ARIZONA WATER RESOURCES NEWS BULLETIN

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Farming Opportunities on Indian Reservations

American Indian lands comprise approximately 52 million acres in more than 26 states. Many reservations have land and water resources that have potential for agricultural development. Three land and water management alternatives for reservation farm development are discussed in a report by the University of Arizona's Laboratory of Native Development, Systems Analysis and Applied Technology (NADSAT).

The primary focus of the report is the development of tribal farms, either as tribal government enterprises or as farms individually owned and operated by tribal members. Various aspects of financing, budgeting, and selecting and developing sites, and managing these two types of farms and possible constraints are discussed.

A second land management alternative discussed in the report is leasing reservation land to non-tribal members. The attitudinal basis of the decision to lease and technical aspects of the lease are stressed, including the importance of clarifying water rights.

The legal aspects of selling and/or trading water on Indian reservations have not been completely explored according to the report. In many cases, the water must be used if the reservation is to retain the water rights. If the reservation is not currently using the water, an alternative would be to sell it for urban, industrial or commerical use, or to trade fresh water for effluent. However, the final authorization for any decision to sell or trade the water must be made by the Secretary of the Interior.

Although the report is intended primarily for use by American Indian tribes in the Southwest, many aspects of the report could be used by other tribes faced with similar choices and problems. The information is presented to stimulate discussion of the issues involved and to suggest some of the alternatives available to the tribes.

The report, authored by N. Gene Wright, Allyn Spence and Monika Escher, was prepared as part of the NADSAT Program, funded by the W.K. Kellogg Foundation. NADSAT is administered by the University of Arizona's Office of Arid Lands Studies. NADSAT provides technical assistance and transfers specific land resource management technology to Indian tribes in the arid and semiarid western United States.

Copies of the report, *Land and Water on Indian Reservations: A Farming Opportunity*, are available from the University of Arizona, College of Agriculture, Office of Arid Lands Studies, 845 North Park Avenue, Tucson, Arizona 85719.

Pima County Water Quality Ordinance

In December 1982, the Pima County Board of Health appointed a blue-ribbon committee to provide technical advice on matters relating to water quality and public health. Committee members included University of Arizona professors Sol Resnick and L. Gray Wilson (Water Resources Research Center), Gary Amy (Civil Engineering Department), John W. Clayton (Pharmacology and Toxicology Department) and Charles P. Gerba (Nutrition and Food Science Department).

Efforts of this committee have resulted in the Pima County Board of Supervisors' adoption of Ordinance 1983, which requires testing of wells for the presence or absence of volatile priority pollutants. If the results of a well-water

analysis show the presence of an unsafe level of a contaminant, the Pima County Health Department will require further testing, public notice and other appropriate actions.

Regulations of the ordinance apply to any water system in Pima County excluding one that: a) consists only of distribution and storage facilities; b) obtains all of its water from a water system to which this ordinance applies; and c) does not sell water to any person. Ordinance 1983 also requires an annual permit fee of $25 per operating well.

Arizona Department of Water Resources
News Briefs

Well Discharge Measurements

Water measuring devices must be in operation on all non-exempt wells by January 1, 1984. The 1980 Groundwater Management Code requires monitoring groundwater withdrawals in all of Arizona's overdrafted active management areas (AMA) and irrigation non-expansion areas (INA). Affected wells are defined as those with a pump capacity of more than 35 gallons per minute or that irrigate more than 2 acres. A list of acceptable water measuring devices is provided in *Engineering Bulletin I*, available at AMA offices in Phoenix, Tucson, Prescott, and Casa Grande and at county extension offices in affected counties.

Well Spacing

Temporary well spacing rules have been adopted by the Arizona Department of Water Resources to provide criteria for issuing well drilling permits. A five-year projected water level drawdown in neighboring wells of less than 10 feet would be acceptable; rates from 10 to 25 feet would require additional investigation and notification to neighboring well owners; a projected rate exceeding 25 feet would be cause for rejection of permit applications. The applicant then would have the option of amending his application, changing the well location, or obtaining his neighbor's consent. Applications for multiple wells, or any well with a pump capacity exceeding 500 gallons per minute must include a hydrological study of projected drawdown effects. Opportunities for public comment are being planned before permanent rules are adopted. Copies of the temporary rules can be obtained from the Arizona Department of Water Resources, Operations Division, 99 East Virginia Avenue, Phoenix, Arizona 85004.

Prescott Groundwater Quality

A recent study of groundwater conditions in the Prescott Active Management Area (AMA) confirms the excellent chemical quality of the groundwater supply. The study, part of the Arizona Department of Water Resources Hydrologic Map Series, provides a data base for the continued monitoring of groundwater conditions in the Prescott AMA.

Copies of the report, *Hydrologic Map Series, Report Number 9*, can be purchased for $1.50 from the Arizona Department of Water Resources, Basic Data Unit, 2810 South 24th Street, Suite 122, Phoenix, Arizona 85034, or from the Prescott AMA Office, 1555 Iron Springs Road, Suite 12, Prescott, Arizona 86301.

Grandfathered Rights

The first certificates of grandfathered groundwater rights were issued by the Arizona Department of Water Resources in February 1983. Rights of certificate recipients to pump or use groundwater cannot be challenged. Also, the rights can be sold to a new user.

Grandfathered Rights Registry

In May 1983, the Arizona Legislature extended the deadline for filing for grandfathered groundwater rights to July 1, 1983. As required by law, the Department of Water Resources has published a registry of all persons who have applied for grandfathered rights between the original statutory deadline (September 14, 1981) and the new deadline (July 1, 1983).

Any person residing in an active management area (AMA) may file a written objection to any application in the same AMA. Objections may be made only if information in the application is believed to be incorrect or insufficient to issue a certificate.

Information contained in the registry includes the applicant's name, the type of grandfathered right sought, the location of water use, the number of acres irrigated and the annual amount of groundwater used. The registry is available for inspection at the Phoenix, Tucson, Prescott and Pinal AMA offices. Written objections must be filed with the DWR Phoenix office on or before September 21, 1983.

American Water Resources Association Annual Conference

The American Water Resources Association will conduct its 19th Annual Conference and Symposium October 9-13, 1983. The sessions will be held at the Hyatt Regency on the River in San Antonio, Texas.

The conference theme is *analysis and management of land drainage and flood waters*. The program will feature more than 20 technical sessions on the following topics: planning for stormwater runoff, nonpoint source water pollution problems, stormwater quality, floodplain management and flood control planning, water resources computations by microcomputer, and remote sensing — a tool for planning.

The symposium theme is "regional and state water resources planning." Fifteen technical sessions will address the following topics: changing roles in water resource financing, federal vs. state vs. regional responsibilities, water importation or interbasin transfer issues, and state and regional groundwater management issues.

Registraton information can be obtained from Kenneth D. Reid, Executive Director, American Water Resources Association, 5410 Grosvenor Lane, Suite 220, Bethesda, Maryland 20814.

Call for Papers

AWRA Conference

The American Water Resources Association will hold its Twentieth Annual Water Resources Conference August 13-16, 1984, in Washington, D.C. The conference, "Overcoming Institutional and Technical Constraints to Water Resources Management," will address institutional aspects of water management, water management technology, and data, research, and assessment needs.

The conference will include a symposium on the "options for reaching water quality goals." Papers are invited on institutional and technical aspects of surface water and groundwater pollution control.

The deadline for submission of abstracts is November 15, 1983. Three copies are required. Abstracts should not exceed 200 words and must include the title of the paper, all authors, and their affiliations. The submitting author must include, on a separate page, full mailing addresses and telephone numbers for each author.

Abstracts for the conference should by submitted to either Warren Viessman Jr., Department of Environmental Engineering Sciences, University of Florida, A.P. Black Hall, Gainesville, Florida 32611, or Claire Welty, U.S. Environmental Protection Agency (WH-565B), 401 M Street S.W., Washington, D.C. 20460. Abstracts for the symposium should be submitted to Theodore M. Schad, National Academy of Science, 2101 Constitution Avenue, Washington, D.C. 20418.

ASCE Conference

The Irrigation and Drainage Division and the Arizona Section of the American Society of Civil Engineers will sponsor a conference titled "Water — Today and Tomorrow" in Flagstaff, Arizona, July 24-26, 1984. A variety of technical sessions consisting of invited and contributed papers are planned.

Authors are invited to submit a one-page abstract. Participants whose papers are selected for presentation will be notified in November 1983. Abstracts should be sent to: Dr. John A. Replogle, U.S. Water Conservation Laboratory, 4331 East Broadway Road, Phoenix, Arizona 85040; or to Dr. Kenneth G. Renard, Southwest Watershed Research Center, 2000 East Allen Road, Tucson, Arizona 85719.

Water for the 21st Century

An interdisciplinary conference on municipal, industrial and agricultural water supply problems of the southwestern United States will be held at Southern Methodist University, Dallas, Texas, April 3-5, 1984. The conference will emphasize the interface between technical alternatives and non-technical issues in meeting existing and anticipated water needs.

Papers are sought on the following topics: technological alternatives, engineering planning and management, resource use and conservation, economics, law and technology transfer. One-page abstracts should be submitted before September 15, 1983, to M.A. Collins, School of Engineering and Applied Science, Southern Methodist University, Dallas, Texas 75275.

Publications

A Handbook of Irrigation Water Management for Urban Water Users contains innovative methods for water use for parks, schools, golf courses and other irrigated urban areas. The handbook is designed to help irrigators help themselves through management improvements that may be required by law in the future. The handbook is available from the Hohokam Resource Conservation and Development Area Council Office, 2821 North 33rd Avenue, B-2, Phoenix, Arizona 85009 or from the Arizona Department of Water Resources, 99 East Virginia, Phoenix, Arizona 85004.

SAWARA

October 19 and 20, 1983 are the dates for the next SAWARA Town Hall Meeting "Tucson Water 1990" at the Tucson Community Center Meeting Rooms. For more information on the meetings contact the SAWARA offices at (602) 624-9000.

Urban Water Management: Augmentation and Conservation Symposium

The Arizona Section of the American Water Resources Association is sponsoring a one-day symposium on Urban Water Management: Augmentation and Conservation at the Sheration-Pueblo Inn in Tucson on October 21, 1983. The registration fee, which includes the cost of a copy of the proceedings, will be $20.00 for AWRA members and $25.00 for nonmembers. Registration fee will be collected at the door.

Invited Papers:

"Groundwater Management Act of 1980 and Urban Water Conservation," Dave Esposito, Arizona Department of Water Resources, Tucson, AMA.

"Tucson Water Scenario 1990," Mary Beth Carlile, Southern Arizona Water Resources Association and Jody Emel, Arizona Department of Water Resources, Tucson AMA.

"Tucson Effluent Reuse Alternatives," Stephen E. Davis, Tucson Water.

"Phoenix AMA Water Conservation Objectives Process," Robin Stinnett, Arizona Department of Water Resources, Phoenix AMA.

"City of Phoenix Water Conservation Education," Barbara Jordan, City of Phoenix.

"Potential Urban Rainfall Harvesting in Tucson," K. James DeCook, Water Resources Research Center and George Parker, City of Tucson.

"Residential Water Conservation System Design," Richard Brittain, College of Architecture and Kennith E. Foster, Office of Arid Lands Studies.

"SAWARA Water Augmentation Alternatives," A. Richard Kassander, Jr., Southern Arizona Water Resources Association.

"Water Harvesting on State Urban Lands in Tucson Area," Donovan Wilkin, School of Renewable Natural Resources and C. Brent Cluff, Water Resources Research Council.

"Desert Gardening Techniques," Melvin Schonhorst, Francisco Delgado, George Metzger, John Mayernack and Kelly McGowan, Department of Plant Sciences, University of Arizona.

"Low Water Use Landscaping: The Nursery Operator's Perspective," Ruth Cole, Cole's Native Plant Nursery, Tucson.

Future Perspectives

"Experimental Prototype Community of Tomorrow: The Kraft Land Pavilion," Merle Jensen, Environmental Research Laboratory, University of Arizona.

For further information contact Ken Foster, 621-1955, Office of Arid Lands Studies, University of Arizona, Tucson, AZ 85719.

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