



## Symposium Draws Crowd

It was standing room only at the institute's Nov. 10 symposium on water policy. Besides drawing the largest registration of any institute meeting, it also drew active discussion of water policy issues affecting New Mexico.

Gov. Toney Anaya, speaking at the symposium a little more than a week after his election, said, "We want a water policy that will enable us to grow economically, but at the same time will protect our environment and the quality of life."

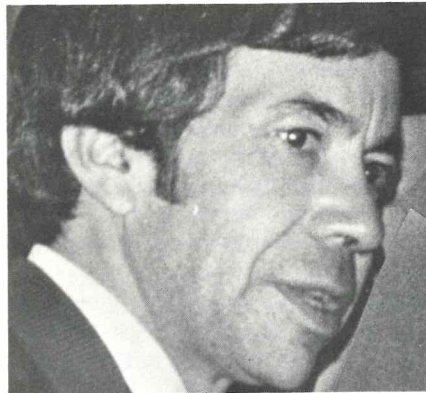
While acknowledging the importance of water availability, he said, "The focus of this administration will also be on water quality and water conservation measures." He also endorsed the institute's efforts to obtain funding for saline water research.

Tom Bahr, director of the Office of Water Policy in the Interior Department, told the morning session, "The cornerstone of this administration's water policy is the recognition of the state's right to quantify, allocate and manage their own water resources."

State Engineer Steve Reynolds said if the federal government requires states to pay 100 percent of the cost of a project upfront, states would avoid federal participation. "Dissolving the state-federal partnership," he said, "would be most unfortunate and not in the national interest."

Jim Hughes, legislative aide to Sen. Pete Domenici, R-N.M., outlined a dozen issues in water resources including impacts of water shortages, cost recovery from water users and streamlining water laws.

State Rep. Hoyt Pattison told



Gov. Anaya outlines water policy in his speech at the symposium.

the group that New Mexicans "need to be certain that state government continues to fund essential water resources research

projects in New Mexico."

Several recommendations discussed at the three workshops generated lively debate at the general session. The proposal to negotiate settlements of Indian water rights raised questions about who would represent the parties in negotiations. The concern about the source of settlement money also was raised. One participant suggested that negotiations might be a way to eliminate the long delays in court procedures.

Other topics discussed included cost sharing, coordination between state and federal agencies, water research funding priorities, and industrial uses for saline water.

Registered symposium participants should receive their copy of the proceedings around the end of February.

## Conference on Water Quality

The 28th Annual New Mexico Water Conference will be held April 5-6 at the Albuquerque Convention Center. The New Mexico Water Resources Research Institute is jointly sponsoring the conference with the U.S. Geological Survey and the New Mexico Environmental Improvement Division.

"Our joint effort in presenting the conference will result in a comprehensive look at water quality in New Mexico," says George O'Connor, acting director of the WRRRI.

In the April 5 morning session, the EID will cover pollution in the Grants' mineral belt, water quality problems in Albuquerque's South Valley and hydrocarbon pollution. This session will feature a panel

discussion on protecting mountain stream quality.

That afternoon, the USGS, along with representatives from the State Engineer Office, the Bureau of Land Management, the Bureau of Reclamation and the Indian pueblos will talk about their water information needs. This session also will have a panel discussion on municipal water quality problems. An "information needs" poster session will follow immediately.

The WRRRI session on April 6 will cover research on hydrocarbon pollution, sediment runoff, ion exchange and water quality. The institute's research and information resources also will be outlined.

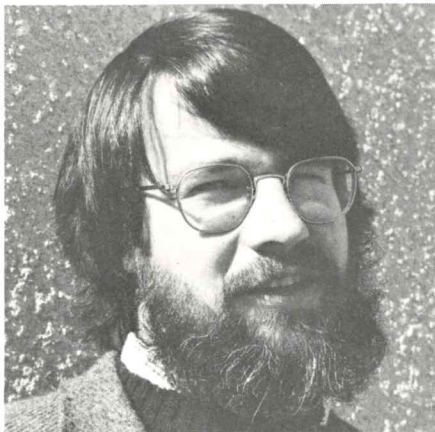
For more information write the WRRRI or call (505) 646-4337.

# Clark Award Given to Two

Wastewater treatment is not one of the glamour issues in research, but that doesn't concern two New Mexico State University civil engineering graduate students. All they care about is results. And as recipients of the John Clark Memorial Award totaling more than \$3,000, Aleksander Drohobyczer and Howard "Wink" Zachritz now have more incentive to pursue those results.

Mrs. John Clark presented the awards recently in a ceremony at the New Mexico Water Resources Research Institute. John Clark was a professor of civil engineering at NMSU and served as the institute's director from 1971-76.

According to Drohobyczer, a doctoral student in environmental engineering, part of his \$2,045 award will be used to "fund ideas." He already has one in mind—a computerized instrument that will monitor the amount of gas generated by a laboratory simulated anaerobic wastewater reactor.



Aleksander Drohobyczer

His new project builds on results of a similar project in which he helped design a computerized biochemical oxygen demand (BOD) device used to measure the amount of oxygen required to break down organic matter in wastewater.

Drohobyczer came to New Mexico the roundabout way. He was born in Russia, grew up in Poland

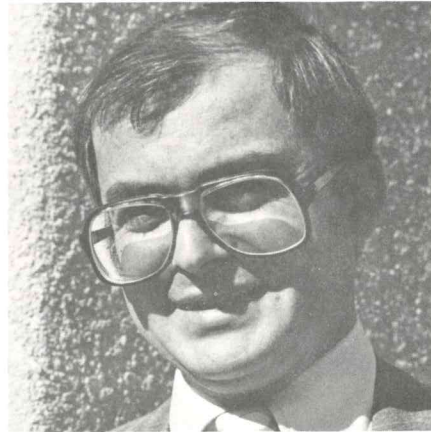
and studied civil engineering in Israel. He later earned B.S. and M.S. degrees in civil engineering from the Bosphorus University in Istanbul, Turkey.

While attending a seminar in Istanbul, he met John Hernandez who was then dean of NMSU's college of engineering. Hernandez convinced him of the opportunities in New Mexico. The chance for research plus curiosity about the Southwest persuaded Drohobyczer to sign on at NMSU for graduate work.

Wink Zachritz received a \$1,000 award which he will use to design a computer model for using secondary treated wastewater to grow freshwater shrimp. "I wanted to do something that would combine the natural science of zoology with environmental engineering," he says.

The St. Louis native is working toward a doctorate in environmental engineering with a minor in fishery and wildlife sciences.

Zachritz says he intends to grow



Howard "Wink" Zachritz

shrimp, and the aquatic plants to feed them, in wastewater that the system will treat to levels nearing drinking water quality. The harvested plants will be ground up and fed to the shrimp.

"Because food is a major cost in raising shrimp, one project goal is to determine the best diet for the shrimp," he says. The diet



Professor John Clark was the WRRRI director from 1971-76.

may include the snails and larvae that feed on the plants. This ecological aspect of the computer model will be incorporated into an engineering design that will determine requirements such as how long the water should stay in the system, its quality and temperature.

He admits that shrimp which has been produced in wastewater and sold for human consumption faces economic and social barriers. "But," he says, "at least I am beginning to approach that barrier."

Drohobyczer and Zachritz have benefited not only from the memorial award established in John Clark's name, but also from Clark's research. Clark designed the first automatic BOD recording device for wastewater treatment plants. He also organized the first New Mexico Water Sewage Short Course and directed the first National Science Foundation Summer Conference on Water Resources. The John Clark Memorial Award was established by friends and faculty after Clark's death in 1978.

One of Clark's former students, Conrad Keyes, Jr., is now the civil engineering department head. Keyes says that often without realizing it, the public benefits from wastewater treatment research. "The real goal in Clark's research, as well as that of these students, is to conserve water and to produce higher quality water for public use in the future," he says.

# Projects Receive Funding

## Interstate Stream Commission Grant Renewals

- Irrigation Cost Reduction and Energy Conservation through Upgrading of Pumping Plants on the High Plains. George Abernathy and Charles Hohn, agricultural engineering, NMSU.

- Model Development for Optimization of Sport Fisheries in the Rio Grande of New Mexico. Richard A. Cole and Paul Turner, fishery and wildlife sciences; Frank Ward, agricultural economics; and Timothy Ward, civil engineering, NMSU.

- A Selective Breeding Program to Improve Water Efficiency and Nutritive Acceptability of Kochia as a Forage and Grazing Crop. Ralph E. Finkner, H.D. Fuehring and W.W. Stallings, Plains Branch Agricultural Experiment Station, NMSU.

- Selecting Genotypes of Valencia Peanuts for Salt Tolerance and Efficient Saline Water Utilization. David Hsi, Middle Rio Grande Agri-

cultural Experiment Station, NMSU.

- Developing an Irrigation Scheduling Methodology. Bob Hulsman, agricultural engineering, NMSU.

- Evaluation of the Potential to Improve Alfalfa for Production Under Less Than Optimum Moisture Conditions. Bill Melton, agronomy, NMSU

- Determining the Consumptive Use and Salt Accumulation with Trickle Irrigation of Row Crops. P.J. Wierenga, agronomy, NMSU.

## U.S. Forest Service Grant

- A Pilot Study of Simulated Rainfall Runoff Processes Under Different Land Treatments on Volcanic Soils. Timothy Ward, civil engineering, NMSU.

## WRRRI Research Grant Renewal

- Sodium-sealed Miniwatershed System for Crop Production with Limited Rainfall. H.D. Fuehring, Plains Branch Agricultural Experiment Station, NMSU.



Agronomist Dale Fuehring checks rainfall runoff which has been "harvested" from the salt-sealed beds at right. The research project has been renewed for another year.

# Recent WRRRI Publications

#152 *The Mechanisms of Poliovirus Inactivation by Chlorine Dioxide and Iodine and the Effects of Cations on Halogen Inactivation* - Alvarez, M.E. and O'Brien, R.T. - June 1982

#153 *Recharge in Semiarid Mountain Environments* - Gross, G.W. - June 1982

#154 *An Assessment of the Impact of Recreational Development of Water Quality and Yield in Small Forested Watersheds* - Fowler, J.M., et. al. - August 1982

#157 *Effects on Coal Burning in New Mexico on Air Quality and Surface Water Quality: Raton Study Area* - Popp, C.J., et. al. - November 1982

# Positions Open

The Department of Civil Engineering and Engineering Research Institute at Iowa State University has openings for two tenure-track faculty positions. A water resource engineer position will be available in August 1983 with an application deadline of Feb. 1, 1983, or until position is filled. A sanitary engineer position is available now. For information write: Dr. Carl E. Ekberg, Jr., Head, Department of Civil Engineering, 390 Town Engineering Bldg., Iowa State University, Ames, IA 50011, or call (515) 294-4975.

# Courses Offered

Manhattan College is offering three courses in pollution control for practicing engineers and scientists during May. The courses are Secondary, Tertiary and Toxics Treatment; Modeling of Toxic Substances in Natural Water Systems; and Quality Models of Natural Water Systems. For information write: Kathryn King, Environmental Engineering and Science Program, Manhattan College, Bronx, N.Y. 10471 or call (212) 920-0277.

# New WRRRI Library Listings

The following publications are recent additions to the WRRRI library.

*Survey of Employment Opportunities in Water Resources*. 1982. American Water Resources Association, Minneapolis, Minn.

*Water Rights Laws in the Nineteen Western States, Vol. I*. Hutchins, Wells A. 1977. Misc. Publication No. 1206, USDA, Washington, D.C.

*Six-state High Plains Ogallala*

*Aquifer Regional Resources Study*. Final Report. September 1982. U.S. Army Corps of Engineers, Southwestern Division. (one set only)

*Six-state High Plains Ogallala Aquifer Regional Resources Study*. Final report to the High Plains Study Council. 1982. High Plains Associates. (one set only)

*Application Kit for Research or Demonstration Assistance*. EPA. 1982.

# NM Stunned by El Paso Ruling

U.S. District Judge Howard Bratton, leveling blow after blow to New Mexico's arguments justifying its ground water export ban, struck down the state's law in a decision Jan. 17.

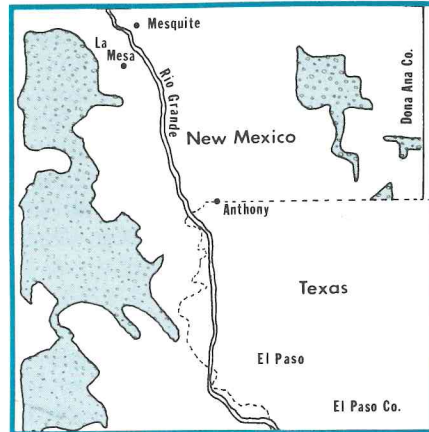
The severity of the ruling stunned New Mexico. Bratton's decision comes more than two years after the city of El Paso filed suit against New Mexico challenging the state's ban on interstate transfer of ground water. El Paso contended that the ban violated U.S. constitutional protections for interstate commerce.

Bratton agreed. In his decision, he cited the Supreme Court's recent decision in **Sporhase v. Nebraska** in which the court ruled that water is an article of commerce and that states are therefore limited in their power to ban its export.

New Mexico contended that the purpose of the embargo is to promote New Mexico's economic advantage." This motive, he said, violates the interstate commerce clause. He said El Paso needs the water more than New Mexico because the city is the southwest's industrial and trade center. "What is good for El Paso is good for the entire region, including Southern New Mexico," Bratton said.

The federal judge also discounted New Mexico's contention

that El Paso's well pumping would violate the Rio Grande Compact. The 1938 compact apportioned Rio Grande water among Texas, New Mexico and Colorado. "Prior to the filing of this suit, defendants (New Mexico) never took the position that the com-



Blue areas are where El Paso wants to drill wells.

compact apportioned hydrologically connected ground water," he said.

George O'Connor, WRRRI acting director, was "surprised and disappointed by the extent which Bratton seems to have discounted all of New Mexico's arguments

justifying the embargo."

New Mexico legal officials agreed and intend to appeal the decision to the Supreme Court. New Mexico Attorney General Paul Bardacke said Bratton too narrowly interpreted the Supreme Court's **Sporhase** decision limiting states to blocking water export "only to the extent that water is essential to human survival."

Bardacke said New Mexico lawyers read the decision as justifying an export ban if a state is protecting its water for a wide range of health and welfare needs of its citizens. New Mexico's law meets that standard, especially since the law serves an arid state.

If the appeals are also struck down, El Paso will assume its place among New Mexico applicants for ground water rights. As such, El Paso would have to show that unappropriated water is available for use and that their appropriation would not impair the rights held by other users.

Until the decision is made on the appeals, the moratorium on drilling permits for new wells, including El Paso's application for 326 wells, will continue. Some exemptions to the moratorium include permits to replace a defective well, domestic wells and point of diversion transfers.

George A. O'Connor, acting director, New Mexico Water Resources Research Institute  
Linda C. Harris, editor

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