ARIZONA
Water Resources

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ADWR Releases Findings of Water Management Plan Hearings

In April 1984 Arizona's Department of Water Resources (ADWR) promulgated the first management plans for the Tucson, Phoenix and Prescott Active Management Areas (AMAs) (see summaries *Arizona Water Resources News Bulletin*, 84-2 Summer 1984). Public hearings on the proposed plans were held in June. Based on the testimony and evidence presented at these hearings, ADWR has released the following modifications to the proposed management plans.

Municipal Conservation Programs

• A method for considering seasonal population in the calculation of per capita rates will be addressed during the planning process for the second management period.

• An approach to municipal conservation, which takes into account the residential and non-residential components of each provider's deliveries, will be considered during the second management period planning process.

• ADWR will consider a proposal to modify the provisions requiring per capita conservation by municipal providers that began serving new non-residential users between December 31, 1980, and December 31, 1984.

• The Phoenix, Prescott and Tucson management plans will be modified to allow municipal providers supplying unusually high percentages of their total deliveries to non-residential users to be treated as "special providers." The modification recognizes that the water use patterns of these providers cannot be adequately characterized by a gallon per capita per day (GPCD) rate.

• The provisions governing compliance by municipal providers with the applicable maximum GPCD rate will be modified. Compliance will be determined each year based on whichever of the following methods results in the lower rate for the year in question: the GPCD rate for the year in question or the average rate for the year in question and the preceding two years. The running average approach provides an equitable mechanism for determining compliance during periods of high temperatures and low precipitation.

• Conservation measures appropriate for individual users will remain mandatory. This will establish consistent AMA-wide restrictions on municipal water use associated with turf-related facilities, landscaping along public streets and highways, and privately owned large bodies of water that are used for landscape, scenic or recreational purposes. Also, separate water application rates for existing and new turf-related facilities will be established.

• Lists of low-water-use plants will be reviewed and incorporated as appendices to the management plans.

• Conservation requirements for distribution systems of municipal providers that begin serving non-irrigation uses before January 1, 1985, will be modified. The upper limit on the amount of unaccounted-for water in municipal distribution systems will be changed from 5 percent to 10 percent.

Industrial Conservation Programs

• For turf-related facilities, the provisions governing compliance with the average annual water application rate will be determined on the basis of whichever of the following methods results in the lower rate: the water application rate for the year in question or the average rate for the year in question and the two preceding years.

• ADWR will take under advisement a proposal to increase the water application rate for existing and new golf courses.

• The maximum allowable turfed acreage for cemeteries that qualify as new turf-related facilities will be changed from 50 percent to 75 percent. The restriction on turfed acreage will not apply to expansions or modifications of existing cemeteries.

• The quantity of blowdown water produced by a power plant will require calculation rather than measurement

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Arizona Department of Health Services • Arizona Department of Water Resources • Arizona State Land Department • Office of Arid Lands Studies • Water Resources Research Center

Publications

1982 National Resources Inventory

The U.S. Department of Agriculture's Soil Conservation Service has released the findings of its 1982 inventory of the nation's natural resources. John Block, Secretary of Agriculture, has described the inventory as "the most exhaustive and extensive survey the USDA has ever made of where our use of soil and water is taking us." The 1982 inventory used more than five times as many sample points as the 1977 inventory and, therefore, is accurate for much smaller geographic areas.

Copies of the report are available from: Resources Inventory Director, Soil Conservation Service, U.S. Department of Agriculture, P.O. Box 3890, Washington, D.C. 20013.

A Case Study of Dry Well Recharge

This report, written by L. G. Wilson, University of Arizona Water Resources Research Center, presents results of five injection tests conducted on an experimental dry well at a site near Tucson, Arizona. Dry well injection of urban runoff may develop perched groundwater systems capable of spreading injected water within the radius of influence of nearby wells. Also, given the pollutant loading rates of the test, groundwater was not deteriorated in quality.

Copies of this report are available from the National Technical Information Service, Springfield, Virginia 22161, as publication PB84-110865. Price codes: A04 in paper copy, A01 in microfiche.

A Guide to Information Sources for Water and Related Natural Resources

This guide was designed to present a broad spectrum of information sources available for water and related natural resources. Printed, computerized and national and Vermont State information resources are included. While some of the specific information is directed at Vermont users, the contents as a whole could be useful for resource managers and researchers nationwide.

The guide may be purchased from the University of Vermont, Vermont Water Resources Center, George D. Aiken Center, Burlington, Vermont 05405-0088; telephone (802) 656-4280. Copies are $7 each payable to the University of Vermont.

Pima County Water Hyacinth Pilot Treatment Plant

The University of Arizona's Office of Arid Lands Studies has published the results of a study (supported by Pima County Wastewater Management Department) reviewing water hyacinth treatment systems, recent bioengineering advances that improve treatment reliability and performance and problems encountered during water hyacinth treatment. The report concludes that a water hyacinth wastewater treatment facility is feasible in Pima County. The report offers a preliminary design, cost estimate, site analysis and an experimental operation schedule for a pilot treatment facility. An addendum to the report reviews potential uses of water hyacinths as a harvested by-product of the wastewater treatment process.

Copies of this report are available from the Office of Arid Lands Studies, College of Agriculture, University of Arizona, 845 North Park Avenue, Tucson, Arizona 85719; telephone (602) 621-1955.

Bibliography of Water-Resources Reports for Arizona through 1982

This bibliography is a listing of reports concerning the water resources of Arizona. Listings were obtained by computer search of the Water Resources Scientific Information Center (WRSIC), the National Technical Information Service (NTIS), and the American Geological Institute's GEOREF. This document was prepared by the U.S. Geological Survey in cooperation with the Arizona Department of Water Resources and was printed in cooperation with the University of Arizona's College of Agriculture.

Copies are available for $4 (payable by check or money order to the University of Arizona) from: Publications, Office of Arid Lands Studies, College of Agriculture, University of Arizona, 845 North Park Avenue, Tucson, Arizona 85719.

Hydrology and Water Resources in Arizona and the Southwest

Proceedings of the April 1984 meetings of the Arizona Section, American Water Resources Association and the Hydrology Section, Arizona-Nevada Academy of Science are now available. Topics discussed include water demand analysis, watershed management, water quality assessment and flood analysis.

Copies are available for $14 from: Arizona Section, AWRA, c/o Dale Wright, 845 North Park Avenue, Tucson, Arizona 85719; telephone (602) 621-1955.

ADWR Releases Findings (cont'd)

of the quantity produced. This will help avoid the maintenance problems associated with measuring poor quality water.

- The monitoring and reporting requirements for the sand and gravel sector relating to the average depth of each disposal pond, the expected life of each disposal pond, the method of silt removal and the specifications for each barge or sump pump, etc. will be deleted from the management plans.

- Monitoring and reporting requirements for other industrial users relating to the quantities of water used annually for landscape watering, cooling and industrial processes have been revised.

Groundwater Withdrawal Management Programs

No modifications will be made in the groundwater withdrawal management program as outlined in the proposed plans.

A full summary of hearings and findings can be obtained from ADWR, 90 East Virginia, Phoenix, Arizona 85004; telephone (602) 255-1554.

Conferences

National AWRA Conference and Symposium

A call for papers has been announced for the Twenty-First Annual AWRA Conference and Symposium, which will be held in Tucson, Arizona, August 11-16, 1985. "Water Demand—Sharing a Limited Resource" is the theme of the Conference, "Groundwater Contamination & Reclamation" is the theme of the Symposium. The deadline for submission of abstracts is November 15, 1984.

For information about the Conference write to: Dr. Yoram Gordon, Greenhorne & O'Mara Inc., 9001 Edmonston Road, Greenbelt, Maryland 20770. For information about the Symposium write to: Dr. Kenneth D. Schmidt, Groundwater Quality Consultant, 4120 North 20th Street, Suite G, Phoenix, Arizona 85016. The general chairman of the Conference and Symposium is Dr. Nathan Buras, Department of Hydrology and Water Resources, University of Arizona, Tucson, Arizona 85721.

Arizona AWRA Symposium

The Arizona Section, American Water Resources Association will convene its fall symposium, titled "Water Quality and Environmental Health," November 9, 1984, at the Sheraton-Pueblo Hotel, Tucson, Arizona.

For more information contact: Kennith E. Foster, Executive Secretary, Arizona Section, American Water Resources Association, c/o 845 North Park Avenue, Tucson, Arizona 85719; telephone (602) 621-1955.

Western Regional Ground Water Conference

The National Water Well Association (NWWA) has announced a series of four Ground Water Technology Division regional conferences that will focus on the hydrogeology of the western United States to be held in Reno, Nevada, January 15-16, 1985. Topics of interest will include: groundwater flow in fractured rock; radioactive isotopes in groundwater; selection of sites for disposal of nuclear waste; hazardous waste site investigations; the role of artificial recharge in groundwater management; remediating groundwater contamination; groundwater development in coastal areas; hydrogeology of the basin and range province.

For information write to: David M. Nielsen, Conference Coordinator, NWWA, 500 West Wilson Bridge Road, Worthington, Ohio 43085.

Deep Percolation Symposium

The Arizona Department of Water Resources, Department of Health Services, the Salt River Project and the U.S. Water Conservation Laboratory will host the 1984 Deep Percolation Symposium Wednesday, November 7, 1984, from 8 a.m. to 5 p.m. at the Safari Resort in Scottsdale, Arizona. The Symposium will focus on measurement of deep percolation. Topics of presentations will include the use of water balance determinations, and the use of tracers and isotopes.

The cost will be $25 per person (includes a copy of the Symposium proceedings). For more information, contact: Phil Briggs, Arizona Department of Water Resources, 90 East Virginia, Phoenix, Arizona 85004; telephone (602) 255-1554.

Arid Lands: Today and Tomorrow

A call for papers has been announced for the 1985 international arid lands conference, which will be held October 20-25, 1985, at the University of Arizona, Tucson. Papers on all topics relating to arid lands water use and conservation, agricultural systems and genetic resources, natural resource management conservation and reclamation, and human adaptations, migrations and habitations are welcomed.

Prospective participants should submit the title of the proposed paper as soon as possible and a 200-word abstract before December 31, 1984. For more information write: Conference Coordinator, Arid Lands: Today and Tomorrow, Office of Arid Lands Studies, College of Agriculture, University of Arizona, 845 North Park Avenue, Tucson, Arizona 85719.

Adjudication Begins in Agua Fria River and Verde River Watersheds

In July, adjudication proceedings began for the Agua Fria River and Verde River watersheds. These proceedings are part of a consolidated action involving the entire Gila River system. It is extremely important for all individuals who have rights to use water to file in this adjudication, even if they previously filed under the state's 1974 Registration, 1977 Stockpond, or 1980 Groundwater Management acts.

Residents in the Agua Fria and Verde watersheds are urged to carefully read the adjudication notices they have received from the Arizona Department of Water Resources (ADWR). Any questions should be directed to the ADWR, 99 East Virginia, Phoenix, Arizona 85004; telephone (toll free) 1-800-352-8488.

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