

Oklahoma

Water
News

MONTHLY NEWSLETTER OF THE OKLAHOMA WATER RESOURCES BOARD

Conference Unveils Plaque Honoring 40 Water Pioneers

Six outstanding men receive Governor's Award for contributions to law, water development

Hundreds gathered in Oklahoma City for the Governor's Water Conference on December 16, despite a shroud of heavy snow the day before that stilled travel on capital streets and over much of the state. But they came, many perhaps out of respect for the



ABOVE: Houston Adams, water development advocate and Tulsa water and sewer commissioner, is congratulated by Gov. Bellmon on his being named a water pioneer.

RIGHT: A 20×30-inch bronze plaque honoring the 40 Oklahoma Water Pioneers was revealed at the Governor's Water Conference.

half-dozen men honored there.

A plaque displayed for the first time at the Governor's Water Conference pays tribute to celebrities in water development with this inscription . . .

"in appreciation for their wisdom in developing Oklahoma's great rivers and groundwaters, and for preserving the integrity and beauty of the state's waters for future generations."

The names of this year's six honorees joined 34 others recognized as Water Pioneers at earlier conferences. Three of them—Attorneys Charles G.

Huddleston (Ames), H. Duane Stratton (Oklahoma City) and Joseph F. Rarick (Norman) are renowned for their writings and interpretation of water law. Houston Adams (Tulsa) and Guy N. Keith (Oklahoma City) are celebrated for their efforts in developing the state's water resources. R. K. Johnson (Duncan) has a distinguished career in extending water supplies to rural areas.

The noon address by Gov. Bellmon, introduction of the bronze plaque and presentation of the awards honoring the Water Pioneers highlighted the conference.

All three attorneys—Huddleston, *Continued on page 2*



Conference, continued from page 1

Stratton and Rarick—are original members and continue to serve on the Oklahoma Water Law Advisory Committee formed in 1957. Huddleston served as legislative counsel to the Oklahoma Farm Bureau and board member and legal counsel to Oklahoma Water, Inc. He is recognized as a prolific author of articles and legislation.

Stratton was an attorney for Oklahoma Gas and Electric Company until 1984, serving the firm as head of the legal department, vice president and senior vice president. He presently practices law in Edmond.

Rarick, a professor of law at the University of Oklahoma since 1953, developed the first course in water law offered at OU, and is considered the leading authority on Indian land titles. He authored the first comprehensive book explaining water law and was cited in 1982 by the Oklahoma House of Representatives as the "Father of Oklahoma Water Law."

R. K. Johnson distinguished himself as chief executive officer for both the Oklahoma and National Rural Water Associations and was named NRWA "Man of the Year" in 1982. He served as assistant administrator of NRWA until his retirement in October 1987.

Houston Adams, Tulsa water and sewer commissioner since 1986, is a longtime banker and Tulsa Chamber of Commerce boomer of water development and navigation. He has been president of the Arkansas Basin De-

velopment Association and the National Waterway Users Conference and chairman of the City of Tulsa-Rogers County Port Authority.

Guy Keith was appointed to the Oklahoma Water Resources Board by Gov. Bellmon in 1965 and served the OWRB as secretary and chairman. He is a member of an Oklahoma City engineering firm, has served as Oklahoma commissioner on the Red River Compact and director of the Arkansas Basin Development Authority, Deep Fork Watershed Association and the Mississippi Valley Association. Keith was also vice president of the Water Development Foundation of Oklahoma.

Before the luncheon awards, a battery of water authorities including EPA Region VI Administrator Robert E. Layton, Jr., BuRec Deputy Administrator Joe D. Hall, Tulsa District Engineer Col. Frank M. Patete, National Waterways Conference President Harry N. Cook and Tulsa Stormwater Management Director Stan Williams recapped efforts of their agencies to do business in "the New Era."

After lunch a panel considered problems posed before the water community by pollution and water rights litigation as well as the FmHA buyout of rural water loans and water and sewer system financing.



Flood Insurance Workshops Set

The National Flood Insurance Program, community floodplain officials and city managers will sponsor Flood Insurance Workshops in 11 Oklahoma cities beginning in late February. The purpose of the workshops is to acquaint insurance agents, city officials and real estate agents with the National Flood Insurance Program.

The one-day seminars will address the basics of flood insurance availability, policy coverages and exclusions, general rules and rating, forms completion and manual review. Registration is free to city officials, but costs \$20 for others. NFIP encourages registration in advance but others may

register (as space permits) at 9:30 a.m. on the workshop day. To register, write National Flood Insurance Program, 7035 W. Tidwell, Suite J-105, Houston, Texas 77092, or call (713) 690-0115.

WORKSHOP SCHEDULE

Ada—Wednesday, February 24

Public Library, 2nd Floor
124 S. Rennie

McAlester—Thurs., February 25

Municipal Bldg., Council Chambers
First and Washington

Ardmore—Tuesday, March 8

City Commission Chambers
3rd Floor, City Hall
23 S. Washington

Norman—Wednesday, March 9

Pioneer Multi-County Library
225 N. Webster, Rooms A & B

Lawton—Thursday, March 10

Public Library, Rooms 1 & 2
110 Southwest 4th St.

Stillwater—Tuesday, March 22

Parks & Recreation Department
315 E. 9th St.

Enid—Wednesday, March 23

Holiday Inn, 2901 S. Van Buren

Woodward—Thursday, March 24

City Hall, City Commission Rm.
1219 8th St.

Ponca City—Tuesday, April 5

Marland Mansion
901 Monument Drive

Bartlesville—Wednesday, April 6

Park Inn International
222 S.E. Washington

Miami—Thursday, April 7

Civic Center, 129 5th Ave., N.W.

OWWA Expo February 19

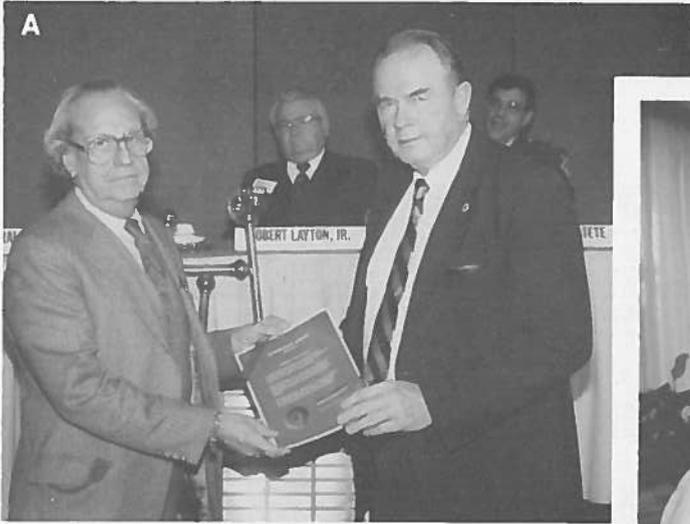
Oklahoma Water Well Association will present the Oklahoma Exposition on Water Treatment and Groundwater Equipment on February 19 at the Lincoln Plaza Convention Center in Oklahoma City. The announcement was made by Robert Hall, OWWA executive secretary.

According to Hall, free technical

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R. K. Johnson, president of the National Rural Water Association, is named an Oklahoma Water Pioneer by Gov. Bellmon.



A. Dr. Joe Rarick, recognized as the "father of Oklahoma water law," receives a water pioneer award from Governor Bellmon.

B. Conference Coordinator Mary Whitlow of the OWRB reviews notes with Secretary of Natural Resources Glenn Sullivan.

C. Col. Frank M. Patete of the Corps' Tulsa District presented a slide show as part of his address during the morning session.

D. Luncheon guests listen as Board Chairman Gerald Borelli opens the program.

E. Several hundred registered for the Governor's Water Conference, despite the forbidding weather.

A. Guy N. Keith, former member of the OWRB, was one of six men honored by Gov. Bellmon as an Oklahoma Water Pioneer.

B. It was "homecoming" for BuRec Deputy Commissioner Joe Hall, former resident and longtime Oklahoma reclamation representative.

C. Ray Smith of Rockwell Meters, J. A. Wood of the OWRB, Gene Whatley of ORWA and Walid Maher of the OWRB visit during a break.

D. Zack Williams of OG&E and OWRB Assistant Director Mike Melton talk business.

E. Longtime Water Law Advisory Committee member Duane Stratton accepts Water Pioneer Award from Gov. Bellmon.



Mainstream, continued from page 2

sessions on water treatment systems will be held in the morning before the Exposition opens. He also said 500 manufacturers have been invited and many will award door prizes to groundwater contractors who attend.

OWWA members may attend without charge. Non-members who pre-register will pay \$2 per person; those who register at the door will pay \$5. Evening banquet tickets cost \$20 in advance and include a special presentation of the play "Tintypes."

For further information or to register, write OWWA at P.O. Box 881, Norman, Oklahoma 73070, or call (405) 364-3100.

OWRB Opens in Woodward

In an effort to make OWRB services more accessible to citizens of north-west Oklahoma, the Board has opened a branch office in Woodward at Lakeview Office Complex, 1605 North 34th Street.

The OWRB also maintains branches in Tulsa, McAlester and Lawton to serve those areas of the state.

Reese Daugherty, formerly of the OWRB's Planning and Development Division, is manager of the Woodward office.

"Now we will be able to conduct complaint investigations more efficiently, implement enforcement activities and provide a more accessible center for information and assistance," Daugherty said.

One of the primary duties of the Woodward branch will be to better implement the Board's financial assistance program in the region, he added.

Floods Top Death List

Of all natural hazards in the U.S., flash floods and floods are the greatest killers, according to 20-year averages released by the National Weather Service Forecast Office in Albuquerque, New Mexico.

Flooding accounts for 163 deaths in a normal year, while tornadoes and lightning strikes account for 98 and 97 fatalities, respectively. But statistics for 1986 show a significant decrease in total natural hazard deaths, the Fore-

cast Office reported.

In 1986, only 80 deaths from floods and flash floods were reported—less than one-half the 20-year average and the lowest number of fatalities (68) reported from such disasters since 1971. As is the case every year, the majority of flash flood deaths (59 percent) were vehicle-related. Three states accounted for one-half the flood deaths in 1986: Texas (18), California (13) and Pennsylvania (9).

Also in 1986, lightning strikes accounted for 68 deaths and tornadoes for only 15—both well below their normals.

New entries on the 1986 "death list" are heat and winter storms. Ninety-two fatalities were attributed to extreme heat, although only eight states reported those deaths. Winter storm events took the lives of 69 individuals.

Well Measurement Underway

On January 4 in the Panhandle, the OWRB and U.S. Geological Survey (USGS) began 1988's cooperative well measurement program aimed at inventorying state groundwater levels.

Duane Smith, Groundwater Division chief, predicts that results from the annual effort, which began in 1937, will again portend good news for Oklahoma's underground water resources.

"Last year's data generally showed rising water levels across the state primarily due to increased precipitation and decreased pumping. We expect this trend to continue," he said.

According to Smith, 1987 reports showed well levels increasing several inches in the Panhandle's Ogallala Aquifer—an area of concern in past years. He pointed to the depressed economy, especially the ailing agricultural industry, as the major reason for decreased water use and the subsequent rise in well levels.

The 1988 effort will measure nearly 1200 wells before its finish in March. Although the focus is normally in western counties, more wells will be measured in eastern Oklahoma to more accurately determine the status of groundwater sources there.

The program focuses on major groundwater basins in the state and

relies heavily on field work accomplished by USGS employees and staff from the OWRB and its branches in Tulsa, Lawton, McAlester and Woodward. Board hydrologist Dannie Spiser is coordinator of the program.

Well data will be entered into a USGS computer. Results will be available in June.

Zap! Sewage to Usable Water

New system converts grossly polluted sewage to highly purified water in a few hours at little or no cost. That is the claim of Cornell University researchers who have built the system on the technology of hydroponics. Cornell's approach incorporates an unusual bacterial technique to devour heavy pollutants and sludges before the hydroponic "farming" strips nutrients from the water.

An article in January's "U.S. Water News" states the Cornell system may even make sewage treatment profitable through the generation of methane gas. The system employs a first-stage biological treatment process that removes great amounts of sludge, soluble organics and suspended solids. The anaerobic bacteria are attached to small particles of corn-cobs, which are then suspended in the wastewater. So slow-growing are these bacteria in the absence of oxygen that they do not accumulate in the system. And they rapidly convert soluble organic materials in the sewage to methane gas.

Irrigate with Saline Water?

New Mexico State University Agricultural Economist Robert Lansford says the state's 15 billion acre-feet of salty groundwater could help solve a couple of problems faced by Roswell farmers. He suggests that saline water be used to supplement fresh irrigation water, then the conserved fresh water could be used to pay New Mexico's Pecos River water debt to Texas.

A recent study showed that farm profits increased by 17 percent when 33 percent of the total irrigation was from saline water. Researchers said of the four crops studied, cotton and bar-

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ley were the best candidates for the supplemental saline irrigation. They claim cotton and barley can be produced with a fresh water irrigation at the beginning of the growing season, followed by almost continuous irriga-

tion with saline water.

One major problem is that the farmers employing the technique require more than the 3.5 acre-feet of water now allowed by the State Engineer. Higher levels of water are required under saline irrigation, the farmers say,

because salinity tends to dry out the soil and decrease the movement of fresh water into plant cells.

Another possible benefit is that it could allow New Mexico to repay a big water debt owed to Texas under terms of the Pecos River Compact.

**ACTIVE CONSERVATION STORAGE IN SELECTED OKLAHOMA LAKES AND RESERVOIRS
AS OF JANUARY 4, 1988**

| PLANNING REGION LAKE/RESERVOIR | CONSERVATION STORAGE (AF) | PERCENT OF CAPACITY | PLANNING REGION LAKE/RESERVOIR | CONSERVATION STORAGE (AF) | PERCENT OF CAPACITY |
|-----------------------------------|------------------------------|------------------------|-----------------------------------|------------------------------|-------------------------|
| SOUTHEAST | | | NORTHEAST | | |
| Atoka | 123,475 | 100.0 | Eucha | 79,567 | 100.0 |
| Broken Bow | 918,100 | 100.0 | Grand | 1,491,800 | 100.0 |
| Pine Creek | 77,700 | 100.0 | Oologah | 544,240 | 100.0 |
| Hugo | 157,600 | 100.0 | Hulah | 30,594 | 100.0 |
| CENTRAL | | | Fort Gibson | 365,200 | 100.0 |
| Thunderbird | 105,925 | 100.0 | Heyburn | 6,600 | 100.0 |
| Hefner | 75,051 | 96.9 | Birch | 19,200 | 100.0 |
| Overholser | 15,935 | 100.0 | Hudson | 200,300 | 100.0 |
| Draper | 70,277 | 70.3 | Spavinaw | 30,000 | 100.0 |
| SOUTH CENTRAL | | | Copan | 43,400 | 100.0 |
| Arbuckle | 62,571 | 100.0 | Skiatook | 308,079 | 96.4 |
| Texoma | 2,637,700 | 100.0 | NORTH CENTRAL | | |
| Waurika | 203,100 | 100.0 | Kaw | 428,600 | 100.0 |
| SOUTHWEST | | | Keystone | 616,000 | 100.0 |
| Altus | 125,149 | 94.1 | NORTHWEST | | |
| Fort Cobb | 78,347 | 99.9 | Canton | 96,469 | 98.9 |
| Foss | 184,833 | 75.8 | Optima | 3,000 | 1 |
| Tom Steed | 78,778 | 88.5 | Fort Supply | 13,846 | 99.6 |
| EAST CENTRAL | | | Great Salt Plains | 31,400 | 100.0 |
| Eufaula | 2,329,700 | 100.0 | | | |
| Tenkiller | 627,500 | 100.0 | STATE TOTALS | 12,504,636 | 99.0³ |
| Wister | 27,100 | 100.0 | | | |
| Sardis | 302,500 | 100.0 | | | |

1. In initial filling stage
2. Temporarily lowered for maintenance
3. Conservation storage for Lake Optima not included in state total

Data courtesy of U.S. Army Corps of Engineers, Bureau of Reclamation, Oklahoma City Water Resources Department, and City of Tulsa Water Superintendent's Office.

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MARY E. WHITLOW, Editor

BRIAN VANCE, Writer

BARRY FOGERTY, Photographer

MARIE WELTZHEIMER, Artist

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Oklahoma Water Resources Board
1000 N.E. Tenth, P.O. Box 53585
Oklahoma City, Okla. 73152

Gerald E. Borelli, Chairman

Earl Walker

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