills.

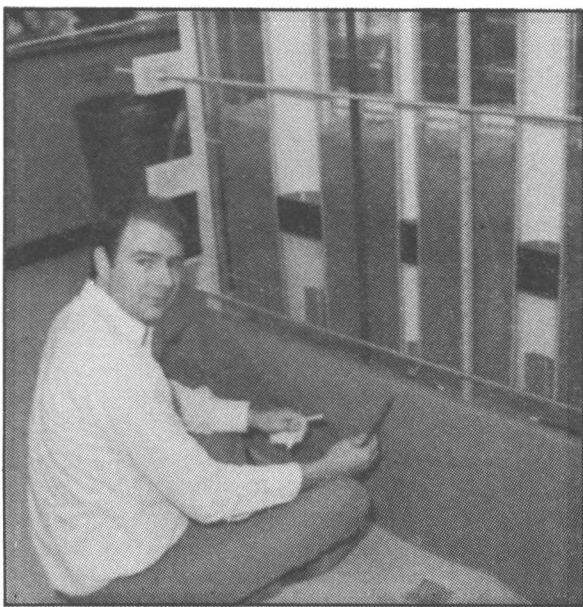
"My work in this area is really based on an unmet need I found while working as a consultant,"

Hampton says. "As part of my job, I used to measure the thickness of floating petroleum products in monitoring wells located at railroad refueling sites."

After coming to WMU, he began work in the sandbox, which is a simulation of Michigan groundwater conditions. On one side of the plexiglass box are three wells of different diameters, cut in half lengthwise and attached to the plexiglass along the lengthwise cut to permit viewing of the interior of the wells during experimentation. Sand, selected and layered to match local conditions, is packed around the wells. At each end of the box, a water inlet apparatus is installed to simulate groundwater flow.

In a series of experiments, dyed kerosene was purposefully leaked into the sandbox. Both the thickness of the contaminated soil and the thickness of the floating kerosene were clearly visible in all three wells. With exact knowledge of the thicknesses available to him, Hampton tested a number of predictive formulas that had been proposed by various scientists trying to tie the well petroleum thickness with the actual thickness. None were effective so he began his development of the probe.

His research will inevitably lead to work on more effective cleanup procedures and Hampton says he is already developing some ideas about better ways to attack such processes.



SANDBOX TIME PAYS OFF — Duane Hampton, assistant professor of geology, studies floating petroleum products contaminating three wells in his Rood Hall "sandbox." The plexiglass structure was constructed to simulate Michigan groundwater conditions so Hampton could test the effectiveness of methods used to measure the amount of petroleum contaminants in the water table surrounding the wells. (Photo by Robert D. Havira)

Economic impact another benefit of Hampton research

While cleaning up contaminated water is reason enough to develop a tool like the Aquifer Dipstick, the economic consequences of the work also are of major importance.

"This tool holds great potential for saving both time and money on cleanup efforts," says Dr. Duane R. Hampton, assistant professor of geology, who developed the tool.

By providing cleanup personnel with precise information about the exact location and severity of a spill, Hampton says, the most efficient and cost-effective cleanup systems can be selected for site remediation.

How many sites are in need of cleanup?

In the state of Michigan alone, more than a thousand underground storage tanks have been confirmed to be leaking by the Department of Natural Resources. Many of the rest of the state's 67,000 registered tanks have never been checked. Of confirmed leaks, less than a third are being cleaned at owner expense and it is assumed that state and federal agencies will have to shoulder the responsibility for cleaning the rest.

The Environmental Protection Agency estimates the average cleanup price tag per site at \$110,000. To clean up Michigan's confirmed leaks that are not being treated at owner expense, that puts the bill at \$94 million. Private consulting firms in the state put the cost much higher. One even estimates the cost per site at \$250,000.

In November, federal officials announced that fuel spills at 13 U.S. Coast Guard sites in Michigan would cost taxpayers more than \$20 million in cleanup costs. Contaminated groundwater near the worst site, at Traverse City Air Station, will take about 15 years and \$20 million to clean, according to the General Accounting Office.

Groundwater facts available in non-technical terms

For those with little or no understanding of where groundwater comes from or how the actions of humans can affect it, WMU researchers have been busy spreading the word with a 42-page book that presents the facts in non-technical terms.

"Groundwater in Southwest Michigan," published a year ago by the Science for Citizens Center, is already in use by more than 1,300 individuals in businesses, schools and agencies around the state.

Produced by the center for the Michigan Groundwater Survey, the book was written by Dr. W. Thomas Straw and Dr. Richard N. Passero of the WMU Department of Geology. It is available for \$5 through the Science for Citizens Center. For more information, call (616) 387-2715.

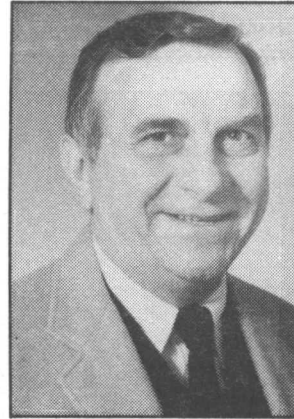
Lakeshore property owners await WMU verdict on erosion control

Geologist's study funded by state

As a result of national publicity about a controversial method to prevent shoreline erosion, government officials and private citizens around the country are awaiting the results of a study now being conducted under the direction of Dr. W. Thomas Straw, chairperson of WMU's Department of Geology.

A widely distributed Associated Press story last summer noted WMU's role in a pilot study initiated by Michigan legislators who want an independent evaluation of the effectiveness of an erosion control system that is commercially available from a West Michigan inventor and businessman.

After years of conflicting claims from satisfied customers, the Department of Natural Resources, the U.S. Army Corps of Engineers and others, state



Straw

control sites to determine what natural changes would have occurred over the time of the study.

"We'll be monitoring any changes that these systems bring about," Straw says.

The Undercurrent Stabilization System has been described as a series of "underwater speed bumps" that slow currents along the shore where they are installed and encourage sand granules to be deposited in much the same way as naturally occurring deltas encourage such deposits at stream and river mouths. The system consists of concrete filled geotextile mounds or bags that are placed at regular intervals perpendicular to the shore and extending 100-150 feet into the lake. An

onshore barrier structure that is parallel to the shore also is part of the system. Each system is custom designed to fit the individual piece of land for which it is contracted.

Holmberg claims that much of what is called "natural erosion" of the coast is really caused by a series of man-made structures and projects such as dredging of inlets and river mouths and construction of piers and breakwater walls that force shoreline currents to divert sand away from the coast. He says his system works with the forces of shoreline currents, encouraging the deposit of sand.

Holmberg's supporters include satisfied customers who claim that the system has reversed the course of erosion that was endangering their homes. In some cases, they claim that expanded new beach can be measured at 150 feet in width. Detractors claim that most such changes are the result of natural lake fluctuations and any artificially induced gains are made at the expense of nearby coastal property owners.

"The people on the coast are most anxious to know whether or not these things function," Straw says. "Since there has been so much press, we need to know if they work."

Soviet water expert attracts world media

While many WMU water researchers are enjoying a growing reputation for their expertise on Michigan's water supply, Dr. Philip P. Micklin, professor of geography, has quietly carved out a role as one of the world's leading authorities on Soviet water resources.

That expertise earned him a spot as one of three members of a National Geographic team that visited the Aral Sea last September — the first group of Westerners permitted into the region. Details of that trip appear in a 24-page article featured in the February 1990 issue of National Geographic. Micklin's name has also surfaced with growing frequency on the pages of such publications as the New York Times and Science.

Micklin's emergence as an expert on Soviet water topics is the result of 23 years of research. He has done extensive research on water management and agricultural problems associated with the desiccation of the Aral Sea — once the world's fourth largest lake. The Aral Sea has lost 40 percent of its area and 66 percent of its volume in the past 30 years because of excessive use of the sea's inflowing river for irrigation.

After seeking Micklin's help on a short, earlier "National Geographic" news note about the Aral Sea, the magazine's editors invited Micklin to accompany assistant editor William S. Ellis and photographer David Turnley to the area that has been officially closed to foreign visitors. The article that resulted includes a photo of Micklin and several quotes from him.

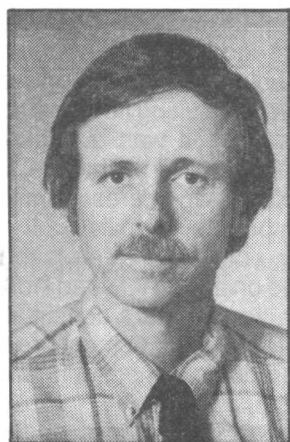
Micklin frequently is sought out for comment by writers focusing on the Aral Sea or on the problems of agricultural irrigation in arid regions.

"Usually what happens is a reporter starts making some calls to find someone who knows about the Aral Sea," Micklin says. "Eventually they end up talking to me."

In December, when the Washington-based research group Worldwatch Institute issued a study titled "Water for Agriculture: Facing the Limits," the New York Times turned to Micklin for comment, identifying him as "a specialist in Soviet water resources."

In September of 1988, readers of Science magazine got an in-depth description of the Aral Sea disaster in that week's cover story which was written by Micklin. The article generated a New York Times article and a national Associated Press story.

Last fall, he was interviewed for a program on the Aral problem made by public television station KUAT in Tucson. In recent months, he has also advised Newsweek, the London Sunday Times and CBS's "60 Minutes."



Micklin

officials decided last spring to fund a pilot project to determine if an "Undercurrent Stabilizer System" holds any promise of preventing and/or reversing the effects of erosion problems that have reached critical proportions along Michigan shorelines. In recent years, erosion has worn away steep shoreline bluffs and sent scores of private homes toppling into the lake.

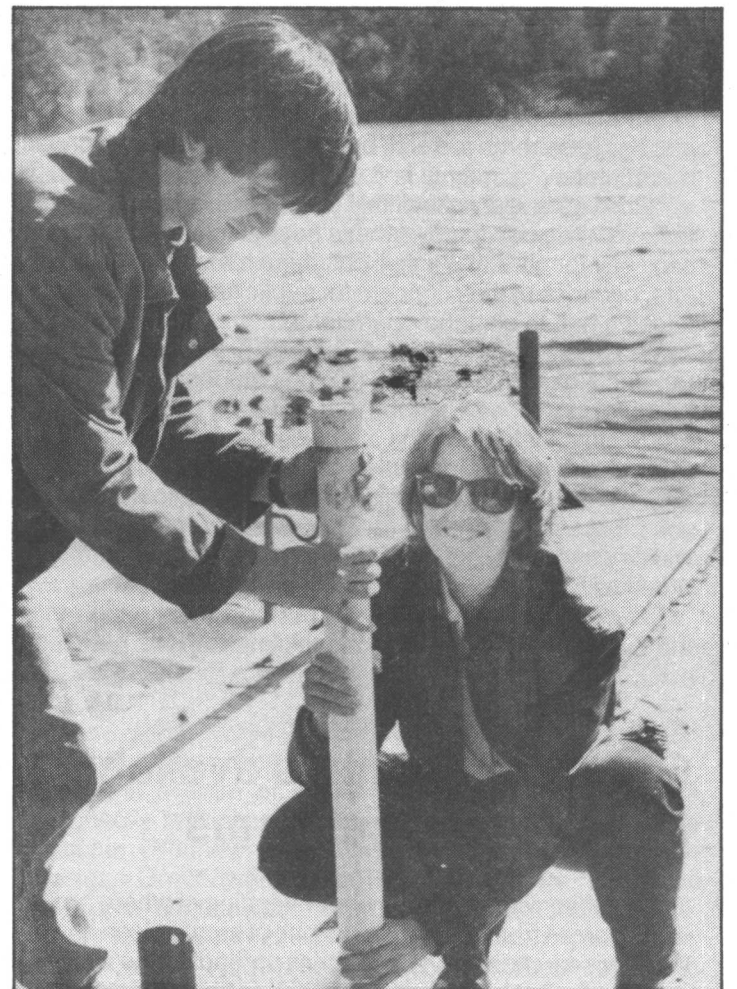
The system being studied is patented and produced by Erosion Control Systems Inc., a Whitehall firm headed by inventor Dick Holmberg. His systems are already in place in more than 100 locations around Michigan and on the Atlantic coast.

To complete the study, the state funded installation of two of Holmberg's systems — one at the base of an endangered bluff near Douglas on the Lake Michigan coast and a second near Tawas City on Lake Huron. Straw was awarded a \$50,000 contract to complete an independent evaluation of those two installations' effects on the lake bottom topography.

"This department has a history of studying the lake," Straw says of the grant. "This seemed like a natural undertaking for us."

Straw, working with the WBDC Engineering Group of Grand Rapids, will complete a series of surveys of the affected lakeshore areas. A baseline survey of the selected sites has already been completed. Another will be done in the spring and a third completed in the fall of 1990. WBDC, a licensed surveying firm, will complete the on-land recordings of beaches where the system is installed.

Straw's team will augment that survey work by doing depth recordings and by plotting and mapping the adjacent lake bottom from the deck of a specially outfitted pontoon boat. Surveys will be done of each site where the system is installed and similar surveys will be completed of two nearby



UNDERGRADUATE TAKES THE PLUNGE INTO WATER RESEARCH — Kalamazoo junior Jody A. Johnson gets an assist from geology graduate student Robert Tolliver of Taylor, as she takes a core sample from the bottom of Kalamazoo County's Dustin Lake. Johnson, operating from the deck of the Department of Geology's pontoon boat, spent two days drawing such core samples for later laboratory analysis in a fall semester research project. Her work was aimed at analyzing the condition of the lake, which is located near a recently closed landfill. Johnson's research was supported by a \$1,200 Undergraduate Research and Creative Activities Award. (Photo by Robert D. Havira)

Media

Philip P. Micklin, geography, discusses his trip to the Aral Sea in the Soviet Union and the resulting article in National Geographic on "Focus," a five-minute interview produced by the Office of Public Information. "Focus" is scheduled to air Saturday, March 17, at 6:10 a.m. on WKPR-AM (1420) and at 5:45 p.m. on WKZO-AM (590).

"Newsviews: Legislative Report," a 30-minute radio and television program featuring WMUK-FM news director Tony Griffin and area state legislators, will be

aired during the week of March 19-24. Produced by media services in cooperation with WMUK-FM, the program will be aired on WMUK-FM (102.1) at 6:30 p.m. Monday, March 19, and on Kalamazoo Community Access Television at: 8 p.m. Monday, March 19, on Channel 30; 7 p.m. Thursday, March 22, on Channel 31; 8 p.m. Friday, March 23, on Channel 31; and 8:30 p.m. Saturday, March 24, on Channel 30. Participating in the program will be Reps. Mary Brown, Donald Gilmer and Paul Wartner and Sens. Harmon Cropsey and Jack Welborn.

Jobs

The listing below is currently being posted by employment services in the Department of Human Resources. Interested fringe benefit eligible employees should submit a job opportunity transfer application or sign the appropriate bid sheet during the posting period.

S-01 and S-02 clerical positions are not required to be posted. Interested University employees may contact an employment services staff member for assistance in securing these positions.

(N) **Assistant Professor** (Tenure Track), I-30, Psychology, 89/90-342, 3/13-3/19/90.

(N) **Police Officer** (2 Positions), G-01, Public Safety, 89/90-352, 3/13-3/19/90.

(R) **Stores Laborer** (1 Position), M-2.5, Freight, Postal and Delivery, 89/90-353, 3/13-3/19/90.

(R) **Vehicle Mechanic** (1 Position), M-5, University Facilities/Transportation Services, 89/90-354, 3/13-3/19/90.

(R) **Mechanical Engineer**, X-06, Campus Planning, Extension and Engineering, 89/90-355, 3/13-3/19/90.

(R) **Coordinator, Donor Relations**, P-02, Development, 89/90-356, 3/13-3/19/90.

(R) **Custodian** (1 Position; 1st, 2nd or 3rd Shift), M-2, University Facilities/Custodial Services, 89/89-357, 3/13-3/19/90.

(N) New
(R) Replacement

Exchange

FOR SALE -- House at 817 Weaver Ave., near WMU. Three bedrooms, two baths, very well maintained. Call Kala at 345-5973.

FOR RENT -- Vacation home near Rudyard, Mich., for \$150 per week. Everything but food included. Sleeps up to eight. Conveniently located for visits to Mackinac Island, Sault Ste. Marie, St. Ignace, Tahquamenon Falls, etc. Golf, tennis, swimming and fishing in the area. Contact Max Benne, 70811 Lakeview, Sturgis, Mich. 49091, (616) 651-8718. Faculty references available.

Zest for Life

During winter months, do you:

- sleep more but have less energy?
- feel more anxious, irritable or depressed?
- feel less productive or creative?
- experience increased difficulty with memory or concentration?
- have little control over your appetite or weight?
- feel less outgoing or social than usual?
- feel less able to cope with stress?

If you answer "yes" to two or more of these questions, you may be one of many who suffer from Seasonal Affective Disorder (SAD), a condition related to insufficient light.

The American Psychiatric Association officially recognized SAD as a disorder in 1987. Although no specific cause has been identified, exposure to bright artificial light helps to relieve symptoms. It is believed that light entering the eye travels to the brain and modifies brain chemistry, correcting abnormalities resulting from light deficiency in vulnerable individuals.

To learn more about SAD and local physicians who treat this disorder: come to the Spring Into Wellness Health Assessment Fair Wednesday, April 4; or call Bronson Health Answers at 341-7723 to have SAD information mailed to your home.

Media Services

Is there STRESS in your life? Three videotapes dealing with stress are available until March 30 for previewing in the Media Resource Center in Sangren Hall.

These programs provide some insight into how to handle stress as it relates to one's job and personal life, and also cover how to relieve stress. The titles are: "Stress and the Supervisor," "The Joy of Stress" and "Energy -- For All Reasons." Each tape is less than one hour long.

The previews have been made possible by Kinetic Inc. for purchase consideration. To arrange a preview, call Michelle Dick in the Media Resource Center at 7-5072.

Human Resources

Dependent Care Benefits Reimbursement Accounts available

There's good news for employees paying for dependent care! Beginning this month, WMU will be offering all faculty and staff a means of financing dependent care through the reduction of taxable earnings.

This method of paying for child and elder care is called a Dependent Care Benefits Reimbursement Account. This is how it works:

You decide how much you wish to have deducted (pre-tax) from each paycheck. Internal Revenue Service regulations limit the total yearly deduction to \$5,000. (If you are married and filing separately, the maximum is \$2,500.) You obtain receipts from your dependent care provider and present them to the University for payment from your Dependent Care Benefits Reimbursement Account. WMU's accounting department prepares and mails a check to you to cover the amount specified by your receipts, as long as there are adequate funds in your account.

Barbara S. Liggett, associate vice president for human resources, emphasized that, while this benefit offers some employees tax savings, it may not be appropriate for everyone. She is urging you to attend one of the informational meetings to learn more about this important benefit program.

The Department of Human Resources has prepared a booklet explaining the provisions of the Dependent Care Benefits Reimbursement Accounts. Copies will be mailed soon to each University department. Copies also will be available at the informational meetings and by calling the benefits office at 7-3630.

Meetings are scheduled for: Tuesday, March 20, from 10 to 11 a.m., noon to 1 p.m. or 1:30 to 2:30 p.m. in 210 Bernhard Center; or Wednesday, March 21, from 10:45 to 11:45 p.m. in Red Room C of the Bernhard Center.

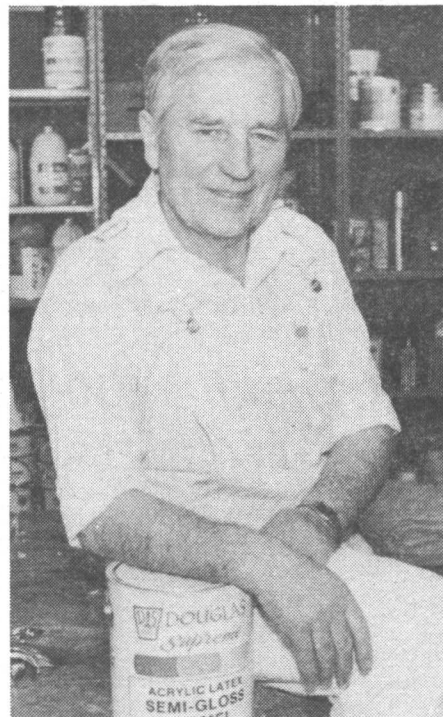
Benefits staff members also will be available from 8:30 a.m. to 4:30 p.m. Thursday, March 29, in 107 Bernhard Center. Employees who are unable to attend a session on March 20 or March 21 are invited to drop in.

The Dependent Care Benefits Reimbursement Account is a concept that was explored by the University's committee studying flexible benefits. The committee proposed its implementation and adoption by the University.

"We spend considerable money and time on our wellness program because we know that a healthy workforce is a productive workforce," Liggett said. "Mental wellness includes being free from worry about our family members for whom we are responsible. We think the savings made possible by paying for dependent care with before tax dollars may help ease the financial strain that some employees incur."

"Many of us may not need to be

On campus



A TRIP DOWN MEMORY LANE -- The recent political events in Eastern Europe have affected Karl Kurzmann's travel plans for this spring. The painter in the physical plant now will be able to visit some areas of East

Germany and Poland -- including his hometown -- that he hasn't seen since 1945. Kurzmann, who came to the United States some 30 years ago, has worked at the University for 24 years. Although he has a shop area in the basement of Hadley Hall, he spends most of his time out and about campus painting apartments, residence halls, the Bernhard Center and the Oaklands. "I've met a lot of nice people and made many friends over all the years as a painter, paper hanger and glazer," he says. "My job has given me the opportunity to see just about every room on campus -- you name it, I've been in it." Kurzmann says he likes his job because it gives him the satisfaction of seeing an improvement. "I can look back when I'm done and see that it looks better than before," he says. Besides his job, Kurzmann maintains some other ties with the University. His son Brian is a Medallion Scholar and president of the Western Student Association. His daughter recently competed in the Medallion Competition for fall 1990 scholarships. Kurzmann, who travels to either Europe or Arizona every year, says he and his wife are particularly looking forward to this year's trip and a chance to visit some long-lost relatives.

concerned about dependent care at this particular time, but it's comforting to know that Western has such a program available for some future need," she continued.

Retirement planning meetings set

You are invited to take control of your retirement now by attending a series of three retirement planning meetings sponsored by the Department of Human Resources. The information to be presented will be helpful to both long-time employees and new faculty and staff. Sessions are open to all employees and their spouses.

"WMU Retirement Benefits," the first session, is set for Wednesday, March 28, in 204 Bernhard Center. C/T and AFSCME staff should plan to attend from 10:30 a.m. to noon, while P/T/A staff are invited from 1 to 3 p.m. Richard K. Schaper, human resources, and Michael A. Weber, payroll, are the instructors.

The date for the second session, "TIAA-CREF," is Thursday, April 12, and the final session, "Social Security," is scheduled for Thursday, April 19.

To register, call Dawn J. Papesh at 7-3620.

Insurance feedback needed

If you are having problems obtaining health/medical benefits, LET US KNOW.

Are your health/medical claims being processed accurately and paid within a reasonable period of time? Our insurance carriers and benefits administrators need to know how well they are servicing our faculty and staff members.

Staff members from the Department of Human Resources meet periodically with representatives from Aetna, Blue Care Network and Physicians Health Plan to discuss the quality of services being provided to our employees. We provide them with current and specific information so they can investigate and attempt to resolve claims concerns.

During the next month, we encourage you to drop us a note explaining any problems you may have encountered during the past year. Please include specific claim information so we can follow up. We also encourage you to comment on positive experiences! Information should be directed to Richard K. Schaper, human resources, 1300 Seibert Administration Building, by Friday, April 13.

Buy Savings Bonds now

While savings bonds may be purchased any time, the Department of Human Resources once a year makes a special effort to encourage employees to use this convenient method of saving regularly, according to Barbara S. Liggett, associate vice president for human resources.

All WMU employees will have the opportunity to learn about the many benefits of saving U.S. Bonds in a special mailing during the week of March 19.

This easy way to save is smarter than ever. Savings Bonds offer market-based, competitive interest rates when held at least five years and are exempt from state and local income tax. In addition, federal tax may be deferred until the bonds are cashed. Because they can be held for as little as six months or as long as 30 years, bonds are ideal for any savings need -- be it short- or long-term.

If you are already a regular saver, this is a particularly good time to increase



your rate of saving. As of Oct. 1, 1990, the smallest denomination bonds-- the \$50 and \$75 -- will no longer be available. All employees still buying these denominations will begin to receive \$100 bonds after that date. Your current allotments will automatically be applied to the \$100 bond purchase and, unless you want to increase your allotment, you need take no further action.

Developing a savings habit on your own is hard work, but WMU's Payroll Savings Plan offers you a great way to save, whatever your financial goals. When you join the Payroll Savings Plan, you select an amount to be set aside from each paycheck to buy bonds. The rest is automatic -- you save payday after payday without any interruption and you can feel good about helping building America's economic security as well.

Libraries

At a time when everything at Waldo Library seems to be in chaos, the University libraries are starting a new service that will benefit all library users.

Books may now be returned and/or renewed at any of the branch libraries -- the Education Library in Sangren Hall, the Business Library in North Hall, the Physical Sciences Library in Rood Hall and the Music and Dance Library in the Dalton Center -- as well as Waldo Library.

In the past, books had to be returned to the library where they were checked out. Now they may be returned to the most convenient library, regardless of where they were checked out. This service applies only to books in the circulating collection, NOT to materials on reserve.

Unlike some changes in service necessitated by the construction at Waldo Library, this is a permanent change that will continue after the construction is completed.

Calendar

MARCH

Thursday/15

(thru April 20) Exhibition of mixed media paintings, including figures, landscapes, still lifes and watercolors of Italy, by Martha Flynn, Kalamazoo artist, 1240 Seibert Administration Building, weekdays, 8 a.m.-noon and 1-5 p.m.

(thru April 20) Exhibition of "American Gothic" parodies by Betty Fouch, retired from media services, showcases, entrance to the Space Gallery, Knauss Hall.

(thru 27) Exhibition of paintings, Wayne Paige, Arlington, Va., Gallery II, Sangren Hall, weekdays, 10 a.m.-5 p.m.

Medieval Institute seminar, "Teresa d'Avila: The Development of a Different Voice," Frank Gross, religion, Cistercian Studies Library, Hillside West, noon.

Visiting Scholars Program lecture, "Consensus and Coherence as Persisting Problems in Anthropological Theory," James W. Fernandez, professor of anthropology, University of Chicago, 291 Wood Hall, 1 p.m.

Computer science colloquium, "The Role of Meta-Analysis in Knowledge Engineering for Medical Informatics," Charles Barr, biostatistics, Harvard School of Public Health, 4550 Dunbar Hall, 4 p.m.; refreshments, 3:45 p.m.

Mathematics and statistics colloquium, "Recent Results on a Diffusion-Delay Equation," David Green, mathematics and computer science, GMI Engineering and Management Institute, Commons Room, sixth floor, Everett Tower, 4:10 p.m.; refreshments, 3:45 p.m.

Spiritual Journey Series, "Sarada Devi: Holy Mother of India -- Does One Always Choose To Be Spiritual?," Nancy E. Falk, religion, St. Aidan's Chapel, 4 p.m.

University film series, "Red Desert" (Italy, 1964), directed by Michelangelo Antonioni, 2302 Sangren Hall, 4 and 8 p.m.

Concert, Southwestern Michigan Vocal Festival conducted by Jerry Jordan, Miller Auditorium, 7 p.m.

(thru 21) Gay/Lesbian Awareness Days: Thursday event, "Gays and God," panel debate, 2304 Sangren Hall, 7 p.m.

Friday/16

* (thru 18) 14th annual Minority Student Leadership Conference, Bernhard Center, begins at 8 a.m. Friday and ends at noon Sunday.

Meeting, Academic and Student Affairs Committee of the Board of Trustees, 204 Bernhard Center, 8:30 a.m.

Meeting, Budget and Finance Committee of the Board of Trustees, 205 Bernhard Center, 9:15 a.m.

Meeting, Board of Trustees, Board Room, Bernhard Center, 10:30 a.m.

Graduate student recital, Shirley Brinkerhoff, piano, Dalton Center Recital Hall, 5 p.m.

Gymnastics, WMU men vs. the University of Wisconsin at Oshkosh and Michigan State University; WMU women vs. Bowling Green State University, Gary Center Gymnasium, 6:30 p.m.

Concert, Canterbury Chamber Players, Dalton Center Recital Hall, 8 p.m.

Saturday/17

* Western Invitational Jazz Band Festival, University Jazz Orchestra concert conducted by Trent P. Kynaston, Dalton Center Recital Hall, 7:30 p.m.

Sunday/18

Gay/Lesbian Awareness Days group discussion, "Exploring a Gay or Lesbian Identity," Kiva Room, Faunce Student Services Building, 2 p.m.

Graduate student recital, Carol Hudson, piano, Dalton Center Recital Hall, 2 p.m.

* Concert, Willie Nelson, Miller Auditorium, 7 p.m.

Monday/19

* (and 20) Management and executive development seminar, "Managing Accelerated Productivity," David R. Allen, vice president, Insight Consulting Group, Santa Monica, Calif., Fetzer Center, 8:30 a.m.-4:30 p.m.

Tax preparation for students, faculty and staff who do not itemize by Beta Alpha Psi, professional accounting fraternity, Red Rooms A and C, Bernhard Center, 2-4 p.m.

Lecture series, "Toward a Theory of a Unified Mind/Body Field: Healing the Healer": "Duality and Non-Duality -- The Mind in Motion and at Rest," Richard Williams, licensed psychologist, 2502 Sangren Hall, 6 p.m.

Gay/Lesbian Awareness Days lecture, "Opening Blind Eyes," Chris Glaser, first gay activist on the seminary campus of the Yale Divinity School, 3770 Knauss Hall, 7 p.m.

School of Music lecture-demonstration, Scott St. John, viola/violin, Dalton Center Lecture Hall, 7 p.m.

Student recital, Ellen Petrowsky, trombone, Dalton Center Recital Hall, 8 p.m.

Tuesday/20

Dependent Care Program information sessions, 210 Bernhard Center, 10-11 a.m., noon-1 p.m. and 1:30-2:30 p.m.

(thru 25) Exhibition of winning entries from the WMU Photo Contest, 106-107 Bernhard Center, 10 a.m.-3 p.m. March 20, 22 and 23; 3-7 p.m. March 21; and 11 a.m.-3 p.m. March 24-25.

Mechanical engineering seminar, "Multiple Roles for Faculty as Scholars About Teaching," Mary Anne Bunda, University assessment, 2064 Kohrman Hall, 1 p.m.

Physics colloquium, "Nuclear Temperatures," Aaron Galonsky, cyclotron laboratory, Michigan State University, 1110 Rood Hall, 4:10 p.m.; refreshments, 4 p.m.

Gay/Lesbian Awareness Days lecture, "Building an Inclusive Movement," Ivy Young, director, Lesbian and Gay Families Project, National Gay and Lesbian Task Force, 3770 Knauss Hall, 7 p.m.

19th annual Whitney Young Scholars Award Program, speech, "Hispanic Women: Balancing the Expectations of Society and Hispanic Cultures," Guadalupe G. Lara, director of social work, Children's Hospital of Michigan, Detroit, West Ballroom, Bernhard Center, 7:30 p.m.

* School of Music Young Concert Artists Series, Scott St. John, viola/violin, Dalton Center Recital Hall, 8 p.m.

"Days of Remembrance" lecture, "The Holocaust Today," Raul Hilberg, the John G. McCullogh Professor of Political Science, University of Vermont, 2302 Sangren Hall, 8 p.m.

Wednesday/21

Meeting, Human Subjects Institutional Review Board, Conference Room C, third floor, Seibert Administration Building, 8:15 a.m.

Doctoral oral examination, "The Relationship Between Absenteeism and the Amount of Overtime Worked in Various Job Classifications in a Metal Fabrication Plant," Thomas D. Hopkins, educational leadership, Tate Center, 3210 Sangren Hall, 1:30 p.m.

School of Music Convocation Series, Scott St. John, viola/violin, Dalton Center Recital Hall, 2 p.m.

Economics lecture-seminar series, Marianne A. Ferber, professor of economics, University of Illinois at Urbana-Champaign: seminar, "Career Plans and Expectations of Young Women and Men: The Earnings Gap and Labor Force Participation," 3760 Knauss Hall, 3 p.m.; lecture, "Evidence of Labor Market Discrimination," 3750 Knauss Hall, 8 p.m.

* Regional gathering of biology and junior high/middle school science teachers, Wood Hall, 4-7 p.m.

College of Education Research Colloquium, Red Rooms, Bernhard Center, 5:30-9:30 p.m.

Gay/Lesbian Awareness Days film, "Torch Song Trilogy," 3770 Knauss Hall, 7 p.m.; reception following featuring feminist singer Gloria Larrieu.

"Senior Prom," for students and senior citizens, South Ballroom, Bernhard Center, 7-10 p.m.

Lecture, "Toward a Just, Free and Non-Racial Society in South Africa," Dumasani Kumalo, South African exile, 2750 Knauss Hall, 7:30 p.m.

* Concert, Orchester der Beethovenhalle Bonn, Miller Auditorium, 8 p.m.

Dependent Care Program information session, Red Room C, Bernhard Center, 10:45-11:45 p.m.

Thursday/22

Training seminar, "Valuing Diversity," for supervisors, 204 Bernhard Center, 8:30 a.m.-noon.

Women's History Month lecture, "The History of Women in the Labor Market: How Present Day Conditions Evolved," Marianne A. Ferber, professor of economics, University of Illinois at Urbana-Champaign, Red Room A, Bernhard Center, noon.

Mathematics and statistics colloquium, "The Work of Statisticians in an Operational Environment," Gipsie B. Ranney, BOC Powertrain General Motors Corp., Commons Room, sixth floor, Everett Tower, 4 p.m.; refreshments, 3:45 p.m.

Spiritual Journey Series, "Vocation: Spirituality in the Workplace," the Rev. Steve Klingelhofer, rector, St. Luke's Episcopal Church, St. Aidan's Chapel, 4 p.m.

University film series, "Juliet of the Spirits" (Italy, 1965), directed by Federico Fellini, 2302 Sangren Hall, 4 and 8 p.m.

Reading, Roberto G. Fernandez, Cuban-born novelist and Martin Luther King Jr./Cesar Chavez/Rosa Parks Visiting Professor, 10th floor, Sprau Tower, 7:30 p.m.

Lecture by Gloria Alicia Galan, representative of CO-MADRES, the Committee of Mothers and Relatives of Political Prisoners, Disappeared and Assassinated in El Salvador, St. Aidan's Chapel, 7:30 p.m.

* (thru 25 and 29-31) University theatre production, "The Misanthrope," Shaw Theatre, all at 8 p.m. except Sunday, March 25, at 2 p.m.

* Admission charged

Area science teachers to gather here March 21

Junior high and middle school science teachers from Southwest Michigan will gather on campus Wednesday, March 21, to share ideas on ways to better teach their subjects.

The first "Regional Gathering of Biology and Junior High/Middle School Science Teachers" is being sponsored by the Department of Biological Sciences. It will run from 4 to 7 p.m. in Wood Hall.

"We're trying to encourage the flow of information between schools and the department through the first of what we hope will be many conferences," said Brenda K. Johnson, biological sciences, organizer of the event.

Although aimed primarily at biology teachers, the topics to be covered are broad enough to interest other science teachers as well, she said. Participants will attend two sessions and will be able



Motz

to choose from among nine topics to be presented concurrently during each session.

The presentations will be led by WMU faculty members and area teachers. Topics will range from "Misconceptions in Biology: Prior Knowledge and the Biology Teacher" to "Exploring a 'Ton' of Hands-On Life Science Activity Ideas."

The two sessions will be followed by refreshments and a general session at 6 p.m. on "Essential Changes Needed For Reforming and Restructuring Secondary Science Education." The speaker will be LaMoine L. Motz, past president of the National Science Teachers Association.

Motz is director of science, health and outdoor education at the Oakland Schools in Pontiac. He holds master's and specialist degrees from WMU and also is past president of the Michigan Science Teachers Association. He chairs a national committee in its second year of trying to get schools to adopt different ways of teaching the traditional sciences.

The cost to attend the gathering is \$5. For more information, persons may contact the Department of Biological Sciences at 7-5600.

Social worker to speak at awards program

The 19th annual Whitney Young Scholars Award Program is scheduled for 7:30 p.m. Tuesday, March 20, in the West Ballroom of the Bernhard Center.

The program recognizes undergraduate and graduate minority students who are academic achievers and outstanding contributors to community service. Sponsored by the School of Social Work, it is free and open to the public.

The speaker for the program will be Guadalupe G. Lara, director of social work at the Children's Hospital of Michigan in Detroit. She will discuss "Hispanic Women: Balancing the Expectations of Society and Hispanic Cultures."

Lara is a certified pediatric social worker and an adjunct faculty member and training consultant at Eastern Michigan University. She is known statewide for her expertise in ethnic-sensitive training for human services workers in the area of child abuse.

The program is a memorial tribute to the late Whitney M. Young Jr., who, at the time of his death in 1971, was a well-known social worker and the executive director of the National Urban League. More than 60 minority students have been cited for awards since the inception of the program.



Lara

Delene, Cain re-elected to top Senate positions

Linda M. Delene, marketing, and Mary A. Cain, education and professional development, have been re-elected to one-year terms as president and vice president, respectively, of the Faculty Senate. The election took place by mail in February.

Three persons were elected to three-year terms as representatives-at-large: H. Nicholas Hamner, history; E. Thomas Lawson, chairperson of religion; and Shirley A. Woodworth, communication.

Twenty-one persons were elected by their departments to three-year terms: Dale M. Brethower, psychology; Wendy L. Cornish, dance; Evalyn T. Dearmin, chairperson of education and professional development; Philip J. Egan, English; Sami Esmail, electrical engineering; James M. Ferreira, history; Thomas L. Gossman, finance and commercial law; Barbara L. Harris, special education; Suzanne Hedstrom, counselor education and counseling psychology;

Parvis Merati, aircraft and automotive engineering; Bettina S. Meyer, University libraries; Diann L. Miller, Counseling Center; David K. Peterson, paper and printing science and engineering; John R. Provancher, academic services; Debbie A. Renshaw, business information systems; Donald R. Schreiber, chemistry; Gail M. Stephens, educational leadership; Larry J. tenHarmsel, English; Walter Turner, mathematics and statistics; William Welke, chairperson of accountancy; and Carl A. Woloszyk, consumer resources and technology.