

# OKLAHOMA WATER NEWS

*Bimonthly Newsletter of the Oklahoma Water Resources Board*



Duane A. Smith

*from  
the desk  
of the  
Director*

In this session of the Legislature, the Board will consider requesting an appropriation on behalf of the Oklahoma Commissioner, Les Kamas of Freedom, to the Canadian River Compact for litigation to address problems created by Texas' construction of Palo Duro Dam. After several years of unsuccessful discussions and negotiations, we will recommend litigation to the Governor and Attorney General.

In 1990, the Palo Duro River Authority constructed a reservoir on Palo Duro Creek in Hansford County, Texas, about 12 miles upstream from the Texas-Oklahoma line. Palo Duro Creek is a tributary of the Beaver-North Canadian River, so apportionment of its waters is governed by the Canadian River Compact administered by the Canadian River Commission.

Oklahoma has opposed construction of Palo Duro Reservoir because we believe it violates the Canadian River Compact in two major areas. We contend that it fails to protect the existing uses of the river in Oklahoma, specifically, Oklahoma City's Canton Reservoir water supply and the water supply of Woodward and other towns drawn from the alluvium and terrace of the Canadian River. Further, the reservoir's only current use is recreation, a use not authorized by the Compact.

The Oklahoma Commissioner and PWRB initially refrained from pressing the issue with Texas due to litigation concerning Ute Reservoir brought by Texas and Oklahoma against New Mexico.

*Continued on page 2*

## Ceremony at Montgomery Point Marks Beginning of Construction

At a ceremony near Dumas, Arkansas, December 3, some 250 supporters of the Montgomery Point Lock and Dam witnessed a ground breaking ceremony for the 18th lock and dam on the Arkansas River Navigation System. The new structure will be built on the White River, six-tenths of a mile from its confluence with the Mississippi River near Rosedale, Mississippi.

The ceremony was held in a large tent under grey skies and fog that precluded attendance by some speakers who had scheduled helicopter transportation. Mike Melton, assistant to the director, attended the ceremony on behalf of the Water Resources Board.

"During the navigation system's 26-year life, navigation and flood

control projects upstream on the Mississippi River have narrowed the channel of the river, causing it to scour the riverbed 10 feet deeper than when the system was built," Melton pointed out.

The system was intended to operate with the river's elevation no lower than 110 feet above sea level. However, in recent years, the system has been plagued with chronic low-water problems. Frequent dredging due to sediment buildup at the confluence was necessary to keep the first 10 miles of the navigation system open for barges. The Corps of Engineers feared continued dredging eventually would have undercut the Norrell Lock and Dam 10 miles upstream.

*Continued on page 2*



Participants in the ground breaking ceremonies for Montgomery Point Lock and Dam examine commemorative coins cast for the occasion. Pictured left to right: Bob Portiss, director, Port of Catoosa; Doug Sickle, project manager, J.A. Jones/Guy F. Atkinson Construction Companies; Col. Daniel R. Holzwarth, commander, Southwestern Division, Corps of Engineers; Wally Gieringer, former director, Port of Pine Bluff; Dr. John Zirschky, acting Assistant Secretary of the Army for Civil Works; Arkansas Congressman Jay Dickey; Maj. Gen. Russell Fuhrman, director of Civil Works, U.S. Army Corps of Engineers; and Col. Scott Morris, Little Rock District Engineer.

**Ground Breaking continued from page 1**

There are no dams on the lower White River which links the Mississippi River to the Main Stem of the Arkansas River. When the Mississippi gets low, so too, does the White River.

The new lock and dam is expected to correct chronic low flows that have troubled the White River entrance channel and reduce the need for dredging by 90 percent.

Construction will not hinder barge traffic on the 445-mile long system that ends at Catoosa.

Montgomery Point consists of three main sections, a 300-foot navigable pass with bottom-operated torque tube gates, a 110-foot x 600-foot



Montgomery Point L&D will be built on the White River, six-tenths of a mile from its confluence with the Mississippi.

lock, and a 200-foot overflow spillway. The dam is designed to maintain the navigation pool in low water conditions. As Mississippi River levels fall below the 115-foot elevation, the 13-foot tall pass gates will be raised to maintain navigable depths upstream of the dam. When the gates are in the raised position, vessels will use the lock chamber.

"The design is unique -- unlike any other lock and dam in the world, the Corps tells me," said Melton. He said except for the control tower and floating guide walls, the lock and dam is completely below the top banks of the channel and are submerged during high flows.

John Pearson, vice-chairman of the Arkansas River Basin Coalition, said "Concern for the river and adjacent wetlands prompted a careful environmental study. Construction of this low-water dam will neither hold water above the existing river banks nor flood the surrounding habitat. It will simply reestablish the historical water elevation," he pointed out.

Construction could be finished as early as Spring 2002 at a cost of approximately \$250 million. □

**Director, continued from page 1**

For three years, Oklahoma has become increasingly concerned. In 1995, the City of Oklahoma City funded a Corps of Engineers study which showed that state line flows from Palo Duro Creek had decreased significantly since construction of Palo Duro Reservoir.

The exact impacts of Palo Duro on Oklahoma water supplies will need more study. In the meantime, I believe Oklahoma should seek a judicial declaration that Texas is in violation of the Compact. This will prevent Texas from constructing another reservoir on Wolf Creek, which feeds Fort Supply Reservoir in Woodward County, then flow to the North Canadian and Canton Reservoir.

We will continue to discuss the matter with Texas officials, but we believe we need to protect Oklahoma's water supplies through litigation if necessary.



**Hook Employee of the Quarter**

Executive Director Duane Smith presented the Employee of the Quarter Award to Jann Hook, head of the OWRB Information Services Section.

Hook joined the agency in 1980 while attending UCO at night to earn a degree in computer science in 1982.



Duane Smith and Jann Hook

Hook guided the development of the Data Processing section from the time the agency owned one bulky micro-processor until the present, when there is a personal computer or workstation on every desk.

Smith pointed out that Hook had worked tirelessly after the 1995

bombing to restore agency data and the computer network. She compiled the agency inventory to replace damaged furniture and computers and was instrumental in coordinating the design and decor of work space in the new building.

Hook is OWRB representative to the state GIS Council and founder of the Oklahoma Chapter of the South Central ARC/Info Users Group.

**Well Measurement Underway**

The Water Resources Board's annual well measurement program got underway in the Panhandle January 12 and will continue eastward until 750 wells have been measured statewide. The announcement was made by Mark Belden, OWRB hydrogeologist who oversees the program. Belden, Gary Glover, Gene Doussett and Kent Wilkins of the Planning and Management division will measure 250 wells in Cimarron, Texas and Beaver Counties in the early weeks of the program.

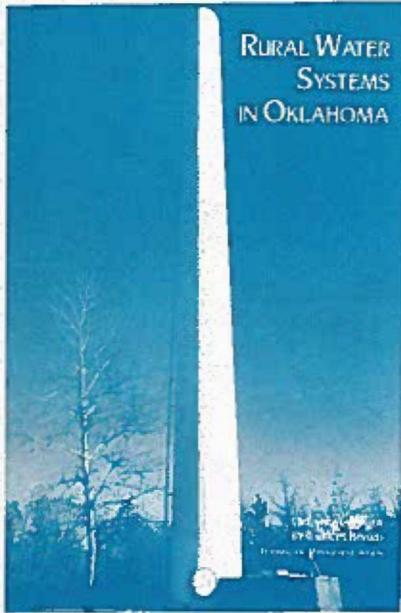
Data is collected between January 12 and March 31, when irrigation wells are shut down and water levels are static. The program monitors trends in groundwater levels over a long period of record. Information is used to generate maps which depict saturated thickness, depth to water and change in water level. Maps are used by federal and state agencies, groundwater consultants, water well drilling contractors and land/well owners.



Mike Melton, assistant to the director, and Mary Schooley, executive secretary, enjoy looking at toys donated to the annual Salvation Army toy drive by OWRB employees in December. According to Schooley, 40 toys were collected again this year, the same number contributed in the 1996 effort.

## New Book Available March 1

The update of the "Rural Water Systems in Oklahoma" will be available March 1. The book mapping the state's 726 rural water systems is the



first to utilize so extensively the agency's Geographic Information System (GIS) and computer graphic resources.

It contains a directory of water systems, 78 county maps, glossary and other text. Each map displays water system boundaries, location and size of lines, pumps, storage and treatment facilities.

"Rural Water Systems in Oklahoma" will be available at the OWRB in Oklahoma City for \$15; \$20 by mail. For information, call 405-530-8800.

## Legislators to Ready CAFO Regulations

Governor Keating welcomed the recommendations of the Animal Waste and Water Quality Task Force on December 1 and asked legislative leaders to take steps necessary to fast-track legislation on this high priority issue. The report was the product of seven months' work by the task force chaired by Secretary of Environment Brian Griffin.

Senate President Pro Tempore Stratton Taylor and House Speaker Loyd Benson named a joint legislative task force to put the most pressing issues on the fast track.

Governor Keating told legislative leaders that "any revisions as a result of the report will have to walk the fine line between ensuring a viable agricultural economy while protecting the state's water quality needs into the next century."

Among more than 75 recommendations were proposals to toughen regulation of the hog industry and, for the first time, set in place regulations governing eastern Oklahoma's poultry industry. A poultry bill is expected to spell out corporate responsibilities, require operator certification, licensing of poultry feeding operations and specific rules for storage and land application of litter.

Other recommendations would allow county-option votes on whether residents want CAFOs in their counties and delay new CAFO licenses until counties can vote. Responsibility

for oversight of CAFOs would remain with the Oklahoma Department of Agriculture, but new teeth in the laws, expanded inspection programs and a bigger enforcement budget are proposed to bring operators of hog and poultry farms into compliance.

Early in December, Governor Keating issued an executive order granting state agriculture inspectors the right to make surprise inspections. The executive order also requires the Department of Agriculture to study odor abatement plans and set criteria to be considered by the legislature in April.

Other measures are expected to deal with waste storage, lagoon construction, land application of litter and liquid wastes, set-backs from residences and myriad other issues involving burgeoning hog and poultry industries.

Senate President Pro Tempore Stratton Taylor named Senator Kevin Easley co-chairman and appointed to the committee Senators Owen Laughlin, Paul Muegge, Bruce Price, Frank Shurden, Rick Littlefield, Herb Rozell, James Williamson and Kathleen Wilcoxson.

Speaker Loyd Benson appointed Rep. Larry Rice co-chairman of the Joint Legislative Committee on Animal Waste and Water Quality and Reps. Larry Adair, Jack Begley, Jack Bonny, Frank Davis, Jim Glover, Danny Hilliard, Joe Hutchison, M.C. Leist, Elmer Maddux, Mike Thornbrugh, Dale Turner and Don Weese as members. □

## Water Resources Board Announces 23 REAP Grants in January

The Water Resources Board approved more than \$2.1 million in Rural Economic Action Plan (REAP) grants at the January 13 meeting. REAP is an initiative to fund water and wastewater improvements in Oklahoma's small communities that are unable to secure financial assistance from traditional funding sources. The 1996 legislation also authorized funding for roads and bridges and other infrastructure projects recommended by the substate planning districts.

According to Joe Freeman, chief of the Financial Assistance Division, "REAP is assisting small entities in precisely the manner the legislature intended." Assistance is directed to small towns and unincorporated areas with populations of 7,000 or less, however priority is awarded to entities of 1,500.

The Board approved grants for communities listed on the right.

Calumet Public Works Authority, Canadian County .....	\$150,000
Medicine Park Public Works Authority, Comanche County .....	98,785
Wayne Public Works Authority, McClain County .....	81,399
Rural Water District #3, Grady County .....	78,852
Rural Water District #4, Pawnee County .....	95,000
Town of Sasakwa, Seminole County .....	140,000
Rural Water District #9, Cherokee County .....	99,900
Ramona Public Works Authority, Washington County .....	95,000
Oologah Municipal Authority, Rogers County .....	150,000
Evergreen Rural Water District #18, Osage County .....	100,000
Rural WSG&SWM District #14, Pittsburg County .....	89,900
Kiowa Public Works Authority, Pittsburg County .....	130,000
Town of Meno, Major County .....	77,100
Rural Water District #5, Garfield County .....	100,000
Kremlin Public Works Authority, Garfield County .....	59,999
Rural Water District #2, Dewey County .....	61,000
Town of Gage, Ellis County .....	47,259
Town of Arnett, Ellis County .....	35,000
Town of Freedom, Woods County .....	32,552
Dougherty Public Works Authority, Murray County .....	91,000
Town of Oakland, Marshall County .....	96,000
Martha Utility Trust, Jackson County .....	109,800
Burns Flat Utility Authority, Washita County .....	98,400

# THE FLOOD CURRENT

JANUARY - FEBRUARY 1998

## Certification Enhances Floodplain Management

Report from Ken Morris, Oklahoma NFIP Coordinator



Ken Morris

The Board's National Flood Insurance Program is well into another federal fiscal year and the Federal Emergency Management Region IV Headquarters

continues to support our efforts. At the year's end review meeting, we chose as an important initiative pursuit of a State Hazard Mitigation Fund to assist communities purchase properties that have a history of repetitive flood loss. Many communities cannot afford the matching money required to take advantage of the federal programs. The Oklahoma Floodplain Managers Association (OFMA) intends to study the successful state hazard mitigation program in place in Arkansas and consider it a model in crafting legislation.

The Oklahoma Department of Civil Emergency Management has a state disaster assistance fund for emergencies not eligible under federal guidelines, but the program excludes personal property losses. The ODCEM probably would be the administrator if such a state fund were established.

Oklahoma was spared major floods this last year, with only isolated storms inflicting damage in Elgin, portions of Comanche County, Tipton and Cherokee. Had a state hazard mitigation fund been in place, structures could have been retrofitted or moved to higher ground.

A certification program for floodplain managers grew out of the Annual OFMA Conference in September. Requirements for certification include two years experience, eight continuing education credits, a completed application and a passing test score.

Certification sets standards and recognizes the professionalism of state floodplain management administrators. Oklahoma is one of only three states that have certification programs.

The Association of State Floodplain



Donetta Blanlot, OFMA chair signs a certification document.

Managers is also preparing a national program to certify floodplain managers. The ASFPM's Professional Development Committee met in Denton, Texas, in December to work on such a national program for the certification of floodplain managers. The Committee established a code of ethics, set out responsibilities of the ASFPM Board of Directors and Certification Board of Regents, identified experience requirements, recognized state programs, established testing and continuing education requirements and other program details.

Oklahomans working on the ASFPM certification task force are Jo Remondini, Tulsa District Corps Engineers; Pat Hoggard, City of Tulsa; Diane Calhoun, FEMA Region VI, and Ken Morris, Oklahoma Water Resources Board. The ASFPM certification will recognize floodplain managers in states that have no certification programs.

January 12-16, FEMA and OFMA hosted a week-long course entitled "Managing the Nation's Floodplains" at the OU Center for Continuing Education on the Norman campus. Approximately 30 floodplain managers attended this course, until last year offered only at the National Emergency Training Center in Emmitsburg, MD.

Additionally, FEMA is working on a home study course to be available next year that will make the training more accessible to even more floodplain administrators.

In this new year, I ask Oklahoma's floodplain administrators to continue their conscientious efforts in permitting to safeguard lives and property in Oklahoma. □



Ken Morris, NFIP Coordinator explains the importance of preparing for floods to Rebecca Miller of Putnam City West High School at the Career Day held at MetroTech in Oklahoma City, November 12.

**Certification Exam March 5**

Carolyn Schultz, treasurer of the FMA and member of the Professional Development Certification Committee (PDCC), announces that the Oklahoma examination for the Certification of Floodplain Managers will be administered at the OFMA Spring Technical Conference. The conference will be held March 5 at the State Office Building 440 South Houston, Tulsa. Registrants for the Spring Conference who are interested in taking the certification exam are invited to sign up at the time of registration. Registration for the conference is free, but there is a \$10 fee for the examination. To reserve a test, please call Carolyn Schultz at (918) 669-4919. The first meeting of the PDCC was held in October, at which time T.J. Davis was appointed chairman; Jack Graham, vice-chairman; and Jack Graham, secretary. Members include Carolyn Schultz, Ken Morris, Joe Mondini and Pat Hoggard.

According to Schultz, all 18 OFMA members who took the certification test at the Fall Conference passed.

**NFIP Announces ICC Coverage**

The National Flood Insurance Program (NFIP) recently modified the Standard Flood Insurance Policy to include coverage aimed at reducing the financial burden to elevate, floodproof, demolish or relocate damaged homes and bring them into compliance.

Increased Cost of Compliance (ICC) coverage provides for the payment of a claim to help cover the cost to comply with the community floodplain management ordinance after a flood in which a building has been declared substantially or repetitively damaged. ICC will help pay the costs up to a maximum benefit of \$15,000.

ICC coverage is additional to the building coverage for the repair of actual physical flood damages under the Standard Flood Insurance Policy. All policies issued or renewed after June 1, 1997 included ICC. Excluded are buildings insured under the Group Flood Insurance Policy or the Condominium Unit Owner Policy. Buildings located in emergency NFIP communities are excluded from ICC coverage.

Standard Flood Insurance Policies will increase in cost depending on flood risk zone and amount of coverage.

For more information on ICC, policyholders may call NFIP at 1-800-427-661. Community officials may call Ken Morris at 405-530-8800.

# Mitigation Built on Partnerships

*An open letter to Oklahoma's emergency and floodplain managers from Fred W. Liebe, Recovery and Mitigation Division Chief, Oklahoma Department of Emergency Management:*

As you know, many Oklahoma communities of moderate to large size are fortunate to have separate individuals to direct emergency (civil defense) and floodplain management activities. However, in many areas of the state, communication between these two offices has been less than ideal. As a result, mitigation and response to flooding events, Oklahoma's most prevalent disasters, occasionally suffer. It is obvious that we must strengthen partnerships between the emergency manager and floodplain manager, two disciplines which must go hand-in-hand for either to be effective.

Developing and nurturing these partnerships through communication is the task now before us if we are to efficiently mitigate the multitude of damages frequently caused by flooding in Oklahoma. Partnerships must be established when the threat of flooding is distant and the ultimate purpose of vital regulations, such as zoning and building permits and related controls to guide floodplain development, may appear abstract. In times of disaster, the value of communication and the partnerships fostered by communication become evident. The result is reduced threat to life and property and better response to various citizen needs which arise in the wake of floodwaters.

Floodplain management is an intricate part of mitigation, whether it be at the city, county or state level. Mitigation must be considered long before an emergency occurs. It includes all activities aimed at elimi-

## **Mitigation is the initial phase of the emergency management process**

nating or reducing the probability of occurrence of an emergency or disaster as well as activities designed to postpone, dissipate, or lessen the effects of a disaster or emergency. Mitigation includes the purchase of flood insurance, development and enforcement of building codes and local land use ordinances; and removal of debris from drainage channels. Whatever action is taken, it must be taken in an enthusiastic spirit of partnership that compliments other ongoing community activities and result in long-lasting benefits.

To assist both emergency and floodplain management officials in assessing flood damage and associated community repair costs, FEMA has developed a computer program entitled "Residential Substantial Damage Estimator; Guidance on Estimating Substantial Damage," now available on loan from the OWRB. I urge you to establish that mitigation partnership with your local floodplain management official. Your community will benefit from this alliance. □

## **How to Survive a Community Assistance Visit**

Floodplain administrators need to know all about Community Assistance Visits (CAVs) conducted by FEMA or state emergency management officials to monitor a community's progress in implementing local programs.

Take these helpful hints to survive:

1. Make local regulations consistent with FEMA criteria.
2. Enforce local regulations.
3. Review all development permits to determine if a flood hazard exists.
4. Ensure elevation of new structures above the 100-year base flood elevation and that structures are floodproofed.
5. Keep records of elevations of the lowest first floor (including basement), elevations of floodproofed buildings,

number of permits and variances issued in flood hazard areas; and number of permits issued for filling, dredging and other alterations above the 100-year floodplain.

6. Be prepared to produce these records.

7. Inspect developments to verify "as-built" elevations.

8. Perform regular inspections to determine if structures have been altered or substantially improved.

9. Require a No-Rise Certificate for any encroachments in the floodway in the community.

Failure to accomplish any of these tasks probably would cause your community to receive an unsatisfactory report and perhaps result in suspension from the NFIP. □

# At the January 13 Board Meeting:

The meeting was called to order by Board Chairman Ross Kirtley at 9:30 a.m. In his remarks, Executive Director Duane Smith told the Board he would like to introduce key members of the staff. He introduced Terri Sparks, Brian Vance, Cecil Bearden and Nathan Kuhnert of the Planning and Management Division and said that he would like to make such recognition a regular feature of his remarks. Smith reminded Board members that the agency would host a reception for legislators at the Capitol February 10, with the Board meeting to follow at 1:30 p.m. at OWRB offices.

Joe Freeman, Financial Assistance Division chief, received Board approval of an emergency grant to Kremlin Public Works Authority and loans to Wagoner County RWD #9, Garfield County RWD #5, Choctaw County RWSD District #1 and Osage County RWD #18. On the summary disposition agenda, the Board approved 23 Rural Economic Action Plan grants totaling more than \$2.1 million.

On the Planning and Management agenda, Division Chief Mike Mathis won approval of two regular permits, four temporary permits and amendment of two temporary groundwater permits. Drillers/Pump Contractors' licenses were approved for Tom Nowak, K&M Shillingford, Inc. and Joe Edd Helms. Stephen C. Foster, Jr., Associated Environmental Industries Corp., and Garry Moyers, Anderson Engineering Consultants, Inc., were certified for construction of monitoring wells and geotechnical borings.

Protestants asked but were denied reconsideration of a groundwater permit issued to Pig Improvement Co., Kingfisher County. Representatives of Cimarron City asked their application be tabled. Logan County RWD #1 requested use of 400 acre-feet of groundwater, but a protesting landowner said he feared saltwater intrusion from improperly plugged oil and gas wells nearby if the proposed

well drew down the groundwater table. A motion to table the permit failed on a tie vote, then a vote to approve also tied, effectively tabling action on the permit until the February Board meeting.

Two regular and four temporary applications for groundwater use which had been protested were approved; one with a special condition that effluent would not be applied near the wellhead by a sprinkler irrigation system.

## FINANCIAL ASSISTANCE PROGRAM UPDATE

Approved at January 1998  
Board Meeting

### FAP Loans

4.422% 1997 Bonds, 30-year maximum term

Wagoner County RWG&SWMD#9 .....	\$	2,845,000.00
Garfield County RWD#5 .....	\$	740,000.00
Choctaw County RWD#1 .....	\$	685,000.00
Osage County RWD#18 .....	\$	185,000.00

### SRF Loans

None

### Emergency Grants

Kremlin PWA .....	\$	65,000.00
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### TOTALS

	FAP Loans	SRF Loans
<b>APPROVED</b>	195	66
<b>Amount</b>	\$250,590,000.00	\$240,487,865.94
	REAP Grants	Emergency Grants
<b>APPROVED</b>	86	412
<b>Amount</b>	\$6,299,546.19	\$23,199,919.32

Mary E. Whitlow, Editor

Barry Fogerty, Writer, Photographer

James Leewright, Graphic Art

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J. Ross Kirtley, Chairman  
Richard McDonald  
Dick Seybold  
Grady Grandstaff  
Wendell Thomasson  
Bill Secrest  
Ervin Mitchell  
Lonnie L. Farmer  
Richard C. Sevenoaks

**OKLAHOMA WATER NEWS**  
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Oklahoma Water Resources Board  
3800 N. Classen Boulevard  
Oklahoma City, OK 73118



# Special 1997 Annual Report Issue

# OKLAHOMA WATER NEWS

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*from  
the desk  
of the  
Director*

**Duane A. Smith**

To better communicate with our readers, we present this issue of "Oklahoma Water News" in an abbreviated Annual Report format. We want to tell you about our many programs and the services we provide every day to the citizens of Oklahoma.

We are proud to introduce the nine members of the Water Resources Board, pictured in this issue. Members are appointed by the governor to serve staggered seven-year terms. They represent all areas of the state and major categories of water use. Board members serve without compensation, receiving only travel expenses to meeting sites.

At regular monthly meetings of the Water Resources Board, staff present items of agency business for Board approval. The Board oversees myriad complex programs administered by the agency's four divisions.

We at the OWRB are extremely fortunate to have such a dedicated, knowledgeable executive board to set policy and guide the course of the agency. This past year has been a particularly challenging year, with every Board agenda demanding of members difficult decisions concerning allocations of water to supply confined animal feeding operations (CAFOs.)

I am also enormously proud of the staff of 82 committed men and women in our Oklahoma City headquarters and Field Offices in Tulsa, McAlester, Lawton and Woodward who work very hard to serve their fellow Oklahomans. We will note some of their accomplishments in this issue. □

## The Water Resources Board

**J. Ross Kirtley**, Kingfisher, chairman, is a certified public accountant, manager of a floor systems company and owner of oil drilling and livestock interests. He was graduated cum laude from Southwestern Oklahoma State University. He represents agriculture.



**Richard McDonald**, Walters, vice chairman, is a banker, farmer/cattleman and independent oilman. He is a graduate of the University of Central Oklahoma with a degree in marketing. He represents irrigation interests.



**Dick Seybolt**, Afton, secretary, owns a bus/recreational vehicle manufacturing company, serves on the Board of the Grand Lake PWA and is a former Miami city councilman. He represents recreation interests on the Board.



**Lonnie Farmer** is a bank president and former mayor of Davidson. He is a founder and Board member of the Oklahoma Rural Water Association and drove formation of the Tillman County Water Development Authority. He represents municipalities.



**Bill Secrest**, Broken Arrow, is a founder of Wagoner County RWD #5 and manager of Wagoner RWD #4. He is an OSU graduate, serves on Boards of the Oklahoma Rural Water Association and National Rural Water Association. He represents rural residential interests.



**Grady Grandstaff**, Oklahoma City, is co-owner and operator of an independent energy production company and a wholesale grocery distributing firm. He is a member of the Oklahoma County Election Board and represents industry.



Continued on page 2

Water Board, continued from page 1

**Wendell Thomasson**, Sawyer, is a cattle rancher with a background in highway construction. He attended Mesa Junior College and Denver Community College to earn an associate degree in business management. He represents agriculture.



**Richard Sevenoaks**, Tulsa, is an auction company owner and member of the Tulsa Metropolitan Utility Authority, Tulsa Utility Board and Regional Metro Utility Board. He graduated from the University of Arizona and represents industry.



**Ervin Mitchell**, Balko, is a cattleman/farmer. He has served on the Balko School Board, Oklahoma State School Boards Association, the Beaver County Conservation District Board and is former president of the Oklahoma Association of Conservation Districts. He represents soil conservation.

## Administrative Services



**Jim Schuelein**  
Chief

The Division provides general support to the agency by coordinating services in accounting, mapping and drafting, legislative and media relations, personnel management and data processing.

The Information Services Section participates in the

state's Geographic Information System (GIS) Committee, established to support implementation of GIS programs in state agencies. Information Services, along with the Mapping and Drafting Section, prepared updated maps for the agency's newest publication, *Rural Water Systems in Oklahoma*.

Mapping and Drafting and Legislative and Media Relations Sections answer information requests, prepare maps and graphics and the OWRB bi-monthly newsletter, *Oklahoma Water News*. □

## Planning and Management

### Water Use Permitting



**Mike Mathis**  
Chief

This division allocates stream water and groundwater supplies to all prospective users who pledged to put the water to beneficial use without waste. (No permit

is required of those who use small amounts of water for domestic purposes.)

### Stream Water Rights

Stream water is considered public water, subject to appropriation, (except the surface waters in the Grand River Basin.)

The Board usually will issue a permit to use stream water if:

1. unappropriated water is available;
2. there is a present or future need for the water;
3. the intended use is beneficial;
4. the use of water will not interfere with domestic or existing appropriative uses;
5. the use of water outside the stream system of origin will not interfere with existing or proposed beneficial uses within the stream system.

In 1997, the Permitting Section of the Planning and Management Division issued 21 regular permits allocating 7,966 acre-feet of stream water and 931 provisional temporary permits allocating 23,624 acre-feet.

### Groundwater Rights

Oklahoma's major groundwater aquifers hold in storage approximately 320 million acre-feet of water, half of which is recoverable. Minor basins provide additional quantities of fresh groundwater.

Groundwater is considered private property that belongs to the overlying surface owner, although it is subject to reasonable regulation by the OWRB. Applicants are allowed two acre-feet



The OWRB offices at 3800 N. Classen in Oklahoma City

per year, per acre of land in basins where maximum annual yield has not been determined; slightly more or less in basins where studies have quantified available water.

Ordinarily, the Board will approve applications for groundwater use if:

1. the applicant owns or leases the land;
2. the land overlies a fresh groundwater basin;
3. the proposed use is beneficial;
4. waste by pollution or depletion will not occur.

In 1997, the Board approved 50 regular permits allocating 25,391 acre-feet of groundwater; 118 temporary permits allocating 22,917 acre-feet of water; and 382 provisional temporary permits allocating 4,980 acre-feet.

## Technical Studies and Programs

Studies and hydrologic investigations to accurately determine available water are critical to responsible water planning. Hydrologic studies have been completed on all of the state's 49 stream systems and updates are underway.

Groundwater basin studies estimate the maximum annual yield that can be withdrawn from an aquifer without depleting the supply throughout its 20-year life. Hydrologic investigations have been completed on 15 major aquifers, and seven studies are underway. Seventeen minor basin studies have been completed, or are near completion.

In 1997, members of the Technical Section finalized the report on the Blaine Gypsum Recharge Demonstration Project in southwest Oklahoma. The recharge effort was successful in making 1,056 acre-feet of additional irrigation water available in the arid region and was proven to be an economically feasible technology.

## Water Resources Monitoring

The OWRB cooperates with the U.S. Geological Survey to maintain a network of 41 strategic stream gages to collect quality and quantity information on surface waters.

Staff collect groundwater level data in a network of 750 wells between January 1 and March 31, when water levels are static. Data are used to generate maps which depict saturated thickness, depth to water and change in water level.

## Licensing of Water Well Drillers and Pump Contractors

To ensure that water wells are properly constructed to prevent pollution, the Water Board administers a licensing program for pump installers and drillers of water, geothermal, observation and monitoring wells.

The program has licensed 377 drillers/pump contractors and 711 operators. In 1997, the Board issued licenses to 33 new well drilling firms and 95 operators.

## Planning Responsibilities

### Oklahoma Comprehensive Water Plan

As the state's authorized water planning agency, the OWRB sets priority on updating the *Oklahoma Comprehensive Water Plan*, a long-range strategy to manage, develop and protect the state's surface and groundwaters. The 1997 update detailed inventories and projected water supplies and demands to 2050.

### Statewide Weather Modification

The division also directs the Oklahoma Weather Modification Program, funded by successive \$1 million legislative appropriations in 1996 and 1997. The primary goal of the statewide effort is to utilize state-of-the-art cloud seeding technology to augment water supplies and prevent future drought and hail damage.

## Rural Water Systems in Oklahoma

Another remarkable publication of the year was the *Rural Water Systems in Oklahoma*, an update of the popular 1980 publication. This survey maps 726 rural water systems and provides current information on water lines, treatment and distribution facilities and water quality.

## Other Planning Initiatives

Among other important programs of the Planning and Management division is an initiative to educate the public and local floodplain managers on land use strategies to mitigate losses to flooding. The OWRB also administers the National Flood Insurance Program in cooperation with the federal government.

The OWRB coordinates a Dam Safety Program that requires regular inspection of 4,400 nonfederal dams, with priority placed on the protection of downstream life and property.

The Planning and Management Division administers the Oklahoma Leak Detection Program to identify energy and water losses that diminish the profits and efficiency of rural water systems. The cooperative program with the Oklahoma Rural Water Association also makes interest-free loans and grants for water audits, leak detection surveys and repairs.

The OWRB coordinates the state's participation in four Interstate Stream Compacts, agreements to apportion interstate waters and cooperate in solving pollution problems. □



# Financial Assistance

## Bond Loan Program

The Board's successful bond loan program, fully established in 1984, is a primary state provider for water and wastewater projects. The loan program is enabled through the State-wide Water Development Revolving Fund which provides a vital portion of the reserves for the bond issues. Loan terms may be as long as 30 years with optional fixed or variable interest rates. The 6-month variable interest rate has averaged 4.945 percent since 1978.



Joe Freeman  
Chief

Standard & Poor's consistently awards Board bond issues AA ratings, citing the program's maturity, good repayment history, strong management and sound underwriting standards

The bond program has made loans to eligible water and wastewater facilities since 1985 without any defaults by borrowers. The loans are funded from a blind pool in which the loans are not committed until after the bond issuance. Money from the lending pool is used to make low-interest loans to eligible entities. A portion of the bond proceeds can be loaned to small communities and rural water districts which could not qualify for loans from

conventional sources, but benefit from the strong OWRB bond rating.

Since its beginning, 195 FAP loans totaling \$250.6 million have been approved by the Board.

## Emergency Grants

Interest accumulated from investment of the \$25 million Statewide Water Development Revolving Fund is the source of emergency grants. The Board approves grants up to \$100,000 for communities who meet emergency criteria as "threatening to life, health or property." The Board has awarded 414 emergency grants totaling over \$23.3 million.

## CWSRF Loan Program

In mid-year, the Board closed a \$2.275 million 2-year note that furnished a portion of the state match for the EPA Wastewater Facility Construction Revolving Loan Fund, or Clean Water SRF program administered by the FA Division.

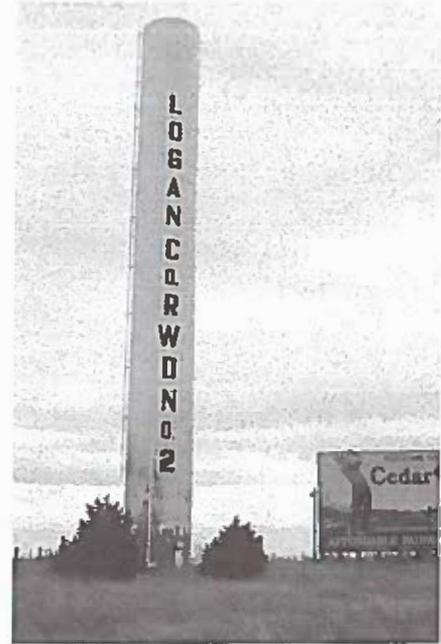
The Clean Water SRF program is one of the state's strongest and most successful strategies. SRF funds are loaned for major wastewater construction projects. As loans are repaid, proceeds are made available to smaller communities in "second round" long-term loans. Large communities are provided long-term, low-interest financing by the Board

through blending CWSRF funds with locally issued notes or bond issue loans from the OWRB.

The Board has approved 66 CWSRF loans totaling \$240.5 million.

## Drinking Water SRF Loan Program

The Drinking Water State Revolving Fund (DWSRF) Loan Program is a recent initiative developed by the OWRB



and ODEQ. Its aim is to assist municipalities and rural water districts construct or improve treatment and distribution systems to bring them into compliance with the federal Safe Drinking Water Act. Similar to the Clean Water program, the DWSRF will provide low-interest loans for eligible projects. Now, \$12,117,711 is available for loans.

## REAP Grants

The Division administers the water/wastewater portion of the Rural Economic Action Plan created by the Legislature in 1996. REAP was reauthorized in 1997, making an additional \$4.5 million in grant funds available to small communities and rural areas for water and wastewater improvements. REAP grants target communities with populations of 7,000 or less, but award extra priority points to entities with populations smaller than 1,500.

Ninety two REAP grants approved since 1996 total over \$7.1 million. □

### FINANCIAL ASSISTANCE PROGRAM UPDATE

Approved at February and March 1998  
Board Meetings

#### Bond Loans

4.22% 1997 Bonds: 29-year maximum term

McCurtain County RWD #8 .....	\$ 750,000.00
Lone Chimney Water Association .....	\$ 600,000.00

#### CWSRF Loans

None

#### Emergency Grants

Bryan County RWD #3 .....	\$ 74,636.00
Morrison PWA .....	\$ 100,000.00

#### TOTALS

	<b>Bond Loans</b>	<b>CWSRF Loans</b>
<b>APPROVED</b>	197	66
<b>Amount</b>	\$251,940,000.00	\$240,487,865.94
	<b>Emergency Grants</b>	<b>REAP Grants</b>
<b>APPROVED</b>	414	92
<b>Amount</b>	\$23,374,555.32	\$7,118,469.34

# Water Quality Programs

## Oklahoma Water Quality Standards

The Standards serve to enhance the quality of state waters, protect their beneficial uses and aid in the preven-



Derek Smithee  
Chief

tion, control and abatement of water pollution. Water Quality Standards establish water quality targets for specific waters and assist in development of water quality-based discharge permits which specify treat-

ment levels required of municipal and industrial wastewaters. WQS are updated at least every three years, the most recent revision submitted to the Board for approval in March 1998.

The 1998 revision of Standards (and Implementation documents) concerned criteria for mercury concentration, flexibility in determining seasonal low flows, beneficial uses for some waters, requirements for background monitoring, and agricultural criteria implementation.

Water Quality staff collect physical, chemical and biological data to determine appropriate present and future beneficial uses and set realistic standards to protect them. Science-based narrative and numerical criteria afford further protection. In exceptional waters -- such as scenic rivers, municipal water supply lakes and waters supporting endangered species -- the anti-degradation policy provides still more stringent protection.

Although all surface waters receive broad protection, explicit protection

is afforded to 27,000 stream and river miles and 5,000 lakes.

Implementation documents assure that Standards are translated into permits in a clear, consistent and scientifically sound manner.

## Lakes Water Quality Assessment

Sampling conducted in 1992-1995 assessed trophic status of 116 lakes covering 630,121 surface acres. Seventy-five percent of the surface acres



sampled had nonpoint pollution concerns, 74 percent were hyper-eutrophic/eutrophic, 41 percent had toxicity concerns and 31 percent had recreational concerns. Staff revisit periodically to evaluate water quality.

## Oklahoma Water Watch

Oklahoma Water Watch is the state's volunteer monitoring program involving citizens in the protection and management of the water resources.

Water Quality Programs staff provide OWW volunteers rigorous training in sampling, data management and quality assurance. Today, 350 active, trained volunteer monitors collect water quality data at 35 lake and stream sites. In 1997, the 40 chapters of OWW contributed

approximately 200 monitoring hours per month, working some 2,500 hours during the year.

## Clean Lakes Initiatives

Clean Lakes specialists work under two cooperative agreements with the Tulsa District Corps of Engineers and other agencies to reduce sediment suspension in the Fourche Maline arm of Lake Wister in southeast Oklahoma. Staff are investigating aquatic plantings and construction of barriers to decelerate waves in shallow areas which will reduce sediment resuspension and shoreline erosion.

Clean Lakes specialists completed two years of monitoring and storm water sampling at Lake Arcadia, east of Edmond. The OWRB cooperated with the City of Edmond and the Oklahoma Conservation Commission in educating residents in pollution abatement in the watershed.

The OWRB has completed data collection in a Lake Hefner Diagnostic-Feasibility study and made recommendations for solving sediment and nutrient problems.

In a cooperative study with the City of Tulsa, staff will address algae growth that impairs the city's drinking water supply from the Spavinaw-Eucha Lake System.

HB 1522 of the 1997 Legislature directed the OWRB to study the impact of concentrated animal feeding operations (CAFOs) on Oklahoma City's water supply reservoirs (Canton, Hefner, Overholser, Stanley Draper, Atoka and McGee Creek) and the North Canadian River. The 3-year project will collect historical data, establish baseline monitoring for the river and reservoirs and report to the Oklahoma Legislature.

Water quality monitoring on the upper reaches of Lake Tenkiller (where it meets the Illinois River) will measure the effectiveness of non point source pollution controls in place in Oklahoma and Arkansas. The study aims to reduce by 40 percent phosphorus loading.

Clean Lakes staff are working with other state and federal agencies in the restoration and possible conversion of Carmen Lake (in Alfalfa County) to a wetland wildlife habitat.

The OWRB cooperates with the City of Enid and the Corps of Engineers at Meadowlake to restore degraded aquatic habitat by dredging. □



# Oklahoma Water Resources Board Budget

## EXPENDITURES BY FUND

Type of Fund:	FY-96 Actual	FY-97 Actual	FY-98 Budgeted
<b>State Appropriated Funds</b>	\$3,136,194	\$3,733,631	\$3,662,627
<b>State Continuing/Revolving Funds:</b>			
205 Weather Modification	\$0	\$654,292	\$1,111,087
210 Well Drillers & Pump Installers Indemnity	1,153	591	34,500
230 Water Development Revolving Fund	0	508,030	0
240 Water Quality Revolving	342,935	298,106	521,531
420 USGS Cooperative Program	109,129	95,190	200,000
426 Stripper Well Oil Overcharge	5,761	0	0
443 Reimbursement Fund	698,367	303,888	1,633,832
472 Water Resources Fund - Construction Loan	366,354	361,650	308,538
<b>Total Revolving Funds</b>	<b>\$1,523,699</b>	<b>\$2,221,747</b>	<b>\$3,809,488</b>
<b>Federal Funds:</b>			
400 Federal Funds	\$805,474	\$645,707	\$1,174,680
410 Federal Water Quality Management	2,700,692	3,343,145	5,000,000
<b>Total Federal Funds</b>	<b>\$3,506,166</b>	<b>\$9,988,852</b>	<b>\$6,174,680</b>
<b>Total Expenditures by Fund</b>	<b>\$8,166,059</b>	<b>\$9,944,230</b>	<b>\$13,646,795</b>

## EXPENDITURES BY BUDGET ACTIVITY/SUB-ACTIVITY

Activity Number and Name	FY-96 Actual	FY-97 Actual	FY-98 Budgeted
01 Administration	\$2,371,243	\$1,808,818	\$2,799,410
02 Water Quality Programs	557,252	644,782	935,828
03 Planning	943,293	269,460	0
04 Financial Assistance Programs	600,867	634,759	1,042,666
05 Water Management	832,158	5,698	0
07 Planning & Management	0	3,063,988	3,602,919
15 Office of the Secretary of Environment	2,861,246	3,516,725	5,265,972
<b>Total Expenditures by Activity</b>	<b>\$8,166,059</b>	<b>\$9,944,230</b>	<b>\$13,646,795</b>

Mary E. Whitlow, Editor

Barry Fogerty, Writer, Photographer

James Leewright, Typography and Layout

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**OKLAHOMA WATER NEWS**  
Bimonthly Newsletter of the  
Oklahoma Water Resources Board  
3800 N. Classen Boulevard  
Oklahoma City, OK 73118

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# OKLAHOMA WATER NEWS

*Bimonthly Newsletter of the Oklahoma Water Resources Board*



Duane A. Smith

*from  
the desk  
of the  
Director*

On May 15, I visited the Bureau of Reclamation regional office in Austin, Texas, to finalize details of a 5-year cooperative study of the Altus-Lugert Irrigation District in southwest Oklahoma.

The Bureau will oversee the project and provide 50 percent of the funding; OWRB and the District will provide matching funding.

The \$1.5 million effort will quantify the amount of water discharged annually by the Altus-Lugert Irrigation District into the Salt Fork and North Fork Rivers from the irrigation canals and laterals. Two stream gages will be installed on Bitter Creek, which Water Board permitting records show to be nearly fully appropriated.

Our job will be to analyze the District's 50 years of records to determine how much water is discharged and evaporates, then develop long-term management strategies that the District can implement.

The Technical Section of our Planning and Management Division, headed by Hydrogeologist Bob Fabian, will collect and analyze the data. Donna Kirby, manager of the District will oversee installation of the new gages and data management. Once the data base is complete, we can develop long-term averages and predict water-use trends.

The District will be able to implement best management practices and, at the same time, the Board will have a more accurate estimate of water available for appropriation in the basin. □

## Explore the New OWRB Website OK Water Info is a Click Away

Did you know that on a peak irrigation day, Texas County in the Panhandle uses as much water as New York City uses on an average day? That water fact and many others await visitors to the Board's new website. Information about the OWRB and its programs is now available on the World Wide Web at <http://www.state.ok.us/~owrb>.

Thanks to five months of preparation by Geologist Ed Eckenstein and Planner Brian Vance of the Planning and Management Division, 26 pages of information await web surfers. Graphics were prepared by James Leewright, cartographic drafter and graphic designer who also assisted Eckenstein and Vance in designing the site pages.

Executive Director Duane Smith heralded the website as "a great resource and customer service tool. The Water Board works very hard to be responsive to the public, and the website is another way for us to be accessible and offer information to Oklahoma

and the world on our water resources," Smith said. "Now that the website is up and running, I envision expansion so that, eventually, we can make available application forms for water use permits, well drillers and pump contractors licensing and Financial Assistance Program loans and grants," he said. Smith pointed out that in the future, OWRB Rules and Regulations, Oklahoma Water Quality Standards, the monthly newsletter, reports, calendars and agendas and other documents useful to the public could be online 24 hours every day.

According to Smith, future plans include access to various agency data bases and Geographic Information System (GIS) data through the Internet connection.

However, here and now, visitors to the website can get acquainted with the agency by reading descriptions of agency programs and special projects,

*Continued on page 2*



Brian Vance, left, and Ed Eckenstein of the OWRB Planning and Management Division designed the informative new website. Visit <http://www.state.ok.us/~owrb>.

Website, continued from page 1

meeting the nine members of the Board and agency managers, reading the OWRB mission statement, browsing Frequently Asked Questions and Oklahoma Water Facts sections and exploring water-related links to federal, state, academic and private water information sites.

Brian Vance, principal writer and editor of the information on line, points out that the "Water Facts" section is a helpful resource for students. It describes surface and groundwater resources, estimates water use and presents drought and flood facts.

Ed Eckenstein, geologist and the Water Board's website guru, was primarily responsible for coding all site content to hypertext markup language (html) and designing the site. Eckenstein said it was his goal to design pages that are attractive, readable and accessible to the most OWRB customers. He points out that there is a wide variety of hardware and software used to view the web, so the web pages must "work" and be appealing in many different formats.

"The site was designed so that the visitor will have a good experience when visiting our site," Eckenstein said.

He pointed out that site features include a thorough navigation system with a site index and fast downloading pages that look good in any browser/software combination.

"We put a lot of effort into designing the pages so they would work in the widest variety of hardware and web browser combinations," he said. He pointed out that he and Vance planned it so the visitor doesn't have to have a special brand of web browser to view the site

Eckenstein declares he's self-taught in web page design. He says that he's been caught up in it as a hobby for over two years.

"If ever there was a 'website created on a shoestring,' it's the OWRB site," said Director Duane Smith. It's entirely the product of three gifted OWRB employees at minimal cost," he said. "It looks like a million dollars and I'm proud."

Webmaster Ed Eckenstein encourages users with comments or questions to call 405-530-8800, FAX at 405-530-8900 or write to the Oklahoma Water Resources Board, 3800 N. Classen Blvd., Oklahoma City, OK 73112. □



"Lost Colony" Lost to Drought?

The unfortunate British colonists at Roanoke Island probably were victims of a vicious and long-lasting drought, say researchers. Archaeologists from William and Mary University and the University of Arkansas say the English could not have chosen a worse time to launch their settlements in the New World.

Their conclusions were drawn from examinations of trees that would have been growing in the region during the 16th century. The most extreme drought in 800 years is implicated in the mysterious disappearance of the Roanoke Island colony and the later Jamestown settlement. The Roanoke colony, started in 1587, had mysteriously disappeared by the time Jamestown colonists arrived. Settlers in Jamestown in 1607, who also suffered cruel losses, found only the word "Croatoan" carved on a tree at Roanoke Island.

Study of tree ring evidence concluded even the best planned and determined colony would have been supremely challenged by such extreme climatic conditions.

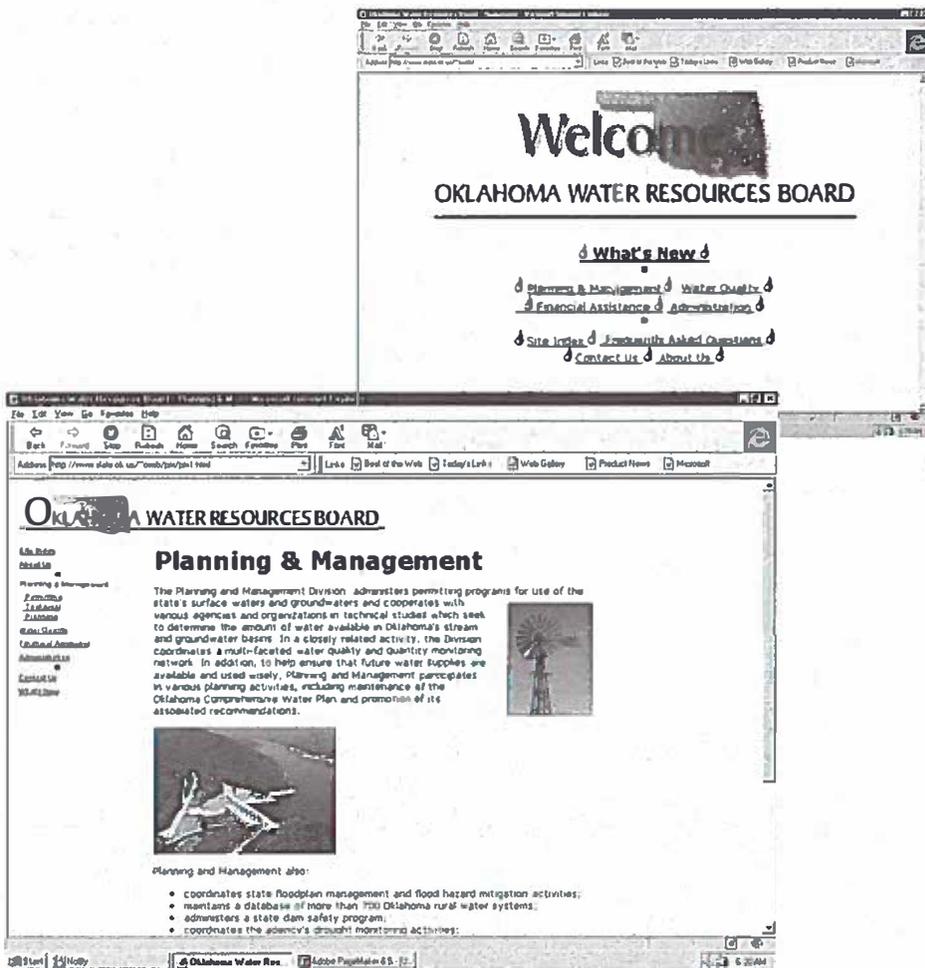
Napa Tax Could be Model

Voters in Napa, California, approved a special half-cent sales tax in March to be dedicated to flood control along the Napa River. The tax approved for 20 years will raise \$6 million annually.

The measure is designed to protect the valley from catastrophic floods, while restoring wildlife habitat along the 30-mile length of the river. The plan devised to control the river shuns concrete lined channels in favor of environmentally friendly alternatives, removal of perennially flooded structures and creation of broad riparian zones where the river can wander harmlessly during floods.

The meander belts will double as wildlife habitat. In addition, the plan authorizes a bypass to divert floodwaters away from the city. Flooding has been a chronic problem, worsened by heavy rains over recent years, rapid growth in the city and intense cultivation of vineyards in the upper valley. All these contributed to increased runoff.

The federal government will contribute \$78 million toward the flood control project to match funds from the city of Napa.



## Freeman Wins Employee Award

Joe S. Freeman, chief of the Board's Financial Assistance Division since 1993, was named Employee of the Quarter at staff meeting on March 26. In presenting the award to Freeman, Executive Director Duane Smith said, "we honor one of the most dedicated and hardest working employees. He has guided the development of one of the OWRB's youngest programs into a phenomenal success story that is admired and emulated by other states across the country."

Freeman oversees Financial Assistance loan and grant programs that have assisted hundreds of qualified Oklahoma entities in the construction or renovation of water and wastewater infrastructure.

Freeman joined the OWRB in March 1990 from a background in banking



Executive Director Duane Smith honored Joe Freeman as Employee of the Quarter at the March staff meeting for Freeman's success in making the Board's loan and grant program a model in the nation. Freeman is chief of the Financial Assistance Division.

in Oklahoma City and Ponca City. He is a graduate of OSU, where he earned a BS degree in Business Administration with a double major in finance and economics. He earned a Master of Business Administration from the University of Central Oklahoma. Freeman was named to the Dean's Honor Roll at both OSU and UCO.

He has served on the board of directors of several local and regional theater groups.

## Barge Tonnage Sets Record

A record 12 million tons of commercial commodities valued at \$2.6 billion was shipped on the McClellan-Kerr Arkansas River Navigation System in 1997. Tonnages increased three

percent over 1996, setting a record for the fourth consecutive year.

According to a Corps of Engineers report, iron and steel shipments, worth \$1.25 billion, rose 23 percent in 1997 to more than 1.1 million tons. Chemical and fertilizer shipments, valued at \$474 million, increased two percent to 1.8 million tons. Soybean shipments, worth \$221 million, rose 12 percent to 934,597 tons and other grains, worth \$104 million, rose 35 percent to 691,453 tons. Petroleum shipments remained steady; shipments of other chemicals, coal and coke, aggregates, wheat, forest products and miscellaneous shipments declined slightly.

## OWF Offers Topographic Atlas

The Oklahoma Wildlife Federation announces the organization has available for sale an "Oklahoma Atlas & Gazetteer." The 11x15 1/2-inch full color maps of all Oklahoma counties show detailed topographic features; lakes, streams and rivers; Geographic Information System grids, major highways and back roads and national and state parks and preserves.

The Atlas also lists historic sites, state lands, float trips, fishing, hunting, campgrounds, biking, wildlife viewing and scenic drive opportunities. It contains an index of place names and map features and guides to museums

and other attractions. It also presents information on the state's Native American culture.

The "Oklahoma Atlas & Gazetteer" costs \$16.95 from the Oklahoma Wildlife Federation, 3900 N. Santa Fe, Oklahoma City, OK 73118 or by calling 405-524-7009.

## Boundary Commission Meets

The Oklahoma Red River Boundary Commission met in Oklahoma City April 29 to review a new draft of the document that would establish a political boundary between Oklahoma and Texas. Senator Robert M. Kerr is chairman of the Oklahoma commission.

Executive Director Duane Smith, Commission member, and General Counsel Dean Couch represented the Water Resources Board at the meeting.

According to Smith, representatives of the Kiowa, Comanche and Apache Intertribal Land Use Committee support proposed criteria for establishing the south bank of the Red River west of the 98th Meridian if tribal interests are not affected. An option for the far west portion of the river (from the North Fork confluence to the Texas Panhandle) was introduced by Charles Mankin, director of the Oklahoma Geological Survey. It would recognize the boundary as "fast land," the land

## OWRB Observes Anniversary of Bombing



Mary Schooley, executive secretary, left, and Connie Ziegelgruber of the Planning and Management Division tie bows to the two trees planted in memory of Trudy Rigney and Bob Chipman, OWRB victims of the April 1995 bombing of the Murrah Federal Building. The memorial trees were planted on the north side of the OWRB offices on the first anniversary of the bombing. OWRB employees gathered around the trees for a brief service on April 17.

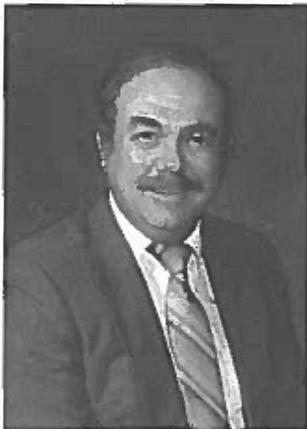
## New Rules Afford Wells More Protection

One of the Water Board's most successful programs is the well drillers/pump installers initiative, a program that cooperates with the well drilling industry in designing standards and enforcing laws to protect Oklahoma's fresh groundwater.

The minimum standards for construction of groundwater wells, fresh water observation wells, heat exchange wells and water well test holes, included in the OWRB Rules mirror changes in the industry and environment.

"Rules protecting the state's fresh groundwater continue to tighten as potential pollution sources increase -- such as burgeoning swine and poultry operations," says Mike Mathis, chief of the Board's Planning and Management Division.

Mathis points out that the Drillers/Pump Contractors Program's significant accomplishments are largely the result of careful day-to-day management by Gary Glover, who oversees the D/PC initiative.



Gary Glover

Among the new rules recently approved by the Legislature were regulations increasing the distance from water well drilling sites from potential contaminants. Where previous rules required wells to be 100 feet from a waste lagoon for a feedlot or an animal feeding operation, the new rules require a distance of 300 feet from the outside edge of the drainage area, lagoon or other possible pollution source.

According to Glover, wells not to be used for drinking water, observation or heat exchange may be located closer to a possible pollution source if the source is not a wastewater lagoon. New language in the law requires the driller to advise the owner that the well may be subject to contamination. The owner is then required to notify the Board that he will authorize drilling the well closer than the minimum standard.

Glover points out that in such instances, the driller fills the outside water-tight casing with cement grout at least 20

feet down from the land surface or pitless adapter connection. Except for a heat exchange well near a building foundation, the well must be located as far as possible from the potential pollution source.

If the well is a heat exchange well, the driller is required to completely seal the annulus from the bottom to within 20 feet of the surface with high-solids bentonite grout, pellets or chips. The driller then is required to seal the well with at least 20 feet of cement from the bentonite to the surface.

Mathis and Glover expect the new rule to afford much greater protection to groundwater supplies in areas adjacent to poultry and swine operations.

"The changes in the Drillers/Pump Contractors Program mark maturity in the effort," says Glover. He points out that since water well driller licensing began in 1973, the number of licensed firms has grown from 33 to 375 firms employing 750 licensed water and monitoring well drillers and pump installers.

The 1973 legislation also required water well drillers to submit multi-purpose completion reports (well logs) on all of the wells they drilled, and by 1974, 120 reports were on file with the Board. Today, 46,000 reports are on file. □

Jann Hook, Mike Sughru and Kevin Koon demonstrate the Water Board's GIS capabilities at the State Capitol.



## May 13 GIS Day at the Capitol

The Fourth Floor Capitol Rotunda hummed with activity May 13 as 23 exhibitors displayed their expertise in Geographical Information Systems (GIS.) Among participants were the OWRB and other state agencies, federal agencies, universities, cities and vendors. Bob Springer, coordinator of the State GIS Council, said this was the fourth annual GIS Day at the Capitol.

## Inside and Out, Water Conservation Pays!

- ◆ Install low-flow showerheads that spray about three gallons a minute; time showers for five minutes or less.
- ◆ Install a toilet tank displacement insert or dam to reduce the volume of water in the tank and the amount used per flush. A plastic jug filled with water and placed in the tank is an effective displacement device.
- ◆ Do not use the toilet to flush away objects that should be thrown away.
- ◆ Use sink and tub stoppers to avoid losing water when shaving, washing hands and washing dishes.
- ◆ Wash only full loads of dishes and clothes.
- ◆ Keep a bottle of chilled water in the refrigerator instead of running water from the tap until it is cool.
- ◆ Use a small pan of water, rather than running water to clean vegetables.
- ◆ Check all waterline connections and faucets for leaks, especially between the water meter and house.
- ◆ Learn to read your own water meter and keep track of water bills so that you can judge when and how much water you use and see opportunities to conserve it.
- ◆ Water your lawn only when it really needs it -- when the leaves begin to roll or show signs of wilt, when grass does not feel "springy" and its appearance is dull, grey-green.
- ◆ Water slowly and thoroughly, rather than frequently, to encourage root system growth and avoid runoff.
- ◆ Condition soil with mulch or compost before planting to promote water penetration and retention in grass and flower beds.
- ◆ Water turf areas separately from shrubs, flower beds and other plantings. Group landscape plants together according to water needs.
- ◆ Use hose washers between outdoor spigots and water hoses to eliminate leaks. Check for leaks often.
- ◆ Use a mulching mower that leaves the clippings on the lawn. Mulching helps grass retain water and reduces the amount of fertilizer needed to maintain a healthy and attractive lawn.
- ◆ Use a sprinkler that applies water as slowly as possible. Waste occurs when water is applied faster than it can soak in.
- ◆ Use a sprinkler that distributes large droplets on a low trajectory close to the ground or one that simulates a gentle rain.
- ◆ To find out how much water your sprinkler applies, set 3-5 empty cans at different distances from the sprinkler, with the last can near the edge of the sprinkler coverage. Run sprinkler 30 minutes. Add the inches of water in all cans and divide by the number of cans to obtain an average. Then multiply the average by 2 to determine how many inches of water are applied in an hour.
- ◆ Choose native plants or species with low water demand.
- ◆ Eliminate weeds to reduce competition for water. Keep the soil loose to promote easy penetration of water.

not usually covered by water which has developed a soil profile and supports "upland" vegetation.

Unlike the active watercourse bank which can shift almost overnight, or the vegetation line which might change over several months, a fast land boundary may take decades to move. Adoption of a fast land boundary would mean moving the boundary south toward Texas from a few feet to several hundred yards.

An Oklahoma subcommittee charged with recommending parameters to establish the boundary proposes to use the vegetation line along the river's south bank, from the east base of Denison Dam, east to the Arkansas border, and west of Lake Texoma to the confluence of the North Fork.

The boundary within the lake bed would be set at the south bank of the Red River, as determined at the time of construction of Denison Dam.

The Oklahoma Boundary Commission will continue to exchange proposals with the Texas counterpart commission. If these commissions agree on terms, the proposal will be submitted to each state legislature, then to the U.S. Congress for approval.

### Floodplain Administrators Meet

The National Flood Insurance Program, coordinated by Ken Morris of the OWRB, observed May Flood Awareness Month by offering regional workshops for state floodplain administrators.

The Water Resources Board held workshops in the Oklahoma City area at Midwest City on May 5, Tulsa on May 7, Woodward on May 12 and Lawton on May 14.



Gavin Brady, manager of the OWRB Tulsa Office, registers Stuart Chai, Midwest City, for the annual Floodplain Administrators Workshop held at the Midwest City Public Library, May 5.



J. Ross Kirtley, Chairman  
 Richard McDonald  
 Dick Seybolt  
 Grady Grandstaff  
 Wendell Thomasson  
 Bill Secrest  
 Ervin Mitchell  
 Lonnie L. Farmer  
 Richard C. Sevenoaks



Mary E. Whitlow, Editor  
 Barry Fogarty, Writer, Photographer  
 James Leewright, Typography and Layout

This bimonthly newsletter, printed by the Department of Central Services, Central Printing Division, Oklahoma City, Oklahoma, is published by the Oklahoma Water Resources Board as authorized by Duane A. Smith, executive director. Ten thousand copies are printed and mailed bimonthly at an approximate cost of 28 cents each. Copies have been deposited at the Publications Clearinghouse of the Oklahoma Department of Libraries.

On May 11, members of the Oklahoma Water Resources Board and staff attending the monthly Board meeting in Duncan were guests of the National Rural Water Association for a tour of NRWA headquarters and a reception and dinner at the Simmons Center.

The regular meeting of the Board began at 9:30 a.m. in the Simmons Center. Executive Director Duane Smith congratulated Ervin Mitchell on his recent reappointment to the Board by Gov. Keating. Smith updated the Board on the Sardis Reservoir buyout proposal discussed with the Corps of Engineers, Department of the Treasury and Office of Management and Budget on his recent trip to Washington with Board Member Lonnie Farmer and General Counsel Dean Couch. Smith said he is also working closely with Congressman Wes Watkins' office concerning terms of such an agreement.

Joe Freeman, chief of the Financial Assistance Division, asked and gained approval for an emergency grant of \$45,621 to the Town of Ames, Major Co.; a Clean Water SRF loan of \$3.3 million to the Okemah Utilities Authority, Okfuskee Co.; a CWSRF loan of \$4,505,300 to the Tulsa Metro-politan Utilities Authority, an FAP loan of \$8,500,000 to TMUA and an increase in the amount of a previous loan to Fort Gibson Utilities Authority, Muskogee Co. Rural Economic Action Plan (REAP) grants were approved for Lincoln Co. RWD #1, Morrison PWA, Noble Co., Town of Roosevelt, Kiowa Co., Grayson Development Authority, Okmulgee Co., and Rush Springs MA, Grady Co. The Board approved a resolution authorizing the issuance of CWSRF revenue notes in the amount of \$2.2 million to provide the state match for the federal capitalization grant under the Clean Water Act, FY 1998.

Mike Mathis, Planning and Management Division chief, asked approval of seven temporary and one regular permit to use groundwater, three amendments to temporary permits

**FINANCIAL ASSISTANCE PROGRAM UPDATE**  
 Approved at April and May 1998 Board Meetings

4.222% 1997 Bonds; 29-year maximum term

FAP Loans	CWSRF Loans	Emergency Grants	TOTALS	FAP Loans	GWSRF Loans	APPROVED	APPROVED	Amount
Ponca City UA	\$ 7,555,000.00					199	199	\$267,500,000.00
Tulsa MUA	\$ 8,500,000.00					418	418	\$23,634,926.35
Norman UA	\$ 4,850,000.00							
Ponca City UA	\$ 4,400,000.00							
Okemah UA	\$ 3,300,000.00							
Tulsa MUA	\$ 4,505,300.00							
Grayson Dev. Auth	\$ 94,910.70							
Ft. Gibson UA	\$ 445,100.00							
McIntosh Co. RWD#12	\$ 50,000.00							
East Central OK. WA	\$ 97,750.00							
Purcell PWA	\$ 67,000.00							
Town of Ames	\$ 45,621.03							
<b>TOTALS</b>								
FAP Loans								
GWSRF Loans								
Emergency Grants								
APPROVED								
Amount								

and two amendments to prior rights to use groundwater. The Board approved Drillers/Pump Contractors licenses for Spencer Correll and operator certification for Michael Dane Elliott of the Layne Christensen Company. □

**At the May 12 Board Meeting:**

# OKLAHOMA WATER NEWS

*Bimonthly Newsletter of the Oklahoma Water Resources Board*



*from  
the desk  
of the  
Director*

**Duane A. Smith**

I was well pleased that the Oklahoma Legislature demonstrated strong confidence in the Water Board by appropriating \$8.5 million in new funding for the agency's programs. However, it was disappointing that the \$20 million for the discounted buyout of Sardis Reservoir was not included in the list of 11 specific projects listed for funding in the Capital Improvements Bond Issue this year. Perhaps the next Session will revisit the Sardis issue, one that we would very much like to see resolved.

Appropriations totaling \$8.5 million from the Constitutional Reserve Fund (Rainy Day Fund) included the \$3.5 million match for EPA's grant for the Drinking Water Treatment Revolving Loan Program. This is a cooperative initiative with the DEQ in which the Board's Financial Assistance Division administers funding for water treatment projects recommended and prioritized by DEQ.

An additional \$3.5 million was appropriated to the Water Resources Board as seed money for the development of a Nonpoint Source Pollution Control Revolving Loan Program. Other appropriations from the Rainy Day Fund included \$500,000 for Rainfall Enhancement/Hail Suppression (Weather Modification) Activities and \$1 million for the development of a Statewide Coordinated Water Quality Monitoring Program.

OWRB received \$4.5 million in REAP funding for sewer and water projects in needy communities.

*Continued on page 3*

## 19th Governor's Water Conference Convenes in Muskogee Sept. 29-30

*Always wanted to tour the navigation system on a barge? Big topics and speakers, half-day barge tour on agenda*

The Governor's Water Conference will take to the road September 29-30 for a day-long meeting (10 a.m. to 4 p.m.) at the Muskogee Civic Assembly Center. That evening, the Ports will host a fish fry at the Muskogee Country Club. Early on September 30, a barge tour of the Arkansas River Navigation System leaves from the Port of Muskogee. The Tulsa District Corps of Engineers will provide the barge for the navigation tour. Conferees will be provided bus transportation back to the Port of Muskogee.

The theme of the 19th Annual Water Conference will be "Rollin' on the River Toward Changin' Times."

Governor Frank Keating will be the featured luncheon speaker; Attorney General Drew Edmondson, the featured afternoon speaker. Other invited speakers include members of the Okla-

homa Congressional Delegation, Col. Leonardo V. Flor, District Engineer, Tulsa District Corps of Engineers; Dr. Joe W. Westphal, former Oklahoman who recently was appointed Assistant Secretary of the Army for Civil Works; Secretary of Environment Brian Griffin and key members of the Oklahoma Legislature.

Panels and speakers will address topics such as scenic rivers, Montgomery Point Lock & Dam construction, new regulations on hog and poultry operations, competing water uses/instreamflows, nonpoint source studies, waste by pollution, Corps of Engineers studies, interstate stream compacts and Native American water rights and water quality standards.

The Conference is coordinated by the Oklahoma Water Resources Board

*Continued on page 2*

**Governor's Water Conference**  
3800 N. Classen Blvd.  
Oklahoma City, OK 73118

Please enclose \$30 check or purchase order payable to **Governor's Water Conference.**

Name \_\_\_\_\_

Organization \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Zip \_\_\_\_\_ Phone (\_\_\_\_) \_\_\_\_\_

**Please check appropriate spaces:**

I will attend the September 29 Fish Fry \_\_\_\_\_

I will take the September 30 Barge Tour \_\_\_\_\_

Conference, continued from page 1

and sponsored by 30 other water-related organizations.

Registration costs \$30 and includes the Governor's Water Conference and evening fish fry on September 29; barge tour from 7 a.m. to 12 noon on September 30. Registration is requested in advance with payment included (check, purchase order etc.) Please check appropriate spaces if you will attend the fish fry and/or barge tour. Make check or purchase order payable to the Governor's Water Conference.

Overnight accommodations are available at the Muskogee Ramada Inn, 800 S. 32nd Street, by calling 918-682-4341 by **September 15. Specify conference rate of \$60** (single or double.)

For information on the Governor's Water Conference, call the Oklahoma Water Resources Board at 405-530-8800 or visit the OWRB website at <http://www.state.ok.us/~owrb>. □



## Water Board Elects Officers

J. Ross Kirtley, Kingfisher, was re-elected to a fourth term as chairman of the Oklahoma Water Resources Board at the regular monthly meeting of the Board on June 9.

In the annual election, members voted Lonnie Farmer of Davidson vice-chair and Richard Sevenoaks of Tulsa secretary.

Kirtley is a certified public accountant, owns a floor systems company and oil and livestock interests. He was named to the Board in May 1992.

Farmer is the president of First State Bank and former mayor of Davidson and a founder and board member of the Oklahoma Rural Water Association. He was appointed to the OWRB in 1993.

Sevenoaks, named to the Board in 1997, is owner of Leake Auction Company of Tulsa and a member of the Tulsa Metropolitan Utility Authority, Tulsa Utility Board and Regional Metro Utility Authority.

## Staff Join July 4 Secchi Dip-In

Members of the Clean Lakes Section recruited 16 volunteers from OWRB ranks to participate in the Annual Great American Secchi Dip-In over the July 4th weekend. It is a nationwide effort

# Board Schedules Dam Safety Workshop

The Oklahoma Water Resources Board, in cooperation with the Federal Emergency Management Agency (FEMA) and the Association of State Dam Safety Officials (ASDSO) will present the 1998 Dam Safety Training Course on October 28-29 at Lake Murray Lodge, near Ardmore. The course is designed to teach dam owners, operators engineers and geologists dam safety technology and inspection techniques.

Cecil Bearden, P.E., coordinator of the OWRB Dam Safety Program, points out that there are 80,000 dams in use in the nation; 4,500 of them in Oklahoma. "Like any engineering works, these dams require continual care and maintenance to ensure they remain operational and protect lives and property downstream," he said. "Although the safety of dams is of considerable local, state and national concern, responsibility for maintain-

ing a safe dam rests with the owner," Bearden said.

Oklahoma requires that all dams classified as high hazard potential be inspected annually by a competent engineer, he pointed out. This workshop will be taught by facilitators who are engineers and geologists with 15 to 25 years of dam design and inspection experience. It will include classroom sessions on October 28 and an inspection of Lake Murray Dam on October 29.

Advance registration is required and will be accepted until October 22. The \$65 registration fee includes all course materials, meals and breaks, workshop discussions and field trip.

For information or advance registration, call Cecil Bearden or Nathan Kuhnert at the Oklahoma Water Resources Board, 405-530-8800. □



Julie Cunningham, left, and Melanie Foster of the Water Quality Programs Division explain the use of a secchi disk to Harold Springer.

in which volunteers check clarity of the nation's waters, providing the Environmental Protection Agency with a snapshot of water quality.

Cunningham reported an additional 70 Oklahoma Water Watch volunteer monitors participated at state lake and stream sites. Volunteers recorded information on data sheets which become part of a national data base.

## Tulsa District Welcomes Flor

The Tulsa District Corps of Engineers announces the July 15 installation of Col. Leonardo V. Flor as district commander.

At change-of-command ceremonies held at Corps offices in Tulsa, Flor

assumed command from Col. Timothy L. Sanford, district chief since July 1995.

Col. Flor was commissioned in the Corps of Engineers in 1975, upon his graduation from the U.S. Military Academy. He earned a Masters in Engineering from the University of California, Berkeley, and a Masters in Military Arts and Science from the US Army Command and Staff College. He is a registered Professional Engineer in the State of Virginia.

He has held many posts including project engineer with the Alaska District, exchange officer to the Peruvian Army, and Engineer Team Chief of the Fort Lewis Readiness Group. He comes to the Tulsa District from the US Army Command and General Staff College, Fort Leavenworth, Kansas, where he was an instructor and senior service college fellow at the School for Advanced Military Studies.

Col. Flor has attended the Airborne School, Engineer Basic and Advanced Courses, Infantry Advanced Course, the Peruvian Army Combat Divers' Course, Combined Arms Services Staff School, Command and General Staff Course, Advanced Operational Arts

Studies Fellowship. He has been awarded the Meritorious Service Medal, the Army Commendation Medal and the Army Achievement Medal.

### Check Driller's State License

Reports have come to the Water Resources Board that a few unlicensed water well drillers are operating in southwest Oklahoma in violation of state law.

According to Gary Glover, who oversees the Board's drillers and pump contractors licensing program, customers for well drilling services should check the credentials of the driller they employ. Glover pointed out that Oklahoma Statutes require all drillers of water wells, observation wells, heat exchange wells and test holes to be examined and licensed by the OWRB and comply with standards set out by the Board.

The Board's minimum standards are a product of the OWRB and the drilling industry's cooperation in developing criteria to protect the state's groundwater resources from pollution. "A poorly constructed well has the potential for contaminating the water supply of the owner as well as all others using water from that groundwater basin," Glover emphasized.

A licensed water well driller carries an operator's certificate, displays a license decal on the windshield of the drilling rig vehicle and provides the customer with a multipurpose completion report on forms provided by the OWRB, said Glover.

For information on the minimum standards or to obtain a list of licensed drillers/pump contractors, call Gary Glover at the Water Resources Board, 405-530-8800.

### Connie Ziegelgruber Honored

Connie Ziegelgruber, an OWRB employee since 1982, was honored in June as Employee of the Quarter.

Executive Director Duane Smith pointed out that Ziegelgruber has worked in nearly every division of the Water Board, presently serving in the Permitting Section of the Planning and Management Division. Smith said, "When the Board recently implemented a new rule to streamline the permitting process, she developed all the necessary forms to administer the new rule efficiently.

Ziegelgruber is the mother of two adult sons and has four granddaughters and three grandsons, the youngest of whom is Brent, born July 18. She and her husband Al, a longtime manager

at the Oklahoma Department of Transportation, enjoy fishing, hunting and vacationing in their travel trailer.



Director, continued from page 1

Bills that impact the OWRB included SB 1175, spelling out rules for protecting watersheds and groundwaters from pollution from Confined Animal Feeding Operations (CAFOs). It requires leak detection or monitoring wells at licensed facilities and the OWRB to adopt appropriate well plugging specifications. The legislation also prohibits the location of CAFOs in areas of Outstanding Resource Waters.

SB 1170 created the Oklahoma Registered Poultry Feeding Operations Act, which requires soil testing and lake monitoring, and encourages transport of poultry waste out of sensitive watersheds.

Overall, the session was successful in answering some long-term hog and poultry concerns and addressing potential water quality issues. □

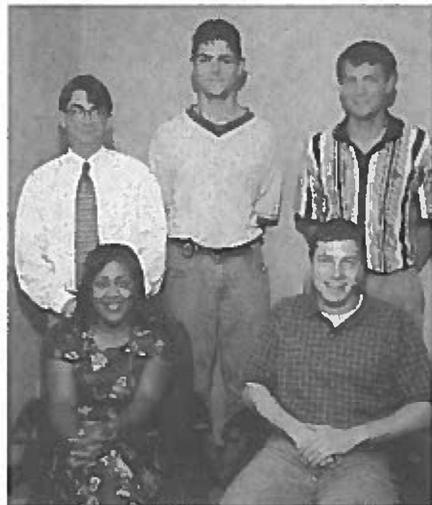
## Temporaries Make Summer Programs Hum

The tasks of the Water Resources Board would be ever so much more difficult without the willing hands of seasonal and temporary employees and Carl Albert Executive Fellows. Their talents are diverse; some assist in important water quality studies at lake and stream sites; others fill positions in the various divisions of OWRB.

It's a win-win situation -- the students get on-the-job training and ex-

perience, while the OWRB gets talented and willing helpers at affordable wages. □

Right: Jalisha Booth, UCO biology major; Ray Hardy, Carl Albert Executive Fellow working toward a Master's in geography; Standing: Michael McGuire, graduate in psychology, Master's in human relations; Cory Gralapp, OU meteorology student; Jason Conover, OU senior geography major.



Lower right: Suzanne Dudding, Melody Drummond, OSU graduates in environmental science; Melanie Foster, National Merit Scholar majoring in environmental science at OU.

Standing: Jason Post, OU graduate in environmental science; Wick Warden and Tim Vermillion, OSU forestry majors; Joe Carson, OSU student in environmental science.



# THE FLOOD CURRENT

## National Floodplain Managers Effective in Promoting Safety

by Ken Morris, Oklahoma NFIP Coordinator

My responsibilities as secretary of the Association of State Floodplain Managers (ASFPM) have kept me extremely busy this spring. I've traveled to Tampa, Florida, for a meeting involving the Federal Emergency Management Agency (FEMA) and National Emergency Managers Association (NEMA.) Then, I flew to San Antonio, Texas, to plan development of the ASFPM certification program and, finally, I attended a meeting of our Administrative Council in Myrtle Beach, South Carolina, to make preparations for ASFPM's 22nd Annual Meeting in Milwaukee, held in May.

The Tampa trip allowed the ASFPM Executive Board and others to voice their concerns directly to Mike Armstrong, FEMA's Associate Director of Mitigation, and other agency staff members. Major topics included the public assistance eligibility of non-participating NFIP communities and FEMA's ongoing efforts to update and modernize flood insurance rate maps. As many of you know, some areas of Oklahoma are represented by floodplain maps which date back to 1980, or even earlier. Since that time, intense development in many watersheds has increased stormwater runoff, or communities have annexed or deannexed lands that contained flood hazard areas. Unfortunately, revising these maps is a costly and time-intensive procedure and FEMA has been allocated insufficient funds to pursue a coordinated update effort. Nevertheless, FEMA officials have pledged to make mapping a priority. I strongly encourage Oklahoma community floodplain managers to contact FEMA's regional office in Denton if your community's flood map shows incorrect flood hazard areas. Be prepared to supply FEMA with detailed information about the stream reach, length of stream affected and why the area needs a restudy. If annexations were involved, FEMA will also require a copy of those ordinances.

At the ASFPM meetings in Texas, the Professional Development Committee continued to refine the floodplain managers certification program. The first pilot exam was administered during the Association's Milwaukee meeting in May. Participant comments will allow the Certification Board of Regents to fine tune the program so it is fully operational by next year's annual conference in Portland, Oregon, or possibly sooner. The Professional Development Committee is comprised of Diane Calhoun, Joe Remondini, Pat Hoggard, Larry Larson, Bill Lesser, Bill Tingle, Wally Wilson and I and co-chairs Roy Sedwick and John Ivey. Oklahoma's certification program, developed by the OFMA under the leadership of co-chair T.J. Davis, has already certified 44 floodplain managers.

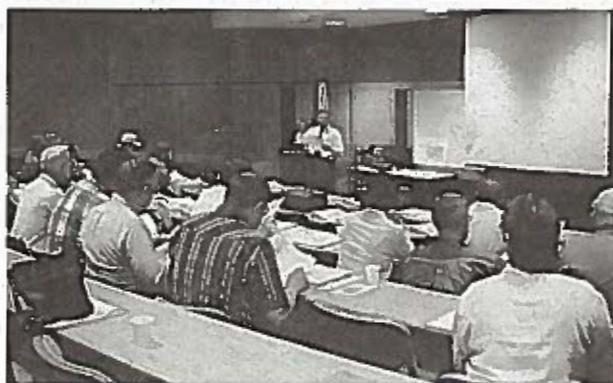
Speaking at the ASFPM Annual Conference, JoAnn Howard, Director of the Federal Insurance Agency, indicated that FIA will be accountable for flood insurance premiums and ensure that every penny is spent wisely. She also advocated a healthy respect for intelligent land use and emphasized the need to build wisely. Howard stressed the many benefits of the National Flood Insurance Program and encouraged communities to enforce local ordinances so that they can maintain their eligibility in the program. Larry Larson, ASFPM Executive Director, echoed Howard's comments regarding community compliance. He pointed out that many floodplain violations occur due to ignorance or inadequate training of community officials and local floodplain administrators. Despite this, Larson emphasized that when adequate training is finally supplied to these officials, program probation and suspension are in order for willful and/or repeat

violators. His bottom line message -- NFIP communities should enforce their local ordinances.

I also recently attended the State Coordinator's and State Hazard Mitigation Officers' Workshop at the Emergency Management Institute in Emmitsburg, Maryland. In addition to obtaining valuable information on the latest emergency/floodplain management issues, the workshop allowed participants to voice their concerns about federal flood programs and visit with high-level FEMA staff, including Mike Armstrong, Associate Director of Mitigation. Some of the more interesting subjects included introduction of software that assists floodplain/emergency managers in determining if a structure has been substantially damaged and state management of the Hazard Mitigation Grant Program (HMGP), a designation which allows qualified states to dramatically decrease the time frame required for mitigation project approval.

Oklahoma Floodplain Management Association members, please reserve September 16-18, 1998, for the Eighth Annual OFMA Annual Conference/Workshop to be held at Shangri-La Lodge, on Grand Lake. The theme is "Unified Pre-Disaster Mitigation Opportunities." The meeting will feature a certification training session and exam. Also, we will discuss potential establishment of a state mitigation revolving fund.

Finally, on June 3, at the National Press Club in Washington, D.C., the City of Tulsa was named by FEMA Director James Lee Witt one of the 50 national Project Impact communities. (See the related article in this issue.) The Oklahoma Department of Emergency Management will work closely with Tulsa on this unique effort between government and the private sector to develop "disaster resistant" communities. □



Ken Morris of the OWRB instructs Floodplain Administrators at Workshop held in Midwest City May 5.

## Come to OFMA Conference Sept. 16-18

The Oklahoma Floodplain Managers Association announces the OFMA Eighth Annual Fall Training Conference at Shangri-La at Grand Lake September 16-18.

According to Neill Pulliam, Jr., OFMA secretary, OFMA members and staff of communities participating in the National Flood Insurance Program are invited to attend the conference entitled "Unified Pre-Hazard Mitigation Opportunities." Pulliam said informative sessions will feature key speakers representing private, local, state and federal interests. Emphasis will be on reducing losses in future disasters through zoning, flood proofing and removal of flood-prone structures.

Participants will have an opportunity to qualify as a Certified Flood-

plain Manager. To date, OFMA has approved 44 applicants as Certified Floodplain Managers.

In addition to seminars, the conference will offer a cookout September 16, awards breakfast September 17 and entertainment aboard the Cherokee Queen the evening of September 17.

Registration by the August 15 deadline costs \$125 for OFMA members, \$135 for non-members, an additional \$10 for registrations after deadline.

Hotel accommodations are not included in registration fees, but may be arranged by calling Shangri-La at 1-800-331-4060.

For more information on registration or the conference, please call Carolyn Schultz at 918-669-4919 or Neill Pulliam at 918-491-9995. □

## Don't Drive Through Water

A recipient of Subaru's *Drive* magazine, upset by an article depicting a vehicle fording a river, wrote a letter to the editor that appeared in the Summer 1998 edition.

He wrote, "Crossing flooded streambeds costs hundreds of lives each year. People have no conception of the power of moving water and the force it exerts against a car when it gets in above the floorboards. First, the previously air-filled car floats slightly, since it weighs less than the water it is displacing. Next, the driver loses traction, then the car goes wherever the water wants to take it. Usually, the engine stalls, so the driver becomes helpless.

"The weight of the water prevents the passengers from opening the doors. If the car has electric windows, well, by now the electrical system is shorted out and those don't work either. Safety glass makes it even harder to break out a window or windshield and escape a vehicle that has now become a deathtrap.

"States mount massive education programs to try and prevent drivers from doing exactly what your article depicts. Your magazine is for Subaru owners, not professional drivers or stunt men. Worst of all, you work for a company which markets its vehicles primarily on their outstanding safety features. Please include a warning in the next issue and make every effort possible to prevent readers of your magazine from attempting this stunt."

The editor of *Drive* responds: "Rather than try to paddle out of this one, I'll let your well written letter do the talking! Thank you for your explanation and warning to *Drive* readers."

## Never Underestimate the River

Undoubtedly home owners at Twin Lakes near Crescent chose the banks of the Cimarron River for the scenic beauty of the site, heedless of potential danger.



On March 18, the rainswollen river cut away 100 feet of bank, plunging five homes, including this one, into the river. Owners were denied flood insurance claims because gages measuring flow on the Cimarron indicated the river did not reach flood stage.



## Tulsa to be "Disaster Resistant"

On June 3, Federal Emergency Management (FEMA) Director James L. Witt named the City of Tulsa as one of 50 cities and counties in the nation to participate in Project Impact, a new federal initiative to reduce disaster costs.

"Natural disasters cost this country too much in dollars, infrastructure loss and in ... emotional and community well-being," Director Witt explained. "We must put an end to the damage-repair-damage-repair cycle. Project Impact represents a new vision for the way America deals with disasters."

Project Impact will challenge communities across the nation to build local partnerships, assess vulnerabilities to natural hazards and implement actions that protect families, businesses and communities by preparing for and reducing the damaging effects of natural disasters. In each of the 50 "disaster resistant" communities, a local coalition of government leaders, representatives of business and individuals will be asked to provide funding, in-kind services, technical support and labor to undertake disaster-resistant activities. FEMA will provide administrative support through technical assistance and funds.

As many homes as possible were moved; only those which could not be moved or whose owners could not be contacted were lost to the river. Residents and heavy machinery worked through the night to move homes from harm's way.



J. Ross Kirtley, Chairman  
 Lonnie L. Farmer  
 Richard C. Sevenoaks  
 Grady Grandstaff  
 Richard McDonald  
 Bill Secrest  
 Dick Seybolt  
 Ervin Mitchell  
 Wendell Thomasson



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Mary E. Whitlow, Editor Barry Fogerty, Writer, Photographer James Leewright, Typography and Layout

### At the July 14 Board Meeting:

Executive Director Duane Smith updated the Board on preliminary plans for the Governor's Water Conference to be held in Muskogee in cooperation with the ports on September 29-30. Smith said conference activities will include a day of meetings at the Muskogee Civic Center, a reception and a navigation tour from the Port of Muskogee.

In the portion of the meeting devoted to the agenda of the Financial Assistance Division, Chief Joe Freeman asked and received approval of a \$33,150 emergency grant to Pawnee RWD #4. The Board approved loans to the Bixby PWA, Tulsa County, \$4,938,787; and Wagoner County RWCWSMD #4, \$4,405,000. Freeman asked approval of REAP grants to Okfuskee Co. RWD #1, \$56,000; Dewey Co. RWCWSMD #3, \$83,731; Kenetic UA, Bryan Co., \$59,900; Roff PWA, Pontotoc Co., \$51,000; Ralston PWA, Pawnee Co., \$47,979; and RWD #20, Osage Co., \$44,000.

The Board approved two temporary permits and four regular permits for the use of groundwater and amended two regular groundwater permits. The Board approved Drillers/Pump Contractors' licenses for Thomas A. Collins, Jr., A&L Underground, Inc.; Robert Bruce Bolin, Woodward Clyde Consultants; David Gilbert, Gilbert's Hardrock Drilling; Tim Eiston; Mark Fuchs, Crystal Creek Environmental Solutions, Inc.; and William R. Cole, Bentley Environmental Engineering.

Brian Vance of the Planning and Management Division presented a video on the Oklahoma Weather Modification program administered by the OWRB. Division Chief Mike Mathis discussed evaluation of the program and efforts in other states.

Executive Director Smith discussed the issue of waste by pollution and asked input from Board members. He said with their approval, additional information would be solicited by staff from applicants for groundwater permits in an effort to determine that the use of water will not cause waste by pollution. □

**FINANCIAL ASSISTANCE PROGRAM UPDATE**  
 Approved at June and July 1998 Board Meetings

4.222% 1997 Bonds, 29-year maximum term

Entity	Amount
<b>FAP Loans</b>	
Bryan Co. RW, S&SW #2	\$ 460,000.00
Wagoner Co. RWD #5	\$ 1,845,000.00
Muskogee MA	\$ 10,150,000.00
<b>CWSRF Loans</b>	
Bromide PWA	\$ 103,575.00
Perry MA	\$ 950,000.00
Tishomingo MA	\$ 1,353,726.70
Muskogee MA	\$ 5,644,800.00
Bixby PWA	\$ 5,011,774.00
Wagoner Co. RW, S&SWMD #44	\$ 4,405,000.00
<b>DWSRF Loans</b>	
Holdenville PWA	\$ 4,177,000.00
<b>Hardship Grants</b>	
Bromide PWA	\$ 500,925.00
<b>Emergency Grants</b>	
School Dist. #34(Moseley)	\$ 46,750.00
Beckham Co. RWD #3	\$ 71,400.00
Bromide PWA	\$ 86,000.00
Pawnee Co. RWD #4	\$ 33,150.00
<b>REAP Grants</b>	
Billings PWA	\$ 73,000.00
Osage Co. RWD #20	\$ 44,000.00
Gaddo PWA	\$ 80,000.00
Gimarron City	\$ 72,605.03
Okfuskee Co. RWD #1	\$ 56,000.00
Dewey Co. RWS & SWMD #3	\$ 83,731.00
Roff PWA	\$ 51,000.00
Kenetic	\$ 59,900.00

# OKLAHOMA WATER NEWS

*Bimonthly Newsletter of the Oklahoma Water Resources Board*



Duane A. Smith

*from  
the desk  
of the  
Director*

I enjoyed the Governor's Water Conference on September 29 in Muskogee and the barge tour September 30 provided by the Tulsa District Corps of Engineers. The generous hospitality of the city and the assistance of the Muskogee Chamber of Commerce helped make the conference a huge success.

Now we launch a busy season that will include meetings to solicit suggestions for 1998 revisions to the Oklahoma Water Quality Standards. The first informal meeting was held at Water Board headquarters on October 5. Critical issues for consideration include tribal water quality standards, nutrient management, groundwater vulnerability and beneficial use assessment protocols. The second meeting will be held at Water Board offices on November 9.

Another important activity will be underway soon -- revision of the Board Rules and Regulations. We intend to bring these draft documents to public meetings throughout the state to seek input and comment from the water users we serve. See page 2 of this issue for news concerning meetings in your area.

At the October 13 meeting of the Board, members considered adoption of three emergency rules. One exempts small poultry producers (typically operations using five acre-feet of water annually).

Another establishes a minimum setback of three miles for swine feeding operations from a permanent camp

*Continued on page 2*

## "Road Trip" to Muskogee Proves Successful for Water Conference

*400 enjoy conference agenda of notable speakers, firsthand tour of the navigation system by barge*

The downtown Muskogee Civic Center was the site of the successful Nineteenth Annual Governor's Water Conference on September 29.

The meeting opened mid-morning with a keynote by Dr. Joe Westphal, former OSU professor who is Assistant Secretary of the Army for Civil Works. Col. Leonardo Flor, commander of the Tulsa District Corps of Engineers, updated conferees on projects underway in Oklahoma and this district.

Westphal pointed out that water touches the lives of all Oklahomans. "When a water user in Taft turns on the tap, he draws a glass of water that comes from Lake Fort Gibson, a Corps of Engineers lake. When a rural electric co-op member turns on the lights, she uses hydroelectric power generated at a Corps facility," he said. "A bass fisherman speeds his boat across a Corps lake."

Congress passed a budget that contains funding for civil works, including construction at Montgomery

Point Lock and Dam, safety improvements at Tenkiller Ferry Dam and flood protection improvements along Mingo Creek, near Tulsa, Westphal emphasized.

Tulsa District Corps Commander Leonardo Flor stated 23 million people visit Corps lakes in Oklahoma every year. He said the lakes provide 378 million gallons of water supply, generate \$50 million in hydropower and prevent an estimated \$122 million in flood damages.

State agency heads Duane Smith of the OWRB, Dennis Howard of the Department of Agriculture, Jon Craig of the Department of Environmental Quality and Mike Thralls of the Conservation Commission described environmental challenges in a discussion that rounded out the morning agenda.

In a luncheon address, Governor Frank Keating praised the courage of the Oklahoma Legislature in passing

*Continued on page 2*



*Conference, continued from page 1*

strict measures to regulate the poultry and swine industries. He pointed out that Oklahomans must anticipate water quality problems before the environment is threatened.

The afternoon agenda included remarks by Attorney General Drew Edmondson; water quality initiatives outlined by EPA Regional Administrator Gregg Cooke, and a segment on Native American Issues led by Chris Kenney, Bureau of Reclamation Native American Coordinator, Cherokee Chief Joe Byrd and Chickasaw Governor Bill Anoatubby.

Drought was the topic discussed by Albert Ashwood, director of the Oklahoma Department of Emergency Management, and Dr. Ken Crawford, director of the Climatological Survey. Crawford told conferees National Weather Service outlooks predict the

state will receive less than normal rainfall the balance of the year. He said the drought in southwest Oklahoma is as bad as during the Dust Bowl years in the 1930s. The state experienced its most severe droughts in 1896, 1910, 1936, the early 1950s and 1963.

Brian Griffin, Secretary of Environment, reported on programs in place, and Patsy Bragg, vice-chair of the Tulsa Metropolitan Utility Authority, described studies underway in Tulsa aimed at safeguarding the watersheds that produce the city's water supply.

On Wednesday, conferees rose before daylight to board the Corps of Engineers barge that transported them from the Port of Muskogee to Webbers Falls Lock & Dam 17, 30.5 miles down the McClellan-Kerr Arkansas River Navigation System. □

## Board Closes First Drinking Water Loan

On August 28, the Water Resources Board closed the first loan for improvements to a drinking water system. The program that enabled the Board's Financial Assistance Division to underwrite the \$5 million loan to the Cushing Municipal Authority is the Drinking Water State Revolving Fund (DWSRF) Program, a cooperative initiative with the Oklahoma Department of Environmental Quality.

Joe Freeman, chief of the Board's Financial Assistance Division, explains that the first DWSRF loan approved by the Board was the \$4.17 million loan to Holdenville in June, but paperwork is pending, so Cushing's loan is the first to be completed.

Freeman said the Cushing DWSRF loan will refinance at a lower interest rate an earlier FAP loan and finance new construction to update the city's water supply. The city contributed \$2.3 million in local bond issue proceeds to get the renovation underway.

Eight new wells replace the water supply previously available from Cushing Lake, which will be drained and dredged. Water from the new wells will be transported to the treatment plant through a network of pipes ranging in diameter from six to 16 inches. A new water treatment plant designed to process 1.5 million to three million gallons a day, will replace the city's 75-year old facility. A new elevated water storage tank will improve the city's

fire protection capabilities and augment storage in other tanks.

Freeman pointed out that the DWSRF Program is partially enabled by \$3.5 million appropriated by the Oklahoma Legislature to match U.S. EPA grants for upgrading public water systems. The OWRB is "banker" for low-interest loans to communities targeted by DEQ as candidates for improved water treatment and distribution systems. Freeman said that the EPA grant and state matching funds may be used for a reserve, should the demand for loan funds make it necessary to issue revenue bonds to support the program.

The DEQ prioritizes projects and ensures that environmental and engineering standards are satisfied, then Board FAP staff review applications and disburse funds during construction.

Freeman said the 20-year loan to Cushing Municipal Authority carries a fixed interest rate of 3.313%, with repayment to begin at completion of construction.

In addition to this newest initiative, the OWRB Financial Assistance Division manages successful loan and grant programs for the construction and improvement of water and wastewater facilities and oversees the water/wastewater portion of the Rural Economic Action Plan (REAP) grant program directed to small communities. □

*Director, continued from page 1*

or recreational camp operated by a non-profit organization.

The third establishes an emergency drought relief grant account.

Now that the emergency measures have been approved by the Board, they will be forwarded to Governor Keating for review and approval. With his approval they become effective. □

## Public Meeting Dates Announced

Executive Director Duane A. Smith announced a series of public meetings on proposed Board rules will be held throughout the state, beginning in western areas in mid-November and culminating in Oklahoma City in January. Smith said the meetings provide citizens opportunity to comment on new rules proposed, as well as discuss changes to existing rules.

Meetings are scheduled at 7 p.m. at the following locations:

**Guymon** - November 17  
Texas County Activity Center

**Woodward** - November 18  
High Plains Vo-Tech

**Idabel** - December 3  
Kiamichi Area Technology Center

**Altus** - December 10  
Southwest Vo-Tech

**Tulsa** - December 17  
State Offices Building

**Oklahoma City** - January 5  
Board Room, Oklahoma Water Resources Board

The first draft will be distributed to Board members on January 12.

A public hearing will be held in Oklahoma City in the Board Room of OWRB offices, 3800 N. Classen on January 21 at 2 p.m.

Final approval of rules is expected at the February 9 Board meeting.

Smith also announced a schedule of meetings to gather input for Oklahoma Water Quality Standards.

Informal meetings are scheduled at OWRB Oklahoma City offices at 1:30 p.m. on November 9 and December 14. For more information, call Derek Smithee, Water Quality Programs Division Chief at 405-530-8800. □

**A.** Jan New of Oklahoma City picks up packet from Mary Brueggen.



**B.** Angela Thompson and Kent Wilkins assist with registration.



**C.** Keynoter Dr. Joe Westphal is interviewed by Marla Peek of the Oklahoma Farm Bureau.

**D.** A sandwich luncheon was served to conferees by Jasper's Restaurant of Muskogee.

**E.** Steve Taylor, Johnston's Port 33, visits with Col. Leonardo Flor and Glen Cheatham of the ABDA.

**F.** Jack Anderson of the Arbuckle Master Conservancy District and Derek Smithee, OWRB Water Quality Programs Chief talk about water issues.



**G.** The award-winning jazz band from the Parkview School entertained at lunch.



**H.** Remarks by Governor Frank Keating highlighted the luncheon program.

**I.** Gene Whatley and Terry Walker of the ORWA attended the conference.

**J.** Gary Sherrer, former Water Board director, visits with Mason Mungle of the Oklahoma Farmers Union.

**K.** Board Chairman Ross Kirtley welcomed conferees and thanked the City of Muskogee for hosting the conference.

**L.** Ken Morris of the OWRB visits with Andy Comer of the Corps of Engineers.



**M.** Board Executive Secretary Mary Schooley and Col. Leonardo Flor chat in the Registration Area.



**N.** Mike Melton talks to Sen. J. Berry Harrison and his wife, Jackie, as the barge travels down the McClellan-Kerr Arkansas River Navigation System.

**O.** More than 400 people enjoyed the tour from the Port of Muskogee to Webbers Falls.

**P.** Julie Cunningham of the Water Quality Division explains programs of the Water Resources Board to a conference attendee.



**Q.** Duane Smith, OWRB executive director, outlines the issues facing the Water Resources Board.

**R.** Janet and Grady Grandstaff and an unidentified passenger enjoy the early morning view from the barge.

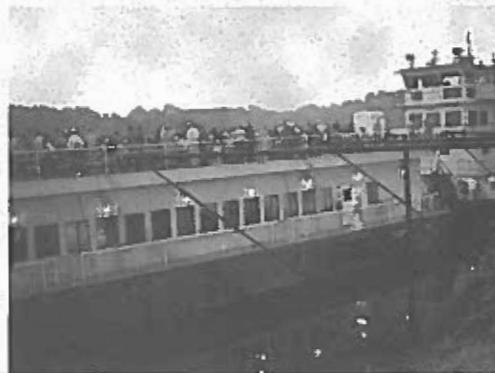


**S.** The annual Corps of Engineers Navigation Tour began with boarding at 6:30 a.m. for departure at 7 a.m.

**T.** Mike Sughru of the OWRB Information Services Section demonstrates GIS application to Liz Hollingworth of Hilldale Public School.

**U.** Sen. J. Berry Harrison and Grady Grandstaff, OWRB member, chat before the meeting.

**V.** Board Members Ervin Mitchell and Lonnie Farmer visit with Keith McDonald.



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# Secret, Portiss Honored as Water Pioneers

At the September 29 Governor's Water Conference in Muskogee, Robert W. "Bob" Portiss, Port Director of the Tulsa Port of Catoosa and rural water activist Bill Secret of Broken Arrow were honored as Oklahoma Water Pioneers. The awards were presented by Governor Frank Keating, Water Resources Board Chairman Ross Kirtley and OWRB Executive Director Duane Smith. The two recipients of the 1998 award were recognized for their exemplary efforts on behalf of the state's water resources.

Portiss has served the port as manager of traffic and sales, director of marketing and transportation and deputy

Portiss' leadership, the port has grown to include 53 businesses shipping products throughout the world.

Secret serves on the Oklahoma Water Resources Board and is a founding member and board member of the Oklahoma Rural Water Association. He also serves on the National Rural Water Association Board. Secret served as Broken Arrow city manager, founded Wagoner County Rural Water District #5 and managed Wagoner RWD #4 for 20 years, until his retirement last year. He was honored as ORWA Manager of the Year in 1996 and ORWA Man of the Year in 1994.

Water Pioneer Awards were presented at the luncheon attended by more than 400 people at the Nineteenth Annual Governor's Water Conference in Muskogee's Civic Center. According to Duane Smith, executive Director of the Water Resources Board, this is only the second time in the 19-year history of the conference that it has been held outside Oklahoma City.

Honorees receive a framed award and their names are added to a bronze plaque displayed at the conference. The Water Pioneer Award was added to conference activities in 1985 to honor Oklahomans who have made outstanding contributions to the conservation, protection and development of the state's water resources. □



Governor Keating presents Water Pioneer Awards to Bill Secret, top photo, and Bob Portiss, lower photo.

port director before assuming the title of Port Director in 1984. He has served as first vice president of the Arkansas Basin Development Association, a 5-state water resources organization and just completed two terms as chairman of the National Waterways Conference. Under



Laura Oak of the Board's Financial Assistance Division rakes the soft bed of sand placed to cushion falls in the playground area.



Cecil Bearden steers a front loader in moving sand to the sand box. The Bobcat skid-steer loader was loaned without charge by A&B Rent-All and the sand was contributed by Dolese.

## OWRB-ers Volunteer in 1998 Day of Caring

On September 11, 18 volunteers from the Water Resources Board returned to the Celebrations Preschool at 431 S.W. 11th to work in the United Way "Day of Caring." The volunteers arrived early, armed with buckets, brushes, paint, rakes, shovels, sand and a Bobcat skid-steer loader to spend half-day to touch up improvements they made on their first visit in 1995. Celebrations is a bilingual preschool assisted by United Way Funding. The effort was coordinated by Shelly Bacon and Laura Oak of the OWRB. □

Suzanne Dudding of the Board's Water Quality Programs Division and Jennifer Halstead of Financial Assistance freshen a bookcase with a new coat of paint.



# At the October Board Meeting:

Two groups representing Sardis Lake water users attended the October 13 Board meeting to ask for resolution of some issues delaying their use of water from the lake. Ownership issues, the state's debt to the Corps of Engineers, proposed sale of the lake's water and a pair of lawsuits have stalled actual use of the water. Executive Director Duane Smith told the water users he believes an agreement reserving some of the Sardis water for use by area residents can be reached soon.

On unrelated issues, Board members approved three emergency rules that need only Governor Keating's signature within 45 days to become effective. One expands the definition of "domestic use" in Board rules, broadening it to include use of up to five acre-feet of water by a landowner for agriculture purposes and fire protection.

Smith asked the Board to consider the passage of a rule requiring a 3-mile setback of swine operations from recreational camps operated by a nonprofit organizations and occupied at least six months of the year as a requirement for granting a groundwater permit. In response to discussion by the Board, staff will request an Attorney General's opinion on the definition of "nonprofit organization."

The third emergency rule approved by the Board establishes a drought relief account to assist counties, municipalities, rural water districts and other entities in supplying drinking water in periods of drought. Among eligible projects would be extension of water supply intake structures, acquiring tanks, tankers, temporary lines, pumps and other equipment necessary to acquire or transport water. It also allows grants for agricultural supply and fire protection.

Smith pointed out that citizens will have an opportunity to comment on these emergency rules as well as other rules proposed by the OWRB in a series of six meetings and hearings throughout the state in the coming months. He encouraged Oklahomans with an interest in water issues to watch their local newspapers for notices of meetings. □

## FINANCIAL ASSISTANCE PROGRAM UPDATE

Approved at Aug., Sept., Oct. 1998 Board Meetings

### FAP Loans

1997 Bonds; 29-year maximum term - Variable Rate

Enid Municipal Authority .....	\$ 5,720,000.00
Wagoner Co. RWD #8 .....	\$ 280,000.00
Tulsa MUA .....	\$ 10,115,000.00

### CWSRF Loans

Enid Municipal Authority .....	\$ 3,280,000.00
Warner UA .....	\$ 177,016.00
Tulsa MUA .....	\$ 17,035,000.70

### DWSRF Loans

Cushing MA .....	\$ 6,500,000.00
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### Emergency Grants

McCurtain Co. RWD #1 .....	\$ 50,000.00
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### REAP Grants

Green Valley RWD #4 .....	\$ 127,394.97
Seiling PWA .....	\$ 58,458.00
Eldorado PWA .....	\$ 80,913.16
Southgate RSD #1 .....	\$ 90,000.00
City of Carter .....	\$ 77,850.00
Devol PWA .....	\$ 83,310.55
Dewey Co. RWD #1 .....	\$ 95,760.00
Kingfisher Co. RWD #4 .....	\$ 134,500.00
Lenapah PWA .....	\$ 32,052.00
Grove School District #D-27 .....	\$ 50,000.00
Devol PWA .....	\$ 99,900.00
Marland PWA .....	\$ 106,322.00
Delaware Co. RW,S,G&SWMD #6 .....	\$ 21,200.00

Mary E. Whitlow, Editor

Barry Fogerty, Writer, Photographer

James Leewright, Typography and Layout

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 Bill Secret  
 Dick Seybolt  
 Ervin Mitchell

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# OKLAHOMA WATER NEWS

*Bimonthly Newsletter of the Oklahoma Water Resources Board*



**Duane A. Smith**

**from  
the desk  
of the  
Director**

The Water Resources Board is approximately midway in a series of meetings to gather comment on agency rules. In western Oklahoma November 17-18, we had productive meetings at which the interest focused on groundwater law and the agency's protocols for public hearings on permit applications.

On November 16, I was invited to visit with Senator Bruce Price's interim legislative study committee to present an overview of Oklahoma's water resources and the laws governing water use. I explained the different codes regulating stream water and groundwater and the means of prescribing water quality standards. I explained that the OWRB is designated by statute as the

agency responsible for promulgating water quality standards and developing the implementation framework. All state agencies implement the Standards in appropriate programs and work in a cooperative effort to protect the quality of the state's waters.

Another exciting program ongoing at the OWRB is the Beneficial Use Monitoring Program described in an adjacent article. Our specialists are in the second month of water quality monitoring, with funds provided by the 1998 Legislature from the Rainy Day Fund. We are requesting of the 1999 legislature funding to underwrite the second year of this critical program. As conscientious stewards of state monies, we will dedicate any new funding to accomplishing the goals of the program without the addition of more personnel. We believe this is our mandate from the citizens of Oklahoma.

As I review the agency's accomplishments in 1998, I am also proud that we completed another year of operations in a comprehensive weather modification program; completed a far-reaching state drought management plan; developed an OWRB website to serve our customers; initiated several important studies on water use, wastewater and water availability; made great strides in GIS applications; and provided financial assistance to dozens of Oklahoma communities for upgrading or replacing water and wastewater systems.

## ***Water Board Develops Strategy For Beneficial Use Monitoring***

**\$1 million legislative appropriation assists Board  
in protecting beneficial uses of surface waters**

In the closing days of the legislative session, lawmakers reaffirmed their confidence in the Water Resources Board by appropriating \$1 million for a beneficial use monitoring program and awarding OWRB oversight in the effort.

The OWRB is the state agency charged with promulgating Oklahoma Water Quality Standards, rules that are the cornerstone of the state's water quality management programs. The Standards define beneficial uses of the state's waters, set out strategies to protect the beneficial uses, and declare an anti-degradation



**Derek Smithee  
Water Quality Programs  
Division Chief**

policy. A critically needed component of the Standards is a monitoring program to assure that the beneficial uses are protected and maintained.

Other state environmental agencies rely on the Standards to accomplish their missions related to water quality, and routinely gather water samples specific to the needs of their programs. The OWRB solicited the assistance of its sister agencies in accomplishing the enormous task assigned by the legislature.

“This is a program critical to the long-term success of maintaining Oklahoma’s water quality,” said Derek Smithee, chief of Water Quality Programs. “Without it, water quality management decisions may be handicapped by a lack of sound, reproducible and defensible data.”

The OWRB has developed a comprehensive, long-term, statewide monitoring program to detect and measure water quality trends, note impairments to beneficial uses, and identify pollution problems before they become crises. This will allow state and federal agencies to implement necessary water quality management activities, such as best management practices (BMPs), to address Oklahoma’s pollution problems.

Water quality specialists of the Board outlined five key tasks in setting the Beneficial Use Monitoring Program in place. They are fixed and rotational monitoring, load monitoring, lake monitoring, groundwater monitoring and intensive monitoring.

As Task 1, the OWRB will sample 125-200 river and stream sites annually, 84 of them fixed stations; 92 rotational. Smithee said fixed sites will be sampled 10 times a year for nutrients and general water quality parameters; once for metals, once for pesticides, and five times for bacteria during the recreation season.

“Rotating sites were selected with input from other state environmental agencies and should reflect the state’s short-term monitoring priorities for this year,” said Smithee. “In most instances, rivers and streams were selected because they were previously identified as having beneficial uses impaired. Those stream segments will be sampled 10 times annually for the specific parameters impairing them. As time, manpower and funding permit, an additional 75 sites may be added to the sampling program,” he pointed out.

To accomplish Task 2, fixed-station load monitoring, the OWRB will cooperate with the United States Geological Survey (USGS) or other agencies that collect flow data. The effort will focus on collecting both quality and quantity information in order to calculate pollutant loads, thus building the critical link with total maximum daily loads (TMDLs.)

### ***Beneficial use monitoring is a critical component of the state's water quality program***

Task 3, fixed station lakes monitoring, requires quarterly sampling of 35-40 lakes annually for a similar suite of parameters as sampled by the stream program. The OWRB will assess impairment of beneficial uses and enrichment/sedimentation trends.

“Under Task 4 of the Beneficial Use Monitoring Program, we will cooperate closely with the Oklahoma Department of Environmental Quality (DEQ) to develop standardized groundwater monitoring methods,” said Bill Cauthron, program coordinator. “We’ll spend the first year evaluating existing groundwater data to see where we have gaps in information,” Cauthron pointed out. “Then we’ll work with DEQ to determine a comprehensive groundwater sampling program for the future.”

Task 5 requires the state agency with appropriate jurisdiction to undertake intensive monitoring on any site where a beneficial use impairment is noted to determine the source, or sources, of impairment. “We’ll work closely with other agencies to identify high priority waters and provide critical input toward determining where remediation money should be spent,” Smithee said.

The Water Board is grateful to the Oklahoma Legislature for this appropriation, Smithee, acknowledged. They realize that clean water is one of Oklahoma’s most dynamic and highly prized resources.

“However, the dynamic nature of water and the environment makes it imperative that we integrate beneficial use monitoring into the state’s long-range water quality management program,” Smithee emphasized.

# THE FLOOD CURRENT

## *Floods Point Out Driving Dangers, Futility of Damage/Repair Cycle*

Ken Morris, Oklahoma NFIP Coordinator

Once again, on the heels of fierce drought conditions, Oklahoma has been struck by severe flooding after the Chikaskia and Salt Fork Rivers spilled over their banks in early November. One life, that of a young Aline woman, has already been lost after driving into always dangerous and deceptive floodwaters. Although homes and businesses were impacted in Alfalfa, Grant, Tulsa, Creek and Ottawa Counties, Kay County, especially the Towns of Blackwell and Jefferson, suffered the most severe damage. As mentioned elsewhere in this issue of the Flood Current, I traveled to Blackwell on November 2 to tour flood-damaged homes. After meeting with local and county officials at the Red Cross Center and Emergency Operations Center, we experienced first-hand what a devastating impact flooding can have on both possessions and lives.

Representatives of the Cherokee Strip Red Cross, Kay County Emergency Management and the Town of Blackwell were instrumental in assisting hundreds of flood victims, from evacuation to providing temporary shelter and other personal items. In the wake of this disaster, many victims have pledged to stop future flood damage here and break the damage/repair cycle that continually drains communities and state governments of available funds and services.

On another note, it's time for all certified floodplain managers in Oklahoma to renew their certification, which expires each fall after the Oklahoma Floodplain Management Annual (OFMA) Conference. This year's conference, held September 16-17, was one of the best ever. Also, keep your eyes open for The BFE, OFMA's newsletter, which will contain the Certified Floodplain Managers renewal form. Please complete and return it to the OFMA in Tulsa, along with the \$10 renewal fee. For more information about the renewal procedure, contact Joe Remondini at (918) 669-7198.

## *Officials Visit to Assess Damage in Blackwell, Seek Federal Aid*

On November 6, a team of federal and state officials, including Oklahoma Water Resources Board representatives, assessed damages as Kay County citizens sifted through the muck and destruction left in the wake of devastating floods which inundated the town five days earlier.

The survey of flooded homes in Blackwell and other hard-hit areas of Kay County was conducted by specialists from the OWRB, Oklahoma Department of Civil Emergency Management, FEMA and U.S. Small Business Administration. The agencies seek to determine the nature and amount of uninsured losses and needs of affected communities in Kay, Alfalfa and Grant



**In Blackwell, 160 homes were evacuated, two completely destroyed and 300 "affected" by floodwaters.**



**Estimating preliminary damage in some flooded areas of Kay, Alfalfa and Grant Counties was possible only by boat.**

Counties, where the Chikaskia and Salt Fork Rivers overran their banks and inundated more than 100 homes and businesses.

Governor Keating has declared disaster emergencies in those areas. FEMA and SBA officials will analyze gathered information to determine if a federal disaster declaration is warranted.

According to Ken Morris, OWRB coordinator of the National Flood Insurance Program in Oklahoma, those impacted, including the 160 evacuated in Blackwell, will feel the brunt of the disaster for years to come.

“It’s one thing to witness first-hand the impact that flooding of this magnitude can have on physical structures, homes and businesses. But it really hits home when you see the personal damage inflicted, the impact on families and livelihoods,” he said. On November 2, Morris assisted ODCEM staff in a preliminary damage assessment conducted, in some areas, through the use of small water craft.

The preliminary survey identified two homes completely destroyed, eight homes suffering major damage, 36 homes with minor damage and an additional 300 homes “affected” (flooded basements, wet floors, etc.) by flooding in the three-county region. “Many of the those most severely impacted do not have flood insurance,” Morris said..

“For those who have no alternative to living in the floodplain, flood insurance is critically important; it’s affordable and easy to get,” he emphasized. “It seems like such an easy choice, especially when you see what hardships flooding can inflict on a home and its residents. It appears that damage in Kay, Alfalfa and Grant Counties will be insufficient to qualify for federal aid specifically for individuals and/or families,” he said.

He pointed out that federal and state disaster agencies are implementing strategies, such as buy-outs and other incentives, to permanently remove citizens from the floodplain.

“Our goal is to break the repeated cycle of damage and repair and, instead, restore floodplains and allow them to fulfill their natural purpose – the safe conveyance of floodwaters,” Morris said.



### ***Drillers Schedule Seminars***

Gary Glover, coordinator of the OWRB Water Well Drillers/Pump Contractors Program, announces educational seminars December 8 and 9 for drillers and pump contractors. Both sessions begin at 8:30 a.m. and end at 12 noon.

The December 8 seminar will be held at the Tulsa Technology Center (Southeast Campus), 4600 South Olive Avenue in Broken Arrow. For directions, call 918-455-1588.

The December 9 session will be held at Mid-America Vocational Technical Center at Wayne, 20 miles south of Norman. For directions, call 405-449-3391.

The seminars will feature information on new OWRB rules concerning the D/PC program, the annual well measurement program, properties of Bentonite sealing materials and questions and discussion.

Glover pointed out there is no charge for the program, however he requests that attendees register by calling him at 405-530-8800.

### ***Ogallala Economics Projected***

Texas Tech researchers have implemented two studies to answer the question: “how would the viability of agricultural be affected by further depletion of the Ogallala Aquifer?”

In one study, researchers have examined how changing levels of the Ogallala Aquifer may impact a 14-county area of the Texas High Plains between now and 2035. The objective is to determine future cropping patterns resulting from declines in water levels. A special computer program using site-specific data determined the best solutions for producers on a county-by-county basis, given the availability of water and the

profitability of each crop choice.

The 18-month study concluded that, as the saturated thickness of the Ogallala diminishes, and the cost of irrigation increases due to pumping at ever-deeper levels, the cropping patterns will begin to favor more dryland agriculture. Farmers may have to focus on crops that use less water during the growing season and display high returns.

In scenarios considered for the study, irrigated and dryland cotton were the optimum choices. In comparing net returns of all combinations of crops and technology, irrigated cotton surpassed all crops.

A companion study examined the short- and long-term economic benefits of making irrigation systems more efficient. It focused on cotton, grain sorghum and corn, which comprise 97 percent of the total irrigated area and 47 percent of the nonirrigated area in Lubbock County. Researchers used a dynamic system of computer models to determine optimal groundwater use, cropping patterns, cropping practices, irrigation technology and marginal user costs, while adjusting groundwater availability and pumping costs.

According to study results, widespread conversions to efficient irrigation systems may not necessarily result in regional water savings. Instead, more efficient methods may bring into production more land that would not otherwise have been irrigated.

Precision irrigation techniques deliver 98 percent of the water instead of 50 percent delivered by furrow irrigation, so farmers may have the economic incentive to bring more acres into irrigated production.

Research favors cotton as the crop of choice, with irrigation increasing productivity from 200 pounds of cotton per dryland acre to 800-1100 pounds per precision irrigated acre.

Researchers point to the development of hardier strains that require less water without sacrificing productivity as another hope for the future.

## ***America's Water Use Declines***

The country's use of water declined by about 9 percent from 1980 to 1995 -- even as the United States' population grew by 16 percent during the same period. Experts attribute the decline, which followed decades of increase, to a shift in focus from dam building toward devising ways of using water more efficiently.

According to the report by the U.S. Geological Survey, the trend runs contrary to the belief that water use rises with economic and population growth and that priority must be given to developing new sources.

The use of water per person declined by about 20 percent from 1980, the all-time peak year, to 1995. Domestic water use has stabilized at about 100 gallons per person per day.

The USGS study points out that agriculture and industry have become more frugal in water use. For industry, it became less expensive to recycle water than to remove pollutants from it and return it to the stream, as federal law required. And industrial expansion slowed down.

In the West, where most of the nation's irrigated land lies and where water is more scarce, the steady depletion of groundwater and rising pumping costs drove users to more efficient use. Many farmers have abandoned the huge sprinkler systems that lose much of the water to wind and evaporation, opting for equipment that places the water directly to the root systems of plants. Although the number of irrigated acres remained constant, water use for irrigation fell 16 percent from 1980 to 1995.

Recycling of water and conservation measures, along with new technologies, reduced industrial water use by 35 percent.

Public water -- that withdrawn from natural sources and conveyed to users -- is one of the categories in which use has increased, growing by 18 percent between 1980 and 1995.

Among regions of the country, the northeastern quadrant (the Midwest, Northeast and Middle Atlantic regions) led in the overall drop in off-stream use with a decline of about 17 percent between 1980 and 1995.

Whether the decline in water use will continue is unclear, but the steady, upward trend over the last century has at least been halted.

## ***OWRB Chili Chefs Inflict Heartburn on Staff for Good Cause***



**Executive Director Duane Smith presents blue skillet denoting first prize to Mike Melton, assistant to the director. Melton returned to cook-off competition, undaunted by the 1996 failure to place with his “Roadkill Chili” recipe.**

First place in the hot competition was Mike Melton, assistant to the director, who credits the success of his recipe to a “secret ingredient.” (Shhhh...peanut butter!) The coveted blue skillet trophy displaying Melton’s name will hang in his office until next year’s winner claims it.

The red skillet marking apprentice standing was awarded to Harold Springer of the Financial Assistance Division. Executive Secretary Mary Schooley was awarded the third place beginner’s skillet.

Guest judges were Lisa Durham, Celebrations Pre-School; Toni Faris, Eateries, Inc.; and Billy McDaniel, Communications Federal Credit Union.

Tantalizing aromas of homemade chili drifted seductively from a dozen crockpots as 73 Water Board staff tested the craft of their fellow workers at the Fifth Annual OWRB Chili Cook-Off November 12. Co-chairs of the heart-warming event were Shelly Bacon and Laura Oak of the Board’s Financial Assistance Division.

The indigestion inflicted by the 12 chefs was borne nobly for the worthy cause of United Way. At \$3 per fiery bowl with all the fixin’s and dessert, the effort raised \$220 over and above the \$4,415 pledged to the United Way by employees.



**Harold Springer, first time competitor, was pepperin’ to win, but settled for an honorable second place and a red skillet in the blistering competition.**



**The spicy concoction entered by Mary Schooley, a Water Board cook with a reputation, placed a blazing third to garner her the red skillet.**

## ***Enroll Now for Floodplain Managers Course***

The OWRB will sponsor a week-long training course January 11-15 for state floodplain managers. According to Ken Morris, state NFIP coordinator, the course is entitled “Managing Floodplain Development through the National Flood Insurance Program.”

Morris pointed out this is the same course previously offered only at FEMA headquarters in Emmitsburg, Maryland. He said the expense of sending Oklahomans so far had restricted the number of state floodplain managers who could attend.

The course will be held at the Center for Continuing Education on the University of Oklahoma campus in Norman, with the first session underway Monday, January 11 at 1:30 p.m. Morris encouraged early enrollment because the class size will be limited to 36. Instructors will be federal, state and local officials.

Lodging at the Sooner Hotel, adjacent to the Center for Continuing Education, is free to course participants and

continental breakfast is provided. Morris emphasized that although there is no lodging charge, it is important to call the Sooner Hotel at 405-329-2270 to make reservations. Participants may bring spouses, but lodging expenses will be billed.

Participants may purchase other meals at the nearby Couch Cafeteria. For more information, call Ken Morris, NFIP coordinator, or Pat Kirkpatrick at 405-530-8800.

## *OWRB Partners with Tulsa In Project Impact*

A ceremony held at Tulsa's Gilcrease Museum November 4 recognized Tulsa as the Oklahoma Project Impact Community for 1998. James Lee Witt, Federal Emergency Management Agency director, presented the award to Mayor Susan Savage and noted that Tulsa is a model community in floodplain management activities.

Witt emphasized that now is the time for Tulsa to move toward the next level to become resistant to disasters associated with earthquakes, tornados, wildfires and floods. Project Impact challenges communities across the



Members of the Oklahoma Floodplain Management Association presented FEMA Director James Lee Witt with an OFMA briefcase when he visited Tulsa early in November.

Left to right: Fred Liebe, Oklahoma Department of Emergency Management, Paul Zachary, City of Tulsa Floodplain Administrator and OFMA chair; Ken Morris, Water Resources Board; James Lee Witt, Gavin Brady, OWRB Tulsa Field Office manager.

nation to build local partnerships, assess vulnerabilities to natural hazards and implement actions that protect lives and property by preparing for and reducing effects of natural disasters.

The ceremony distinguished Tulsa as a Project Impact Community and delivered mitigation funding from FEMA.

Ken Morris, state NFIP coordinator, received a "Tulsa Partners" certificate recognizing the assistance lent by the OWRB in floodproofing the city.

"This country spends \$2.5 billion each year in damage response and recovery," Witt said. "It makes sense to spend one mitigation dollar before the disaster to save \$100 in damages later."

Mayor Savage pointed out that the Project Impact designation represents the proactive approach to disaster preparedness that's been present in the city for more than 15 years. It was Tulsa's Memorial Day Flood of 1984 that

mobilized Tulsa citizens. According to Savage, the disaster killed 14 people, injured 280. The flood damaged 6,800 structures and 700 vehicles, and losses totaled \$183 million for the city.

Before that storm, Tulsa had endured 75 years of flooding and other weather-related disasters.

"People had grown to accept flooding as a way of life, until the Memorial Day flood changed the attitude and course of events for the city," said Savage. She pointed out that voter-approved utility fee increases allowed the buyout of structures along the Arkansas River floodway and conversion of the land to parks and other uses that did not involve structures.

FEMA's Project Impact initiative goes beyond celebrating specific mitigation measures, said Albert Ashwood, director of the Oklahoma Department of Civil Emergency Management. "Mitigation is not a new idea. It is an effort that requires community-wide effort. It's a public safety issue and also an economic development issue," Ashwood declared.

## At the November 10, 1998 Board Meeting

Executive Director Duane Smith provided the Board with an update on many topics including proposed water-related legislation, agency budget request, progress on FAP bond issue, negotiations on Red River Boundary Commission and outcomes of bond oversight and audit committee meetings. Schedules for informal meetings concerning rule changes were discussed.

At the request of Joe Freeman, FA Division chief, the Board approved an order for contract financial assistance for the Chelsea Economic Development Authority for \$40,000 and an increase of \$2,427,500 in the previous loan to RWSG&SWMD #4, Wagoner County. An extension of time was approved for the following previously approved emergency grants: RWSD #15, Pittsburg Co., \$75,000; Town of New Alluwe, Nowata Co., \$100,000; Crowder PWA, Pittsburg Co., \$93,755; Cardin SUA, Ottawa Co., \$79,500 and RWD #15, Osage Co., \$25,000.

A vote by the Board approved the suspension for one year of the well drilling license of James A. Nelson, operator of Nelson Pump Co., and imposed an administrative fine. Geo Systems Engineering, Inc. added David Ritter as a licensed well driller/pump contractor. Certified operators' licenses were approved for Michael E. Stone, Layne Christensen Co.; Rodney Culberson, Associated Environmental Industries, Inc.; and Rick Bridges, Geo Systems Engineering, Inc. The Board approved three temporary permits for groundwater use; four regular permits to use stream water.

Derek Smithee of the Water Quality Programs Division updated Board members on the ongoing revision of the Oklahoma Water Quality Standards, emphasizing the agency's efforts in seeking input from the public at all phases of the revision process. He stressed to participants that Oklahoma has designed a rules system to protect the water quality of lakes and streams. He gave the attendees insight into how streams are categorized by beneficial use and how designated Scenic Rivers like the Illinois, Mountain Fork, Glover and Baron Fork are afforded extra protection.

### FINANCIAL ASSISTANCE PROGRAM UPDATE

Approved at November, 1998 Board Meeting

<b>FAP Loans</b>	
1997 Bonds; 29-year maximum term - Variable Rate	
0	
<b>CWSRF Loans</b>	
Wagoner Co. RWSG&SWMD #4	\$ 2,427,500.00*
<b>Emergency Grants</b>	
0	
<b>REAP Grants</b>	
0	
<b>DWSRF Loans</b>	
0	
<b>Hardship Grants</b>	
0	

### TOTALS AS OF 11/10/98

	FAP Loans	CWSRF Loans
APPROVED	205	77
Amount	\$296,070,000.00	\$278,612,057.48
<b>Emergency Grants</b>		
APPROVED	423	132
Amount	\$23,922,226.35	\$9,903,401.65
<b>DWSRF Loans</b>		
APPROVED	2	2
Amount	\$10,677,000.00	\$1,038,752.30

\*An increase in the previous loan amount.

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