

Funding awarded to 11 new projects

Funding for WRRI-sponsored projects dipped slightly this year, a reflection of tough fiscal times statewide and nationally. The \$262,686 total will support 11 projects during the 1986-87 fiscal year, compared to last year's \$277,219 funding total. Researchers submitted 21 proposals for funding, compared to 25 proposals submitted last year. One interdisciplinary project, "Sport Fisheries Computer Model Application in New Mexico," also received a \$171,870 matching grant from the New Mexico Department of Game and Fish.

Federal Projects--USGS

- *Field Study of Ephemeral Stream Infiltration and Recharge.* Dan Stephens, geoscience, NMIMT.
- *Optimization of the Pilot-scale Cultivation of Commercially Valuable Oysters in New Mexico's Saline Ground Waters.* Barry Goldstein, New Mexico Solar Energy Institute.
- *Irrigation Management Procedures to Maximize Production of Alfalfa Populations Selected for Increased Performance.* Bill Melton, crop and soil sciences, NMSU.
- *A Physiological Route to Water-use Efficiency in Alfalfa: Test of Proposed Gains in Individual Plants.* Vincent Gutschick, biology, NMSU.

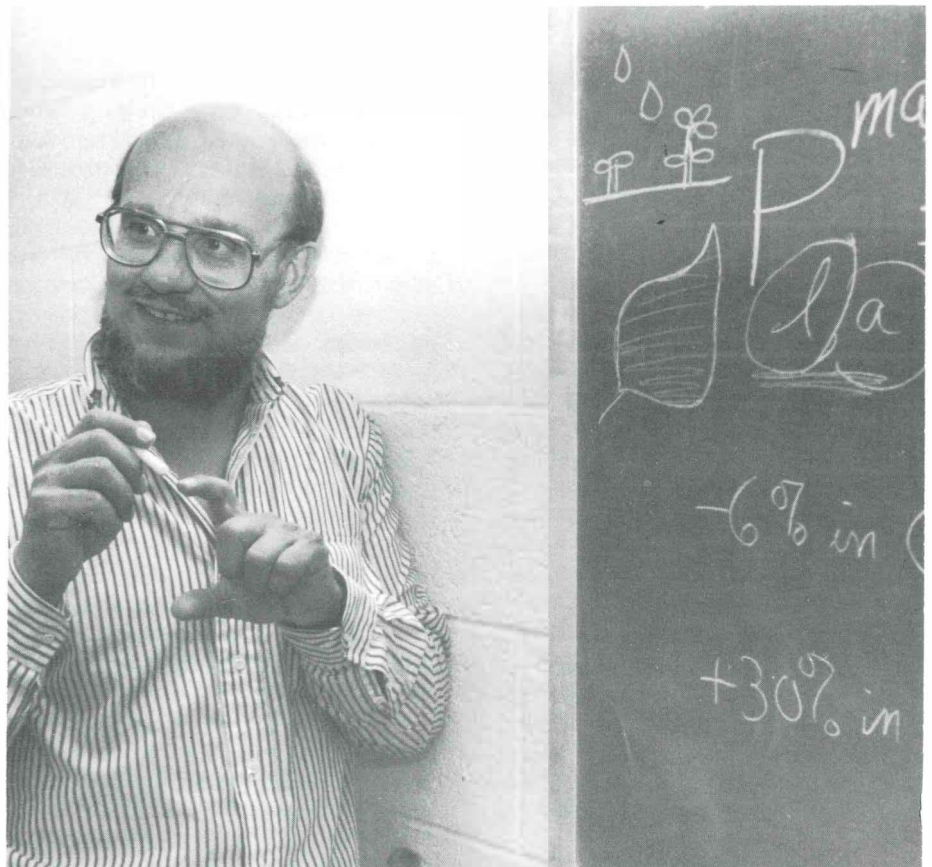
State Funded Projects

- *A Stable Isotope Investigation of Vapor Transport during Ground Water Recharge in New Mexico.* Fred Phillips, geoscience, NMIMT.
- *Hydrocarbons and Liquid Organic Waste in Ground Water.* John Wilson, geoscience, NMIMT.

- *Assessing the Sensitivity of High Altitude New Mexican Wilderness Lakes to Acidic Precipitation and Trace Metals.* Carl Popp, chemistry, NMIMT.
- *Improved Livestock Tolerance of Toxicants in Kochia Herbage toward Increased Usage of Kochia as a Water Efficient Forage Crop.* Stan Smith, animal science, NMSU.
- *Development of a Laboratory Planning Handbook for Water and*

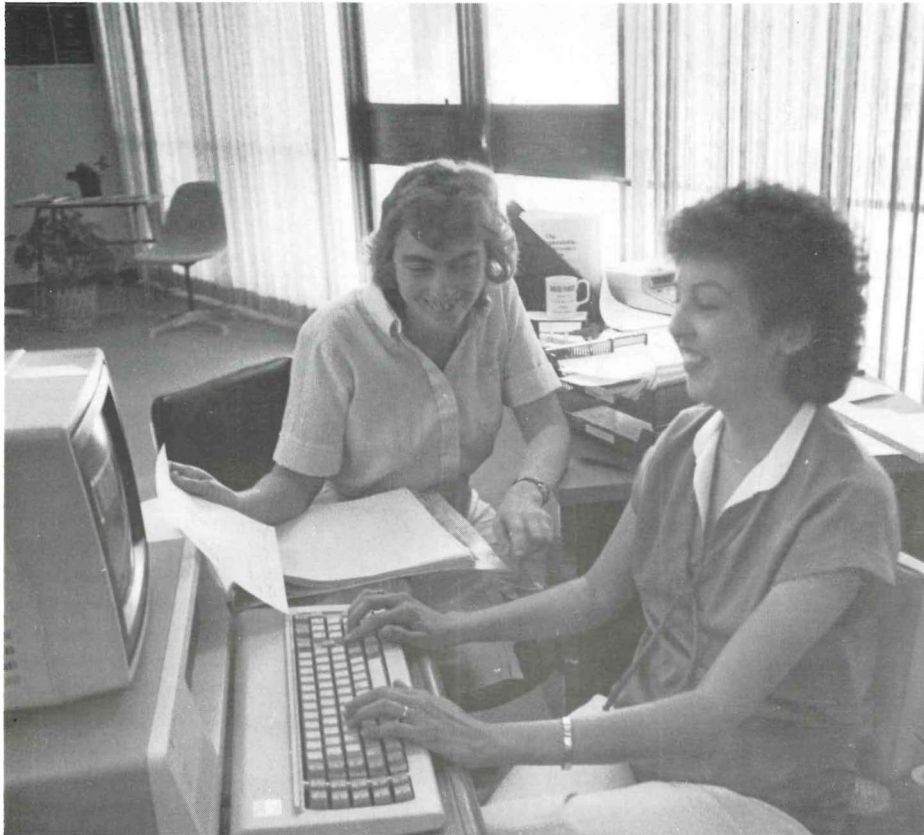
Wastewater Treatment Facilities. Doug Clark, UNM.

- *An Investigation into Water Use by and Salinity Effects upon Trickle Irrigated Grape Production in the Southern Basin and Range Province of New Mexico.* Peter Wierenga, crop and soil sciences, NMSU.
- *Sport Fisheries Computer Model Application in New Mexico.* Richard Cole, fishery and wildlife sciences, NMSU.



A theorist is most at home at his blackboard says Vincent Gutschick. The New Mexico State University associate professor of biology recently received funding to study the physiology of alfalfa for water use efficiency.

Keeping research on track



Darlene Reeves (left) checks with Toni Martinez for an updated budget.

Once during a radio interview, Tom Bahr described the WRRRI staff as "lean and mean." The staff, listening in, cheered.

Bahr said that as WRRRI director his only job is to talk on the phone. However, he does have other responsibilities.

Getting money ranks first. "Money makes things happen, and the success of the research program depends on continued support from the state and from federal grants," he said. To maintain that support, Bahr briefs the legislature on the state's water problems and research needs and makes sure the institute responds to legislative requests.

For example, at the request of the legislature, the institute examined the state's water data management system and subsequently compiled a statewide directory of water resources information. That directory is available free from the institute.

Anticipating research needs comes second. "We identified the direct utilization of brackish ground water as a major research thrust

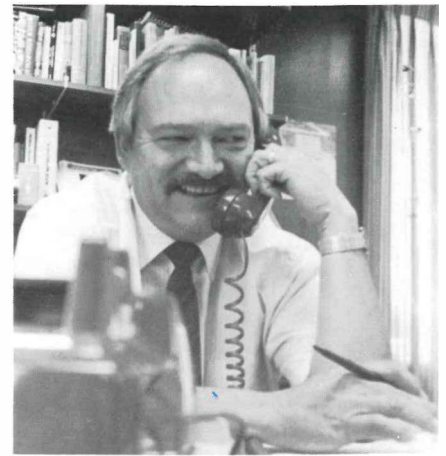
before it became a national concern. Because state funding gave us the research lead, we had the edge when the time came to compete for national funds," he said.

Maintaining visibility is the third aspect of his job. "We hope," he said, "that local, state and national leaders look to us for information on important water resources problems." He is a member of several regional and national water resources committees.

Locally, the institute has gained attention from its association with the legal dispute in which El Paso, Texas, wants to import ground water from New Mexico. Bahr is chairman of a joint powers committee, which is coordinating technical studies to evaluate the impact of El Paso's request.

He has spent so much time with lawyers that his staff gave him a baseball cap sporting the title "Quasi-lawyer."

Bob Creel, the newest member of the WRRRI staff, is not a newcomer at all. From 1972-73 he was the institute's assistant to the director. "Staffing hasn't changed that much



Tom Bahr in his standard working pose.



Linda Harris busy processing words.

since I left, but everything is now done on a bigger scale, with more funds, more projects and more reports," he said.

Creel, an agricultural economist, holds degrees from NMSU and the University of New Mexico. He will devote 60 percent of his time to the institute and 40 percent to the department of agricultural economics as a college assistant professor.

In his return as program advisor, Creel will assume his earlier responsibility for reviewing proposals and assisting in the technical aspects of research in progress.

It is his new responsibilities that reflect the institute's growth. He will help prepare the long range water plan for the university, and study options for strengthening the institute's interface with academic programs.

Student involvement in water research is one of the institute's three missions. An average of 90 students a year work on institute sponsored research.

Creel's major contribution to the institute could be his computer ex-



Bob Creel (left) calls our publication numbers while Janice Apodaca checks them against the computer printout.

advertise. He teaches a course called "Computer Application in Agriculture," and is the chairman of the Agricultural College Computer Advisory Committee and a member of the NMSU Computer Advisory Group.

Although the institute's accounting system, project tracking and library search are computerized, Creel will look for more ways to streamline those systems.

Darlene Reeves began at the institute 12 years and four directors ago. "The director sets the tone for the institute. Each one was very different but very good to work for," she said.

"When I first started," she said, "the institute dealt only with research. We have added an information program and fulfill a more statewide role now."

She said the legislature and the governor's office more often call upon the institute to assist in state projects. She is a native of Santa Fe and an NMSU graduate.

As the project coordinator, Reeves oversees research project administration from the proposal

stage through the end of the project. Although only about a dozen new projects start up each year, she monitors about 50 projects in progress.

She also keeps the researchers informed on project finances. "We always have ones who overspend and ones who underspend and both types are challenging," she said.

Reeves also is the contact between the researcher and the funding agency. Researchers with questions about the budget can give her a quick call for the answer, but call before her work day ends at 3:00 p.m.

Accounting Clerk Toni Martinez is at home at the computer where she also keeps an eye on the budget. Before coming to work part-time at the institute, she was in NMSU's crop and soil sciences department where she "watched so the professors didn't overspend."

She spent several years living in other areas of New Mexico and Arizona before returning to her hometown of Las Cruces. She is a single parent of two boys, nine-year-old Jose and six-year-old Mario.

In her job as information coordinator Linda Harris deals with words, not money. She is the Divining Rod editor, the video writer/producer, the newswriter and the technical publications editor. Even her responsibilities as water conference coordinator end up as thousands of words.

Writing about water research is never boring, she said. "How could it be when one time I'm writing about the El Paso suit and the next time I'm trying to explain how algae remove metal ions from water?" Because Harris grew up in El Paso and graduated from NMSU, she claims pure objectivity about the El Paso suit.

The most difficult part of her job is getting researchers to meet their technical completion report deadlines. At any one time, her white tracking notebook contains about 20 reports filed under various production categories. "My favorite category is called 'at the printers,'" she said.

When a report comes back from the printers, Lucy Gaines takes over. As the institute's only student employee, she is also the report binder, copier and mail clerk. She spent a year as a foreign exchange student in Sweden and is a communications major.

Janice Apodaca, the reports layout/typist, is the other half of the red ink team that works on the technical completion reports. She is also the person behind the water conference proceedings, the water directory and the annual report.

She was once awarded a medal of courage for transcribing three water conference speeches in a row without complaint. "I really earned it," she said, in accepting the award.

Her new responsibilities include assisting Creel in managing the reference library. She will finish computerizing the library listings and maintain those files. The Las Cruces native is the owner of one dog, six cats and come August, a brand new baby.

Staff member Peter Herman is on leave of absence at the Karolinska Institutet in Stockholm, Sweden. "Peter Herman had the chance to work at an internationally renowned laboratory. We are pleased that he could take advantage of that rare opportunity to pursue his research interests," said Bahr.



The 1986 Water Directory is nearly as tall as Lucy Gaines, the institute's student employee. The latest directory is being mailed to all New Mexico Divining Rod subscribers. Others may obtain copies upon request from the institute.

31st Annual New Mexico Water Conference
"Managing the River"
 October 23-24, 1986
 Hilton Hotel
 Santa Fe, New Mexico

Reports--Come and get 'em

- #166 -- *Proceedings of the 30th Annual New Mexico Water Conference, "Megatrends in Water Resources"* --Harris, L. G., ed. (Copy charge: \$5)
- #172 -- *Sodium Sealed Microwatersheds and Skip-rowing for Water Harvesting and Cropping on Limited Rainfall* -- Fuehring, H. D.
- #176 -- *Runoff Model for Watersheds of Nonhomogeneous Hydrologic Characteristics* -- Heggen, R. J.
- #191 -- *Estimating Crop Water Production Functions Based on Transpiration and Crop Growth Curves through Modeling* -- Mapel, C. L.; Sammis, T. W. and Lansford, R. R.
- #192 -- *Preconditioning Cotton to Improve Water Use Efficiency and Conserve Irrigation Water* -- Brar, A. S. and Fowler, J. L.
- #193 -- *Afghan Pine Irrigation Strategies from Non-weighing Lysemetry Studies and Evapotranspiration Models* -- Fisher, J. T. and White, R. W.
- #195 -- *Combining Nutrient Removal with Protein Synthesis Using Water Hyacinth-Freshwater Prawn Polyculture Wastewater Treatment System* -- Jacques, R. B. and Zachritz, W. H. II
- #196 -- *Pecan Nut Yield and Tree Growth as Influenced by Irrigation* --Sammis, T. W. and Lansford, R. R.

- #197 -- *An Integrated Isotopic/Physical Approach to a Numerical Model of Groundwater Flow in the San Juan Basin* --Phillips, F. M. and Tansey, M. K.
 - #198 -- *Evaluation of Salinity Tolerance of Russian Thistle to Determine Its Potential for Forage Production Using Saline Water* --Fowler, J. L. and Hageman, J. H.
 - #199 -- *Yield and Composition of Kochia Forage as Affected by Salt Concentration of Irrigation Water and Leaching Percentage* -- Fuehring, H. D. and Finkner, R. E.
 - #200 -- (Full Report) *State Appropriation of Unappropriated Groundwater: A Strategy for Insuring New Mexico a Water Future* --DuMars, C. T. et al.
 - #200 -- (Summary) *State Appropriation of Unappropriated Groundwater: A Strategy for Insuring New Mexico a Water Future* -- DuMars, C. T. et al.
 - Misc. #14** -- *Water Directory: Where to get water information in New Mexico, 1986* -- Harris, L. G., ed.
- VIDEO
 (Available on 10-day loan)
V6 -- *New Mexico Water Rights: A Legal Perspective* (interviews with State Engineer Steve Reynolds and water rights holders on acquiring water rights) 23 min.

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 Linda G. Harris, editor

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