

OKLAHOMA WATER NEWS

Bimonthly Newsletter of the Oklahoma Water Resources Board



*from
the desk
of the
Director...*

It was my pleasure to be appointed by Governor Keating to serve as Secretary of Environment and be hired by the Oklahoma Water Resources Board as its executive director.

Over the past 12 years, I had many opportunities to work with the Board and its staff during four terms in the House of Representatives and as Secretary of Agriculture. Each time, I was impressed by the professionalism and dedication of the people that make up the Water Board.

At the Department of Agriculture, I embraced the principles of Quality Oklahoma and am delighted to find the OWRB staff pledged to these same goals of employee involvement and outstanding customer service.

The people with whom I work are dedicated to Oklahoma and to the protection, development and conservation of the state's water resources. We at the Water Resources Board work steadfastly to provide you, our customers, with the products and service you expect. It is important to us that we meet your highest expectations.

We solicit your comments and your evaluation of our efforts. We strive to maintain open communication with the citizens of Oklahoma, so we can serve you better and more efficiently than ever before.

If we are ever slow to respond or fail to provide the quality service you

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Board Names Gary L. Sherrer To Executive Director Post

J. Ross Kirtley, OWRB chairman announced the appointment of Gary L. Sherrer to executive director of the Water Resources Board. In welcoming Sherrer to his first Board meeting as executive director on February 14, Kirtley said, "We are so fortunate to have a director with Mr. Sherrer's credentials. He comes to the OWRB with an excellent understanding of water resources and environmental matters."

Governor Frank Keating earlier named Sherrer Secretary of Environment, a position Sherrer will hold concurrently with the Water Board post. Sherrer served as Secretary and Commissioner of Agriculture since 1991 and earlier represented District 19 in the Oklahoma House of Representatives from 1980-1988.

As executive director, he will oversee the agency's day-to-day operations, including personnel, fiscal matters, policy and issues concerning the Board's rules and regulations. He will continue an active role in working with Governor Keating and his staff, the Oklahoma Legislature and the Congressional

delegation in matters concerning water and environmental issues.

Sherrer attended Oklahoma State University and Southeastern State University in Durant, where he earned a B.A. degree. He is a Vietnam combat veteran, previously serving with the U.S. Army as a medic. His family lived in Snow, in Pushmataha County, where he owns and oversees a cattle ranch. Sherrer and his wife, Judith, and three daughters now live in Jones, where Sherrer is a deacon in the First Baptist Church.



Gary L. Sherrer

Board Polls Water System Operators

On January 19, the OWRB Planning Division mailed questionnaires to 964 operators of rural water systems, seeking information to be used in updating the "Rural Water Systems in Oklahoma." The 1980 survey, one of the Board's most successful publications, mapped 398 systems across Oklahoma that serve populations of 10,000 or less.

It is part of the Board's effort to provide reliable information on the systems and reflect recent growth. According to Mike Mathis, Planning Division chief, the number of water systems in Oklahoma has nearly doubled since 1980, and many systems have extended their lines or merged. The survey will also include

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water quantity and quality information.

Preliminary to the statewide project, Planning staff completed a successful pilot study of Noble and Garfield counties. Geographic Information System (GIS) and related software were used to digitize rural water systems.

Dave Goughnour, water resources planner who oversees the project, said, "We are extremely encouraged by the success of the pilot study and the data analysis and management capabilities of the GIS."

Once questionnaires are collected, the Board will begin field work for the project in the spring.

Mathis said the most valuable feature of the updated document will be its benefits to water resources planning. "The survey will be used to guide operation, expansion and maintenance of the rural water systems," he said. It will also identify opportunities for regional systems and boost economic development in rural areas by linking water supply to new business and industry," Mathis pointed out.



Dave Goughnour, Carl Albert Executive Fellow; Deanne Whiteaker, GIS coordinator; and Trudy Rigney compare 1995 data with information collected on rural water systems in 1980.

20 Million A/F of Water Unused

Oklahoma water users have appropriated for annual use nearly 2.6 million acre/feet of water from reservoirs and stream flows-- a mere drop in the bucket compared to the amount of surface water available. "For the past 40 years, an average of 34 million acre-feet of stream water has flowed out of the state through the Arkansas, Red and Little Rivers on the eastern boundary," said J.A. Wood, Water Management Division chief. He said the 30 large reservoirs in Oklahoma that capture and yield at least 5,000 acre-feet a year on a dependable basis, make an additional 1.7 million acre-feet of water available for Oklahoma water users.

He pointed out that water inventories have been completed on 47 of the state's 49 stream systems. "When you add up all the water available from the streams and reservoirs and subtract the amount appropriated, an estimated 20 million more acre-feet of stream water (or eight times the present use) could be used by Oklahomans.

The greatest amount of good water

available for appropriation flows in the Verdigris River in northeastern Oklahoma, through Oologah Reservoir and downstream to the Arkansas River. (Grand Neosho flows are greater, but exempt from appropriation by the state.) The Verdigris produces approximately 3.4 million acre-feet of water each year. Along the river, and from Oologah Reservoir, 263,651 acre-feet of water is appropriated for beneficial use.

After gathering flow from all its tributaries, the Arkansas River carries an average annual flow of 23 million acre-feet out of the state.

The Red River and its tributaries supply large amounts of water. Approximately 11 million acre-feet of water leaves the state via the Red River each year.

Wood said the water is fully appropriated in a few areas of Oklahoma. He emphasized more specific information is available by calling the Oklahoma Water Resources Board Water Management Division at (405) 231-2531.

Director, continued from page 1

are entitled to, I invite you to visit with me personally or call Assistant Director Duane Smith in our Oklahoma City office at (405) 231-2500. "I look forward to getting to know you and encourage you to stop by our offices to share your concerns or your vision for the vast water resources of our great state."



Forrest Nelson Died Feb. 21

Longtime water development activist and Water Resources Board Executive Director Forrest Nelson died February 21 in Norman at the age of 88. Nelson joined the Planning and Resources Board (a state agency which preceded the OWRB) in 1946 and retired in 1975 as executive director.

Nelson was honored as an Oklahoma Water Pioneer at the 1985 Governor's Water Conference for his contributions to the development, protection and con-

ervation of the state's water resources. He was born in Duncan, graduated from Central High School in Marlow and received a B.A. Degree in Education from Cameron Junior College and B.S. Degree in Agricultural Engineering from Oklahoma State University. Nelson served with the U.S. Army Corps of Engineers in World War II in the South Pacific.

He was preceded in death by his wife, Earline, who died in December 1994.

Board Announces New Book

The Water Management Division of the Water Resources Board announces publication of a new book, "Groundwater Levels in Observation Wells in Oklahoma for 1994." Authors of the book are Mark Belden, geologist, and Andy Scurlock, data processing applications specialist.

The 464-page book contains water level data gathered at nearly 850 wells in the state's major and minor bedrock and alluvial and terrace aquifers. Data include maximum, minimum and mean water levels for period of record; 1991-1994 water levels; and changes in water levels from the previous year, five years ago, 10 years ago and from the first year of well measurement.

According to Belden, Oklahoma's well measurement program began in 1937 as a cooperative program with the U.S. Geological Survey. Water Management division staff and field office staff collected static water levels in a network of wells used for irrigation, municipal, stock, domestic and industrial purposes. Measurements are made January through March, when irrigation is inactive and water levels are stable. The USGS and OWRB maintain the data collected, organized and printed by the Water Resources Board.

Books may be purchased for \$20 by requesting Technical Report 95-1, "Groundwater Levels in Observation Wells in Oklahoma for 1994." To order, please call (405) 231-2553.

ORWA Meeting April 10-12

The 25th Annual Meeting of the Oklahoma Rural Water Association will be held at the Holiday Inn West in

Oklahoma City. The April 10 agenda includes ORWA Board meetings, golf tournament and exhibit setup.

Registration will begin at 8 a.m. on Tuesday and the business meeting at 9 a.m. Workshops will be held for operators, new ORWA board members and bookkeepers Tuesday and Wednesday from 9 a.m. until 5 p.m.

The meeting will feature exhibits, door prizes, barbecue, banquet and awards ceremony.

For more information, call James Gammill at the Oklahoma Rural Water Association, (405) 672-8925.

Colorado Limits Wells for Hogs

Corporate hog farming, a troublesome issue for farm belt states, recently has been spurned by Colorado. The state has taken the advice of a local groundwater management district and refused to allow the drilling of 25 wells in the Ogallala Aquifer to pump 2,000 acre-feet of groundwater to a 20,000-sow operation proposed near Burlington. Colorado Water Engineer Hal Simpson, who allowed the drilling of a single well instead of the 25

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Spring is the Danger Season for Flooding

"Spring is Oklahoma's flood season, a dangerous time of the year," pointed out OWRB Executive Director, Gary Sherrer.

Of the 32 presidentially declared disasters in Oklahoma since 1955, 25 have involved flooding. To mitigate such emergencies, the Water Resources Board was named the state coordinating agency for the National Flood Insurance Program (NFIP) in 1969. According to Sherrer, the NFIP assists Oklahomans by making flood insurance available at affordable rates and helps communities make sound decisions concerning use of floodplains. Communities become eligible for the NFIP by establishing a floodplain board, recognizing floodplain boundaries and restricting development in flood-prone areas.

"We estimate some 44,000 structures lie in flood-prone areas," said Sherrer. "From 1978 through 1993, more than 11,000 Oklahoma residents were victims of flood damage, yet none had flood insurance. I cannot emphasize enough the importance of flood insurance -- especially since it is so inexpensive and offers such complete protection against our most common natural disaster," Sherrer pointed out.

The Water Resources Board offers these flood tips:

★Do not walk or drive through floodwaters.

Drowning is the number one cause of flood deaths, mostly during flash floods. Currents can be deceptive;

six inches of moving water can knock you off your feet. More people drown in their cars than anywhere else. Don't drive around road barriers; the road or bridge may be washed out.

★Stay away from power lines and electrical wires.

The number two flood killer (after drowning) is electrocution. Electrical current can travel through water. Report downed power lines to your utility company or emergency management office.

★Be alert for gas leaks.

Use a flashlight to inspect for damage. Don't smoke or use candles, lanterns or open flames unless you know that the gas has been turned off and the area has been ventilated.

★Clean everything that got wet.

Floodwaters often pick up sewage and chemicals from roads, farms, factories and storage buildings. Spoiled food, flooded cosmetics and medicines are health hazards. When in doubt, throw it out.

★Be prepared for a rough time.

Flood recovery is stressful and exhausting. The impact a disaster has on you and your family may last a long time.

For more information on the National Flood Insurance Program, call the Oklahoma Water Resources Board at (405) 231-2576.

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requested, says he expects the corporation to take another tack. Simpson says he expects the applicant to buy farmland and convert existing irrigation rights to usage by the giant hog farm. According to "U.S. Water News," state permittees expect the corporate farm to return with another application and use some deep irrigation water that's already appropriated for other agricultural use, and maybe do some land switching. In recommending a single well, the Plains Groundwater Management District of Burlington cited a section of state water law that limits each business to only one commercial well. Simpson concurred and denied all but one of the applications of Midwest Farms, Inc.

A decade ago, such operations were rare; today corporate hog farming represents more than six percent of the agriculture industry.

Floods Stall Drought Planning

All it takes to derail drought planning is a flood, said Donald Wilhite, a climatologist who advocates an integrated climate monitoring system instead of drought monitoring.

"We all know that drought is transient," said Wilhite, director of the International Drought Information Center at the University of Nebraska at Lincoln. He points out that the danger of developing a drought monitoring system is that in years of normal or above-normal precipitation, government officials may divert drought funds to more visible programs of higher priority.

"The need for climate monitoring must be sold on the basis of knowing, on a continuous basis, the current condition of water availability," Wilhite said.

A worldwide analysis suggests that flooding has been a more significant problem than water shortages, causing apathy on the part of officials and the public. "In the Midwest and western U.S.," said Wilhite, "above-normal precipitation in 1993 that temporarily interrupted a drought cycle, has effectively diverted attention from the big picture. My perception is that after the extensive floods in the Midwest in 1993,

awareness of evolving drought conditions in 1994 is exceedingly low."

He pointed out that such a climate monitoring strategy is underway as a joint venture of the Western Regional Climate Center and some state and federal agencies.

"Such a system would be of enormous value to decision makers in the western U.S.," he said.

Amazon World's Longest River

The Amazon River of Brazil is longer than the Nile of Africa, listed in textbooks as the world's longest, claim Peruvian researchers. Previously, the Nile was recognized as the longest and the Amazon was credited with the largest flow volume.

According to "U.S. Water News," Peru's Institute of Scientific Investigations has determined that the Amazon's true source is the Ucayali River, not the Marañon River, as earlier believed. This new finding puts the length of the Amazon River at 4,131 miles, compared to Africa's Nile at 4,003 miles.

Researchers also say that the Amazon is host to the most fish species of any river in the world. However, the great river is plagued with grave pollution problems -- oil spills in Ecuador, deforestation in Peru and Colombia for the cultivation of coca, and mercury poisoning from gold mines in Brazil.

High Plains Water Levels Up

Although water levels rose in much of the High Plains, levels continued to decline in intensively irrigated areas of southwestern Kansas, the central Panhandle of Oklahoma and the northern Panhandle of Texas, says the U.S. Geological Survey. Water levels rose in some areas of the Oklahoma Panhandle.

Conclusions are based on analysis of measurements at more than 8,000 observation wells in the High Plains during 1992 and 1993. Comparisons were also made with water-level changes from predevelopment to 1980, and 1980 to 1993.

Water levels rose in much of the High Plains, averaging gains of 0.21 foot from 1992 to 1993. Substantial rises occurred

in eastern and southern Nebraska, northwestern and south-central Kansas and much of the southern High Plains of Texas, in association with above-average to normal precipitation in 1992 and 1993.

The USGS noted long-term water level change in the High Plains, however, remains in decline. The average decline from 1980 to 1993 has been more than two feet, but the annual rate of decline, has slowed to 0.14 foot.

The report, "Water level changes in the High Plains aquifer -- Predevelopment to 1993," Water Resources Investigations Report 94-4157, can be purchased from the USGS Earth Science Information Center, Open-File Reports Section, Box 25286, MS 517, Denver Federal Center, Denver, CO 80225.

1994 Waterway Tonnages Up

Tonnages transported on the Kerr McClellan Arkansas River Navigation System in 1994 increased 14 percent over shipping in 1993, reported the Tulsa District Corps of Engineers. The 1994 total amounted to 11.1 million tons.

The Oklahoma segment of the system registered an 11 percent increase or a total of 3.8 million tons.

Biggest volumes were measured in sand, gravel and rock, 4.2 million tons; chemical fertilizers, 1.7 million tons; wheat, 1.5 million tons; iron and steel, 806,698 tons; other grains, 717,200 tons; and soybeans, 531,963 tons.

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Juli Watterson, zoologist of the OWRB Water Quality Programs Division, scores Science Fair project prepared by Classen student Roger Tucker. Watterson and March volunteered as judges in the school's first Science Fair.



Ferrella March, biologist of the OWRB Water Quality Programs Division, judges an exhibit on the Protection of Groundwater at the Science Fair held January 26 at Classen School for Advanced Studies in Oklahoma City.



At a reception preceding the Water Resources Board meeting February 14, the Board honored Patty Eaton, former OWRB Executive Director for her dedicated service to the Board 1991-1995. Eaton, left, receives the plaque of appreciation from Board member Mike Henson of Stillwater.

On February 14, members of the Oklahoma Water Resources Board hosted a reception for legislators at the State Capitol. Executive Director Gary Sherrer, Assistant Director Duane Smith, Assistant to the Director Mike Melton, Board members and OWRB staff from the Financial Assistance Division answered legislators' questions concerning the Water Board's Financial Assistance Program which makes available loans and emergency grants to cities, towns, rural water districts and other entities for the solution of water and sewer problems.



Sen. Gene Stipe, Rep. Danny Hilliard, Speaker Glen Johnson and Jim Cummings, the Governor's liaison to the House, enjoy a break at the February 14 reception.



Norman Lamb, the Governor's Senate legislative liaison; Rep. Bill Widener and Rep. Loyd L. Benson visited the reception.



Standing in front of the OWRB exhibit are Bill Secret, Board member from Broken Arrow; Nader Sous of the OWRB staff, Speaker Glen Johnson, OWRB Executive Director Gary Sherrer, Robert S. Kerr, Jr., Board member from Oklahoma City; and J. Ross Kirtley, OWRB chairman from Kingfisher.

At the March Board Meeting:

Executive Director Gary Sherrer told the Board he was optimistic concerning the 1996 OWRB appropriation after conversations with the House appropriations chair and the Senate subcommittee chair. Sherrer said legislators complimented the Board on the reception held at the Capitol February 14 to acquaint members with OWRB programs.

Joe Freeman, FA Division chief, asked and received approval on a \$70,000 emergency grant to Shady Point PWA (LeFlore Co.) The Board approved a \$320,000 SRF loan to the Tonkawa MA (Kay Co.); an expansion of purpose on the Union City MA loan (Canadian Co.); an extension of time for Creek County RWD #2. Freeman announced the appointment of a 4-member committee to process proposals submitted by underwriting firms and bond counsels interested in participating in the Board's 1995 Bond Issuance.

The Board approved seven temporary (90-day) permits for the use of groundwater; amended the permit held by the Town of Mooreland (Woodward Co.); and approved a regular permit for stream water use for the City of Prague (Lincoln Co.)

New D/PC operators licenses were approved for Ricky Dismang, Larry Turner, Richard Bowman and Andy Jones. Six new firms were licensed and operators certified: Warren E. Black; Therman French; Casey Drilling, Preston Casey, operator; Environmental Technology Specialists, Joe Bruton and Tony Bedingfield, operators; Whisner Well Drilling, Kenneth R. Whisner, operator; and C&W Construction Co., Alan J. Piper, operator.

The Board denied and remanded to staff the application to add three wells to the regular permit of James H. Becker, previous owner of land deeded to Shawnee Funding/Seaboard Farms.

General Counsel Dean Couch reviewed amendments proposed to Board Rules, and the Board approved all amendments.

FINANCIAL ASSISTANCE PROGRAM UPDATE

Approved at January, February and March 1995 Board Meetings

FAP Loans (4.522%; 30 year maximum term)

Blackwell MA	\$ 725,000.00 ¹
Wilburton PWA	\$ 240,000.00 ¹
Goldsby WA	\$ 450,000.00
Ponca City Utility Authority	\$ 2,215,000.00 ¹

¹Amount represents an increase in original loan amount.

FAP Grants

Amorita	\$ 5,000.00
Union City	\$ 50,000.00
Lincoln County RWD #3	\$ 50,000.00
Roff	\$ 70,000.00
McClain County RWD #7	\$ 58,025.00
Gracemont	\$ 44,255.00
Holdenville	\$ 50,000.00
Pittsburg County RWD #7	\$ 15,000.00
Shady Point	\$ 70,000.00

SRF Loans

Shawnee MA	\$ 3,620,000.00
Tonkawa MA	\$ 230,000.00

TOTALS AS OF 12/13/94

	FAP Loans	FAP Grants	SRF Loans
APPROVED	155	356	26
Amount	\$184,560,000.00	\$19,745,386.00	\$123,109,726.48
FUNDED	146	322	22
Amount	\$172,635,000.00	\$17,721,514.55	\$116,875,726.48

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