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Vol. VIII No. 2

New Mexico Water Resources Research Institute

May 1985

WRRI funds new projects

The WRRI Program Development and Review Board has selected 12 projects for funding in the 1985-86 fiscal year for a total value of \$277,219. The average value of a project is \$23,101. The board selected the projects from 25 submitted proposals. Last year, 36 proposals were submitted with 13 receiving grants.

NEW PROJECTS

- Field Study of Ephemeral Stream Infiltration and Recharge. Daniel Stephens, geoscience, NMIMT.
- The Survival and Growth of Commercially Valuable Marine Bivalves in New Mexico's Saline Groundwaters. Barry Goldstein, New Mexico Solar Energy Institute.
- Development of Correspondence Training Courses for Water and Wastewater Laboratory Analysis.
 Doug Clark, Laboratory Consultants.
- Water Resources Archive. Darlis Miller, history, library, NMSU.
- Hazardous Organic Wastes from Natural Gas Production, Processing and Distribution; Movement of Wastes into Drinking



New Mexico State University research specialist John Grassham shelves one of the hundreds of publications he cataloged during his year of compiling Elephant Butte Irrigation District historical records. Although this project is nearly complete (see inside story), NMSU soon will begin similar work on Middle Rio Grande Conservancy District records.

- Water Supplies from Disposal Practices in New Mexico. Gary Eiceman, chemistry, NMSU.
- Refinement, Expansion and Validation of an Optimization Model for Sport Fisheries in New Mexico. Dick Cole, fishery and wildlife, NMSU.

RENEWALS

 Quantification of Groundwater Recharge in New Mexico Using Bomb-36Cl as a Soil Water Tracer, Phase II. Fred Phillips, geoscience, NMIMT.

- Somatic Cell Selection for Genetic Improvement of Water Use Efficiency in Crop Plants Using Alfalfa as a Model System, Phase I. Greg Phillips, horticulture, NMSU.
- Stream-Aquifer Interaction: Influence of Variably Saturated Subsurface Flow, Phase II. Raz Khaleel, geoscience NMIMT.
- Surge Flow Irrigation on Closed Borders to Conserve Water.
 Robert Hulsman, agricultural engineering, NMSU.
- An Investigation into Water Use by and Salinity Effects upon Trickle Irrigated Grape Production in the Southern Basin and Range Provence of New Mexico, Phase II. Peter Wierenga, crop and soil sciences, NMSU.
- Groundwater Basin Parameter Estimation and Simulation under Uncertainty, Phase II. John Wilson, geoscience, NMIMT.

New Mexico Water Conference
Oct. 24-25, 1985 - Corbett Center
New Mexico State University
Las Cruces, New Mexico

Look for your notice this summer!

Reports, videos ready

Publications

#161 - An Evaluation of Sediments in the Middle Rio Grande, Elephant Butte Reservoir and Caballo Reservoir as Potential Sources of Toxic Materials - Popp, C.J.; Brandvold, D.K. and Lynch, T.R. - March 1985

#165 - Landsat Monitoring of Irrigated Farmland Acreage in Curry County, New Mexico - Inglis, M. and Budge, T.K. -February 1983

#170 - Irrigated Agricultural Decision Strategies for Variable Weather Conditions - Landsford, R.R. et al. - June 1983

#179 - The Effects of Decreased Watering on Wheat and Barley Yields - Sammis, T.W. and Smeal, D. - January 1983

Archiving 80 years of records for the Elephant Butte Irrigation District (EBID) was like sorting through someone's attic. Old newspapers, photographs of men wearing handlebar moustaches, crumbling ledgers, letters, and documents written in Spanish tell the saga of four generations.

But unlike an attic relative, New Mexico State University research specialist John Grassham couldn't spend hours pouring over his finds. As an archivist for the EBID project, his job was to handle each piece of history only long enough to collect, clean and catalog it.

His work, however, will make it easier for others to research the

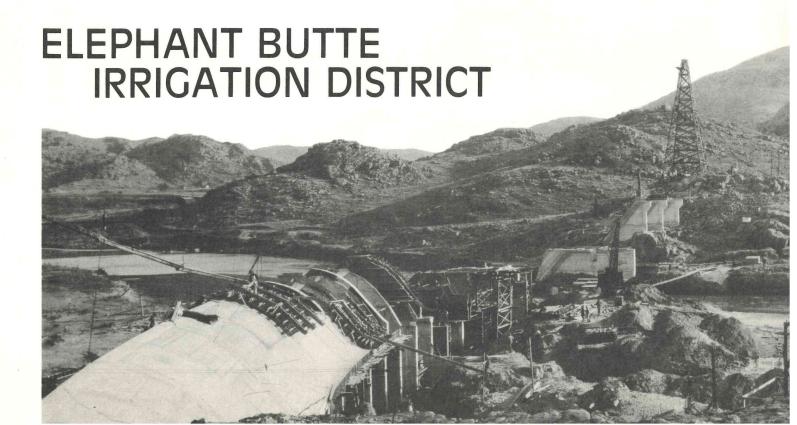
history of Elephant Butte Dam and New Mexico's largest irrigation district.

Grassham is part of a team of archivists and historians who have been working on the project for the past year. Austin Hoover, NMSU library archivist, knew the district had a warehouse full of records dating back to 1905, so he and NMSU history professor Darlis Miller approached the district with the idea of archiving the records. They then took their proposal to the Water Resources Research Institute, which funded the one-year project for \$23,000.

Last summer, Grassham loaded all the records into cardboard boxes and moved them from EBID's bustling Las Cruces headquarters to a large, quiet room inside the library's archives. In this sanctuary, Grassham, using the tools of his trade—drafting powder and a 3" wide paintbrush—cleaned the collection of records, maps, photographs and letters. He then grouped the materials by general category and filed them in acid free folders to prevent further decay. This solitary task took seven months.

He says just when he felt the most overwhelmed, "the pieces fell together." In the next three months, he sorted the materials by specific topic, cataloged them and stored them in permanent containers, which were also acid free.

He credits a 1905 district employee, probably a "good secretary with training in the decimal system of record keeping," for



#182 - Proceedings of the New Mexico Water Resources Research Institute Symposium "Water and Science" - April 1985 (Copy charge: \$5)

#183 - Developing an Irrigation Schedule Methodology - Hulsman, R.B. - January 1985

#184 - Preferences for Managing New Mexico Water - De Young, T. - November 1984

Videos

(Available on 10-day loan)

V2 - Taking Advantage (Saline

research at Roswell) 11 min. - October 1984

V3 - Water in the Desert (WRRI research highlights) 30 min. - February 1985

V4 - The W-R-R What? (Focus on WRRI) 12 min. - March 1985

setting up the early records. This system was religiously maintained for about 25 years. Whoever started the system had a rational sense of order and a good eye for history. "You can tell by their historical approach to record keeping that they were thinking of the future."

Cataloging records dating from the 1930s on was more difficult. Grassham says during the latter period the formal system of record keeping grouped the records by general topics such as audit reports, legislative records and weather modification.

Grassham also did a little detective work of his own. For example, he discovered that certain letters scattered throughout the files were marked with the number 60.

When he collected the letters, they all turned out to be from the same time period. They filled in a gap in the records. However, he says he still doesn't know what 60 stands for.

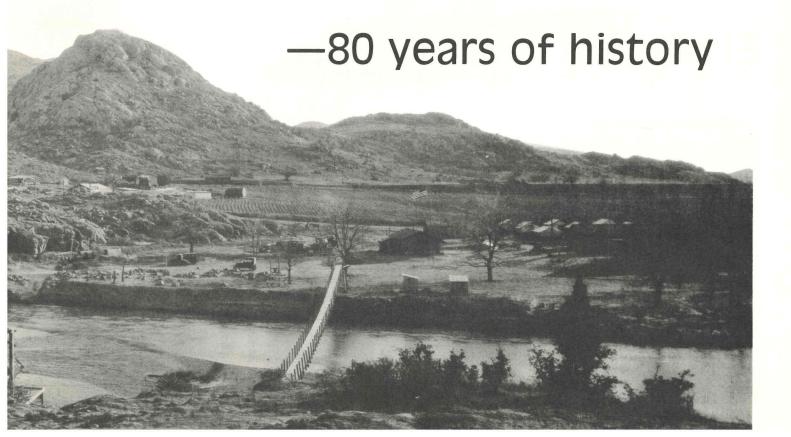
For two hours each morning, historian Ira Clark, NMSU professor emeritus, joins Grassham. Clark sifts through the records, providing the historical perspective necessary to the archive project. He has written an exhaustive book that covers the history of water in New Mexico from prehistory to 1983. Water in New Mexico: A History of Its Management and Uses will be published early next year by the University of New Mexico Press.

Grassham says the records, which track the careers and pol-

itics of many influential men, would make great material for biographies. The history of the community formed around the dam's construction also would make a block buster book.

Historians aren't the only ones who will want to study the records. Hydrologists, water management experts, attorneys, and civil engineers all could benefit from the archived records.

When completed in June, Grassham expects the archive project will include nearly 200 boxes covering some 30 topics, as well as maps, books and photographs. Each record will be indexed for reference and retrieval. Eventually, the records will become part of NMSU's Rio Grande Historical Collection.



State gets boost from water laws

In one of the most chaotic legislative sessions in memory, New Mexico legislators seemed to agree only on one issue—the importance of water to New Mexico. Gov. Toney Anaya also agreed and on April 4, 1985, he signed three bills that are significant to the state's water resources.

House bill 191 appropriates \$900,000 to the cities of Alamogordo and Las Cruces; Dona Ana, Lincoln and Otero counties, Elephant Butte Irrigation District, the State Land Office, and New Mexico State University.

The money will be used for hydrological, legal and technical studies to evaluate the impact of El Paso's pending requests to appropriate New Mexico groundwater. New Mexico will use information from the studies in administrative hearings before the state engineer. The state engineer office has scheduled hearings on El Paso's applications for May 1986.

An eight-member committee made up of representatives of

each of the participants and the governor's office will determine specific studies that will support their common interests. The committee, acting through a joint powers agreement, also will decide how the funds will be spent. The bill, which takes effect immediately, requires the studies to be completed by the end of the 1987 fiscal year.

House bill 192 inserts consideration of public welfare and water conservation as criteria in the transfer of existing water rights. Previously, water rights transfers inside New Mexico were considered on the basis of whether the transfer would harm existing water rights and whether it would be in the public interest.

The public welfare and water conservation criteria had applied only to interstate transfers. However, U.S. District Judge Howard Bratton, who presided over the legal dispute between El Paso and New Mexico, said New Mexico's old law was discrimina-

tory. The new law eliminates that objection.

In addition, the new law allows anyone, or any organization, to protest a water rights transfer on the grounds that the transfer would be contrary to conservation and detrimental to the public welfare. Previously, only those whose water rights would be directly affected by the transfer were allowed to protest.

House bill 399 gives municipalities, counties and public utilities the leeway to acquire and hold, unused, water rights to supply their needs within 40 years. The 40-year planning period allows for the reasonable development and use of water resources. The new law exempts these groups from the beneficial use clause, which states that a water right not put to beneficial use within four years must be forfeited. Cities now have the option of either holding or renting their water until needed as long as they do not exceed the 40-year limit.

Thomas G. Bahr, director, New Mexico Water Resources Research Institute Linda G. Harris, editor

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(Address correction requested)

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