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Bimonthly Newsletter of the Oklahoma Water Resources Board

From the Director



*Duane A. Smith
Executive Director*

In August, I attended a public meeting sponsored by the U.S. Fish and Wildlife Service on the proposed designation of critical habitat for the Arkansas River shiner along designated portions of the Canadian River in Oklahoma. It is the Board's position that, before proceeding with the proposed designation, more data should be collected to determine what is not only best for the shiner but for those dependent upon Canadian River water. Fortunately, the USFWS has agreed to extend the comment period to gather additional information on this very important issue which could have enormous implications on farmers, municipalities, industries and other users who withdraw water from designated portions of the Canadian River.

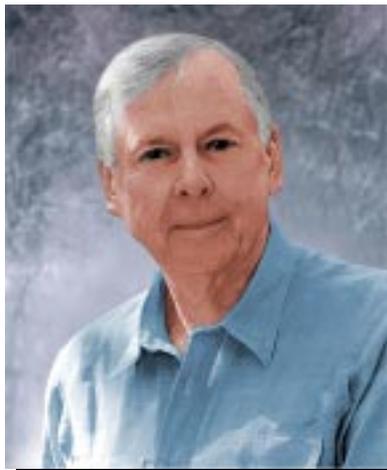
In the aftermath of the Messer-Bowers decision, the State Legislature has wisely decided to conduct a joint interim study on the waste by pollution

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T. Boone Pickens to Headline November 15 Water Conference

T. Boone Pickens, Texas oilman-turned-water-merchant, will deliver the luncheon address at the 21st Annual Governor's Water Conference when it convenes November 15 in Oklahoma City's Myriad Convention Center. The Oklahoma Water Resources Board coordinates the conference, with assistance from 30 other water-related organizations.

Pickens, who is also president and chief executive officer of Mesa Water, Inc., recently declared at an Amarillo (TX) meeting that, "Water is the new Texas gold." He compares the business of buying and selling water to dealing in mineral rights in the oil and gas industry. The Texas entrepreneur was born in Holdenville, (OK) and received his degree in geology from Oklahoma State University in 1951. He worked for Phillips Petroleum in Bartlesville for three years then, with two partners, bor-



T Boone Pickens

rowed \$2,500 to form predecessor companies to Mesa. In 1999, he formed Mesa Water, Inc. with a plan to move water from the Texas Panhandle downstate.

The Conference, entitled "Oklahoma Water: Shaping the Future," will focus on vital water and environmental topics, including the Kiamichi River Basin Plan, water marketing potential, weather modification, endangered species, the direction of water development, water quality and waste by pollution issues.

According to Duane A. Smith, executive director of the OWRB, the agenda will also feature remarks by Gov. Frank Keating (invited), Dr. Kelvin Droegemeier, director of the OU Center for Analysis and Prediction of Storms; William H. Satterfield, Alabama attorney specializing in endan-

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issue. In August, I met with Governor Keating and State Secretary of Environment Brian Griffin, who both fully support that approach as well as contracting with an independent hearing examiner, former Oklahoma Supreme Court Judge Roy Barnes, who is uniquely qualified to conduct the Kronseder remand hearing as directed under the recent Supreme Court ruling.

The first meeting of the Joint Special Committee on Waste by Pollution, Co-Chaired by Representative M.C. Leist and Senator Kevin Easley, was held on September 13 at the State Capitol House Chamber. Various state environmental agencies presented their views on the issue, including summaries of their individual water quality monitoring responsibilities. The U.S. Geological Survey also provided an overview of their activities and findings of a recent study of the Ogallala (High Plains) Aquifer which revealed that nitrates, phosphates and other pollutants are reaching groundwater in the region much quicker than previously thought. The Committee, requested by Senator Bruce Price, was very receptive to the information presented to them and the members appear committed to identifying appropriate solutions with minimal impact.

Following the September Board meeting, the OWRB Rules Committee met to discuss rule changes that would facilitate the agency's compliance with the Supreme Court decision. They considered the potential for establishing protective measures through the Water Quality Standards but, for the short-term, decided to revise the Water Protection Plan required of all water rights applicants. This more immediate course of action, which can generally be accomplished without formal rulemaking, will provide the agency with more complete information concerning the potential for waste through groundwater use. The revised Plan and other proposed rule changes are available for review and public

comment. In the meantime, I have instructed our permitting staff to begin setting hearing dates for non-swine applications.

By now, virtually all Oklahomans have been impacted in one way or another by the ongoing drought. At the September Board meeting, Ken Crawford, Director of the Oklahoma Climatological Survey, was kind enough to update Board members and others present on the current drought situation. Demonstrating the impressive suite of monitoring tools offered by the OCS, including near real-time data derived from the Mesonet's new soil moisture sensors, Dr. Crawford informed the Board that existing climate data and weather forecasts indicate that it could be some time before Oklahoma recovers from this extended drought episode.

Just last week, we received word that Governor Keating has signed the interlocutory agreement with the Corps of Engineers that will free up 500 acre-feet of Sardis water supply and, more importantly, clear the way for construction of Phase I of the Sardis Lake Water Authority. The agreement was approved at the August 9 Water Board meeting. In cooperation with the Governor's Office and Choctaw and Chickasaw Nations, we have also developed a general workplan and timeline for establishment of a State/Tribal water use compact and review of proposals to develop the water resources and economy of southeast Oklahoma.

Finally, as you many of you know, former long-time Water Board member Mike Henson passed away in late August due to complications from leukemia treatment. Several OWRB staff attended her uplifting memorial service in Stillwater. Most of us fortunate enough to know Mike are well acquainted with her kind nature and unique insight into the many complex issues she wrestled with as both Board Member and Stillwater Mayor. The Water Board and staff bid farewell to a great colleague and friend.

Standards Revision Underway

The OWRB's Water Quality Division is currently conducting its triennial review and revision of Oklahoma's Water Quality Standards. To solicit public input on proposed changes, the OWRB is hosting a series of public meetings at the Board's Oklahoma City office at 3800 North Classen Blvd. Initial public meetings on the Standards document were held September 8 and October 13; a third meeting is scheduled for November 3. The rulemaking hearing for formal public comment will be held February 5, 2001.

Specific topics for the meetings are available on the Standards Revision page of the OWRB's website. To facilitate incorporation of suggested comments and changes, the OWRB will also provide on the site justification documents on specific topics of discussion following each meeting. Those documents and other pertinent information on the Water Board's Standards Revision process may also be obtained by calling 405-530-8800.

The Federal Clean Water Act requires a comprehensive review and, if necessary, a revision of Oklahoma's Water Quality Standards every three years.

OWRB Staff Address Rural Water Association Conference

Several Water Board employees lent their expertise on a variety of subjects at the Oklahoma Rural Water Association's fall conference, held September 21-22 at Fountainhead Lodge.

Joe Freeman, Financial Assistance Division Chief, addressed the general session with a discussion of the OWRB's financing programs and general agency responsibilities. Nathan Kuhnert, of the Planning and Management Division, provided conferees with a summary of activities related to the ongoing Rural Water Systems Update. Hosting various technical sessions on water/wastewater funding sources and procedures, along with Freeman, were Nate Ellis, Angela Thompson and Harold Springer. Shelly Bacon also provided training during the break-out sessions.

The conference was attended by approximately 350 representatives and associates of Oklahoma's rural water systems.



Nathan Kuhnert



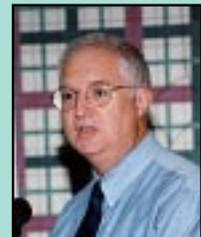
Joe Freeman



Angela Thompson



Nate Ellis



Harold Springer

Water Conference . . . Continued

gered species issues; Gregg Cooke, Administrator of Region 6 of the Environmental Protection Agency; Oklahoma City Mayor Kirk Humphreys; Oklahoma Secretary of Environment, Brian C. Griffin; Ted Coombes, Chairman, ODOT Waterways Advisory Board; Congressman Wes Watkins and key members of the Oklahoma Legislature.

Recipients of 2001 Rural Economic Action Plan (REAP) grants for sewer and water projects will also be announced at the Conference. Participating legislators and various officials of Oklahoma's cities, towns and rural water districts will be recognized. The Financial Assistance Division of the OWRB will conduct a workshop in conjunction with the conference to coach community officials in the rules and procedures of the Rural Economic Action Plan (REAP) grant program. REAP is an initiative of the 1996 Oklahoma Legislature to assist small communities and rural areas in improving water and wastewater infrastructure as a means of stimulating economic development.

Presentation of Oklahoma Water Pioneer awards will close the luncheon agenda and the 21st Governor's Water Conference. The awards recognize the lifetime achievements of outstanding Oklahomans in the planning, de-

velopment, conservation and protection of the state's water resources.

Registration begins at 8 a.m. with opening remarks by OWRB Chairman Lonnie Farmer at 8:30. For more information, please call the Oklahoma Water Resources Board at 405-530-8800.

Conference parking is available for \$5 below the Myriad in the underground parking garage, accessible from Robinson Avenue (Ronald Norick Blvd.) on the west or E.K. Gaylord Ave. on the east.

For advance registration, please complete the Conference registration form in this issue and mail, along with your \$40 check, money order or purchase order, to the Oklahoma Water Resources Board, 3800 N. Classen, Oklahoma City 73118. Please make checks payable to the "Oklahoma Water Resources Board."

To make room reservations at the Renaissance Hotel, which adjoins the Myriad Convention Center, please call 1-800-859-6877. To be eligible for the special room rate of \$99, single or double, call the reservation line before November 1 and mention the Governor's Water Conference.

Weather Experts Say Drought Likely to Persist

Not only has the ongoing drought in Oklahoma caused countless hardships for farmers, ranchers, cities, rural water systems, industries and virtually every citizen in the state, relief may be many months down the road, according to the State Climatologist.

“We’re a long way from ending this drought,” Ken Crawford, director of the Oklahoma Climatological Survey, told members of the Oklahoma Water Resources Board at their September meeting, following the driest August on record in the state since record-keeping began in 1892.

Since Crawford’s appearance before the Board, Oklahomans have witnessed the driest August through September period in state history. From September 1 through October 10, five climate divisions received 20 percent or less of their normal precipitation, including the West Central region at a paltry one percent, or three one-hundredths of an inch. The state-averaged total was only 26 percent of normal for the period. At some point during the July/August/September period, most of the state’s Mesonet stations experienced a rainless streak of more than two months (less than one-tenth of an inch during any one day period). Some areas experienced 80 to 90 consecutive days with no significant rainfall.

August was also extremely hot. The statewide mean temperature of 85.4 degrees Fahrenheit was the fifth warmest on record and all areas of the state were well above normal for the month, Crawford said. And in October, 106 degrees was recorded at Hollis, the warmest reading ever in Oklahoma in October.

Lack of moisture, heat and Oklahoma’s typical southern winds all combined for a potentially disastrous fire situation. Hundreds of wildfires erupted throughout the state and more than 80,000 acres have been burned to date. The state has lost more than \$22 million in timber resources and the fire danger still exists.

While extended forecasts predict a possibility of above normal rainfall during the November through January period, Crawford emphasized that even a short period of above normal rainfall, as we experienced in October, would have little or no effect on this current drought. “We may go into this winter with a drought even if we get some rain,” he said, estimating that a full month of gentle rains is needed to replenish Oklahoma’s parched soil. He added that a dry spring could be devastating to the state’s economy and Oklahomans in general.

The Oklahoma Climatological Survey administers the Oklahoma Mesonet, one the most concentrated and sophisticated weather reporting networks in the world. The Mesonet, a joint project between the University of Oklahoma and Oklahoma State University, became fully

operational in 1994 and consists of more than 110 environmental monitoring stations in all of the state’s 77 counties. Each station measures a multitude of conditions, including rainfall, air temperature, humidity, air pressure, wind speed and direction, solar radiation and soil temperature. Measurements are recorded at five-minute intervals and are updated every 15 minutes on the OCS website at www.ocs.ou.edu.

The most recent addition to the network are sensors at 100 Mesonet sites which measure soil moisture content at four separate depths: five centimeters (two inches), 25 centimeters (almost 10 inches), 60 centimeters (nearly two feet) and 75 centimeters (about two-and-one-half feet below ground). In September, Crawford said that soil moisture supplies were critically short throughout much of the state, as many farmers awaited sufficient

moisture to plant winter wheat for forage. Fortunately, some of that moisture did arrive during October. However, state officials have already forecasted potential agricultural losses of up to \$1 billion.

According to the Palmer Drought Severity Index, a general indicator of current drought conditions issued each week by the National Oceanic and Atmospheric Administration’s Climate Prediction Center, all nine climate divisions in Oklahoma are now in various stages of drought, including the Northwest and South Central regions which are categorized in severe drought. Crawford also points to the Keetch-Byram Drought Index as one of the best and most accurate indicators of drought conditions in Oklahoma. A vital component of the Oklahoma Fire Danger Model, the index measures the state of near-surface soil moisture (within the uppermost eight inches of soil) as well as the amount of fuel available for fires. Prior to the October rains, almost two-thirds of the Mesonet stations in Oklahoma recorded KBDI values above 600, the general threshold of severe drought. The Fire Danger Model was developed by Oklahoma State University in conjunction with the Intermountain Fire Sciences Lab of the U.S. Forest Service in Missoula, Montana and is run operationally by the University of Oklahoma and the Oklahoma Climatological Survey using Mesonet data.

Also of concern to state climate and water officials are streamflows. “To me, the first real indicator of the extreme nature of this drought were the significant number of U.S. Geological Survey streamflow stations reporting little or no flow,” said Duane Smith, OWRB Executive Director.

While water supply storage in the state’s major reservoirs has not reached the critical phase, a number of

“We may go into this winter with a drought even if we get some rain”

major lakes fell below 80 percent capacity, including Lugert-Altus Reservoir at about 31 percent of normal storage in mid-October. Lugert-Altus is utilized primarily for irrigation by customers in southwest Oklahoma.

Fortunately, though levels have dropped steadily in recent months, the state's large surface supplies generally contain ample water to satisfy the near long-term requirements of many Oklahomans. Some smaller municipal lakes, however, have been stretched to their limits, although the recent cool weather has reduced water demands throughout much of the state and provides an opportunity for recovery with fall rains.

The City of Wilburton, in eastern Oklahoma, is all too familiar with such water woes. In August, Governor Keating signed a declaration of disaster emergency due to the critically low level of Lloyd Church Lake. The lake provides raw water supply to some 1,200 residences or businesses in Wilburton and an additional 1,300 to 1,400 customers of Latimer County Rural Water District No. 1. The disaster declaration provided Wilburton with eligibility for a \$100,000 emergency grant through the OWRB's Financial Assistance Program. The grant will be combined with \$100,000 from a local petroleum company and local funds to construct a new six-inch line that will divert additional supply from Fourche Maline Creek some 2½ miles away. The project is estimated at \$236,000.

"The Water Board funds were enabled through a recent change in eligibility requirements that award additional priority points to water systems and rural water districts in designated state or federal disaster areas," said Joe Freeman, chief of the OWRB's Financial Assistance Division. He added that a similar OWRB grant was recently awarded to the Town of Boynton, southwest of Muskogee, to improve its crippled water delivery system.

Generally slower to respond to drought events are groundwater levels, monitored by the OWRB through its annual water well measurement network of more than 700 wells throughout the state. According to OWRB Planning and Development Division Chief Mike Mathis, network data, when compared to historical records, are extremely valuable in determining long-term trends as well as in keeping abreast of localized groundwater supply problems as they occur.

"While deeper wells, in general, will be slow to provide us with information on the extent of this current drought, recent data from many of those wells indicate that levels have already declined due to the extended dry periods in 1998 and, earlier, in 1996," Mathis pointed out.

Crawford agrees that the ongoing drought could, in fact, be a continuation of an extended drought begin-

ning two to four years ago. "Our data indicates that some areas of southern Oklahoma have failed to recover from the 1996 drought. That just intensifies the current situation," he said.

An interim study recently convened by the State Legislature is seeking various short- and long-term measures to deal with Oklahoma's extensive agricultural-related losses, including those related to livestock hay shortages and the substantial resources expended to fight



This dry depression in northern Woodward County is normally a relatively large farm pond.

recent wildfires. The committee, co-chaired by Reps. M.C. Leist and James Covey and Sens. Frank Shurden and Robert Kerr, is specifically studying the feasibility of creating an emergency contingency fund to alleviate costs associated with current and future agricultural-related disasters.

The Oklahoma Drought Management Plan, published in 1997 in response to the previous year's disastrous drought, is the primary mechanism through which state agencies attempt to mitigate and prepare for drought situations in Oklahoma. Albert Ashwood, Director of the Oklahoma Department of Civil Emergency Management and State Drought Coordinator of the Oklahoma Drought Management Team, believes that the state's preparation for this drought has been relatively efficient, to date.

"Considering that drought is a unique natural disaster in that its onset is so gradual and its impacts so widespread, the state has done an admirable job from a readiness and response perspective," he said, adding that Gov. Keating has been extremely supportive of state drought mitigation efforts throughout his term. The Governor created the Drought Team, consisting of the Water Availability and Outlook Committee (WAOC) and Impact Assessment and Response Committee (IARC), through executive order in 1996.

As the state's water management agency and chair of the WAOC, the Water Board is responsible for monitoring emerging drought conditions. According to Duane Smith, this role necessitates a close working relationship with numerous state and federal agencies and organizations.

"We are blessed to have so many responsible environmental agencies in Oklahoma and we depend on them for a variety of drought-related information," he said, citing OCS, State Department of Agriculture (also chair of the IARC), U.S. Geological Survey, Corps of Engineers, Bureau of Reclamation and various others who support state monitoring efforts.

As chair of the WAOC, the Water Board publishes the Oklahoma Water Resources Bulletin, an accounting of various water and moisture-related conditions in Oklahoma. The Bulletin, available through the agency's website

(www.owrb.state.ok/~owrb), is released on a regular basis throughout the year and as frequently as weekly when dry conditions warrant.

Smith points out that due to the "creeping" nature of drought's onset, dealing with drought episodes must necessarily be a day-to-day pursuit of all state and federal water agencies in Oklahoma.

"At the Water Board, we try to short-circuit drought impacts to the best of our ability. Through our hydrologic studies, we obtain an accurate reckoning of available water that facilitates good management of the resource. In general, we administer water rights to allay or prevent water shortages, or at least buy ourselves time to develop a management strategy to deal with those situations when and where they arise. The Drought Team takes a similar approach in being proactive to drought events," he added.

Given the apparent long-term nature of this drought situation, Smith hopes that water users across Oklahoma will work together to iron out disputes over dwindling water availability. "I really want to encourage upstream permit holders to work with their neighbors downstream to resolve and, if possible, prevent conflicts over limited supply. All users should try to do the neighborly thing," he said.

Virtually every summer, water systems in Oklahoma break down or at least become stressed due to the onset of seasonably dry conditions. In many of these cases, Smith points out that infrastructure is the prob-

lem, not drought.

"The Water Board's Financial Assistance Program has been an extremely effective mitigator of drought by strengthening the ability of municipal and rural water systems to withstand potential water emergencies. Through the program, we identify water systems suffering from drought-related supply problems and provide loans and grants for upgrades that ensure their ability to

serve customers even during moderate to severe drought episodes. These improvements also give them greater independence," Smith said.

The OWRB also administers funds awarded to Oklahoma through the Bureau of Reclamation for temporary drought assistance, when available. Smith said that construction is imminent on two separate cooperative projects to provide water supply for livestock and rural fire protection in southern Oklahoma. A project in Cotton County will involve the construction



The depleted Cimarron River in mid-September, as viewed from Highway 81 north of Kingfisher.

of three water wells in the alluvium of Cache Creek, all with public access for area ranchers and firefighters. A similar project in Tillman County will extend water lines from the City of Davidson to thirsty cattle operations west of town.

Smith added that the OWRB and Oklahoma Weather Modification Advisory Board continue to seek opportunities, through the state's contractor, Weather Modification, Inc., for rainfall enhancement. Although chances for cloud seeding in the state have been limited recently, storm systems that moved through Oklahoma in mid/late-October provided several working opportunities. "During two consecutive weekends this month, WMI conducted about a dozen seeding missions and we were fortunate to receive abundant precipitation throughout much of Oklahoma," Smith pointed out. "Of course, I'm sure we'll require more rainfall down the road." The program will cease operations at the end of October.

"The OWRB and members of the State Drought Management Team are committed to improving the way in which Oklahoma handles drought episodes and we plan to work with the Governor and Legislature in developing important initiatives to maximize our drought response and preparedness," Smith emphasized.

"On the other hand, we're certainly not adverse to a little help from Mother Nature. As we prepare for drought, we'll continue to pray for rain."

State, Feds Coordinate Funding Efforts

Following a year-long effort, a state and federal working group has simplified the process required for Oklahoma communities and rural water districts to obtain funds for water and wastewater projects.

The Funding Agency Coordinating Team (FACT), consisting of representatives of various state/federal funding agencies, was created in early 1999 to troubleshoot the existing, and often confusing, engineering and environmental requirements associated with funding water and wastewater projects. Earlier this year, the Team presented the results of their effort — a uniform set of guidelines and checklists for communities and rural water and sewer districts to obtain state and federal funds.

In the past, each funding agency had specific requirements for preparing engineering reports and environmental information documents. When Oklahoma communities and rural water/sewer districts petitioned funds from more than one agency, they were required to pay separately for the engineering report and/or environmental information document meeting each agency's requirements. This proved to be not only a financial burden, but cause unnecessary delays as well.

State and federal lending agencies are now, literally, on the same page, according to Reese Daugherty, an engineering manager with the OWRB's Financial Assistance Division.

"Not only did we coordinate state agency requirements, we were able to bring together state and federal activities," he pointed out. "This standardized system, in conjunction with the availability of forms, instructions and fact sheets on the Internet sites of the relevant agencies, greatly accelerates the funding process for the applicant. Fewer mistakes and less headaches for communities seeking funds for critically important water and wastewater projects — from our viewpoint, that's where the rubber meets the road."

The FACT group consists of civil and environmental engineers from the OWRB and other state and federal lending agencies, including the Oklahoma Department of Environmental Quality, Department of Commerce, Rural Development and the Okla-

Field Office Staff Recognized

At the OWRB's August staff meeting, the agency's field office personnel were honored for their outstanding service. According to Executive Director Duane A. Smith, these versatile employees are required to have knowledge of all OWRB programs and must frequently "go the extra mile" (literally) to serve Oklahomans. The OWRB's six field office employees (pictured from left to right) are Hank Elling, Lawton; Gavin Brady, Tulsa; Kim Sullivan, Lawton; Jason Shiever and Cathy Poage, Woodward and Kent Wilkins, McAlester;



homa City Area Indian Health Services.

Daugherty is a member of the Engineering Committee, one of two FACT working groups. John Day and Jennifer Halstead, also of the Water Board's Financial Assistance Division, served on the FACT Environmental Information Document Committee.

"Initially, we established two goals to ease the funding process for the awarded communities as well as the engineering and environmental firms who represent them," Daugherty pointed out. "The first was to develop a common procedure for processing engineering and environmental information documents. The second was to develop common guides and checklists for use by all state and federal funding agencies."

The Committees completed their work, including an extensive review and comment period, last April. Their final product includes engineering and environmental reporting guidelines and checklists for state-funded water and wastewater projects. They also prepared sample documents to provide basic information for the selection of engineering and environmental consultants.

Although their work is complete, Daugherty points out that occasional revisions by the working groups will be necessary. "We will continue to monitor and review the documents to ensure that they remain accurate and up-to-date. So far, only a few minor revisions have been required."

Forms and related documents are available through the Form Center on the Water Board's website at <http://www.state.ok.us/~owrb>. Also posted on the Form Center are the OWRB's water and wastewater loan and grant application forms as well as fact sheets about the agency's various financial assistance programs.

Financial Assistance Program Update

Approved at August 5 and September 12, 2000 Board Meetings

			Financial Assistance Program Update	
8/5/2000	1	FAP Loans Moore Public Works Authority, Cleveland County	\$2,225,000.00	
8/5/2000	1	CWSRF Loans El Reno Municipal Authority, Canadian County	\$526,800.00	
	1	Jay Utilities Authority, Delaware County	\$3,200,000.00	
		DWSRF Loans None		
		Hardship Grants None		
8/5/2000	1	Emergency Grants Town of Geronimo, Comanche County	\$56,000.00	
	2	Achille Public Schools, Bryan County	\$74,987.00	
9/12/000	3	Farris School District 23, Atoka County	\$25,500.00	
	4	Wilburton Public Works Authority, Latimer County	\$75,000.00	
		REAP Grants None		
			Totals as of 9/12/2000	
			FAP Loans	
			#Approved	223
			Amount	\$329,085,000.00
			CWSRF	
			#Approved	97
			Amount	\$336,044,991.52
			DWSRF	
			#Approved	9
			Amount	\$29,421,954.90
			Hardship Grants	
			#Approved	2
			Amount	\$1,038,752.30
			Emergency Grants	
			#Approved	456
			Amount	\$26,330,758.58
			REAP Grants	
			#Approved	241
			Amount	\$19,628,544.60



Bimonthly Newsletter of the

OKLAHOMA WATER RESOURCES BOARD

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