

OKLAHOMA WATER NEWS

Bimonthly Newsletter of the Oklahoma Water Resources Board



*from
the desk
of the
Director*

It was with a great deal of humility and pleasure that on April 8, I was confirmed by the Oklahoma Water Resources Board to be Executive Director. Since April 1, my position had been acting executive director. It is a privilege to have been selected by the Board and an honor to lead this agency.

I will focus diligently on the goals of providing responsive service to the public and maintaining integrity in all aspects of this agency's operation. I am awed by the enormous responsibility I feel in continuing the work started by other executive directors who have occupied this office.

I meet the challenge with confidence in the ability of the Water Board's staff. Without their dedication and support, my job would be very much more difficult, if not impossible. I will continue being their most avid booster.

As I reflect on the legislative session just ended, I am well satisfied. I am grateful for the confidence expressed by Governor Keating and members of the Legislature in the continuation and funding of vital OWRB programs. The OWRB will continue to administer Rural Economic Assistance Plan grants and weather modification -- two excellent programs renewed by the Legislature. I look forward to settling into this job and demonstrating that their confidence and trust are well placed.

It is important to me that the Water Resources Board remains concerned, interested and accessible to the people of Oklahoma, who we serve. If we may assist, (405) 530-8800. □

WMI Cloud Seeders to Continue State Rain Enhancement Activities

The crews of Weather Modification Inc. (WMI), Fargo, N.D., flew dozens of missions over the state in two sessions, August 15-October 31, 1996, and March 20-May 31. They worked from project command bases in Woodward and Oklahoma City Wiley Post Airport.

According to preliminary evaluations of the fall operations, precipitation and increased cloud development occurred after and downwind of the seeding activities. The Oklahoma Climatological Survey (OCS) and the Environmental Verification and Analysis Center (EVAC) at the University of Oklahoma will fully evaluate the first year's operation in the coming months.

Oklahoma's projects have utilized up to four seeding aircraft, two mobile radar units and trained flight and ground crews. In addition, Project Director Fred Remer says that a specially instru-

mented research aircraft recently flew into growing cumulus clouds to assess ice and/or liquid moisture prior to and after cloud seeding. This effort will help guide project managers and decision makers in fine tuning the seeding methods used in Oklahoma.

The seeding aircraft, with racks for

Silver iodine injected at cloud top or base condenses moisture

102 ejectable and burn-in-place flares mounted under the wings, discharges silver iodide into the tops of clouds or at cloud base. The silver iodide particles condense moisture which turns to ice crystals as the cloud's updraft sucks the moisture to the higher,

Continued page 2



The crews of WMI were based at Wiley Post Airport in northwest Oklahoma City. In the plane, pilot Jon Erickson. Left to right: Fred Remer, Ted Bate, Reed Hayne, Jared Furtwangler, Tim Sedlock and David Turner.

Clouds, continued from page 1

colder regions of the cloud. When the ice crystals grow heavy enough, they fall toward earth, melting to rain on their trip. Typically, clouds won't produce rain until 20 to 30 minutes after seeding, so it's critical to seed clouds upwind of the rainfall target. An on-board radar, in coordination with the ground radar, helps the crew select clouds which would be good candidates for seeding. Computers in the plane and ground operations center communicate data to and from the aircraft.

Remer says the hail suppression and rain enhancement activities are very similar. In hail suppression, so many artificial nuclei are introduced into the cloud that fewer can grow large enough to produce hail. "We look for particular storm conditions and characteristics that we believe will produce hail. At certain stages, seeding can be performed so hail can be pre-

vented or fragmented to fall as beneficial rain," he said. Remer pointed out a successful state-sponsored hail suppression program has been in place in North Dakota since 1961.

Oklahoma's recent rainfall enhancement project was scheduled to end May 31, but in the closing hours of the legislative session, legislators voted to extend the project by appropriating \$1 million from the Rainy Day Fund. The bill needs only approval by Governor Keating to continue the program.

During the recent project, cloud seeders collected a great deal of valuable data upon which to build a sound and long-term program, said Mike Mathis, chief of the OWRB Planning and Management division. Mathis says he is encouraged by the results and believes Oklahoma should continue to explore rainfall enhancement/hail suppression as an ongoing weather and water management tool in the state. □

David Turner, pilot of the research aircraft, examines the probe that measures the amount of moisture in a cloud. Moisture cools the heated wire between the forks. The cooler the wire temperature, the more moisture present in the cloud.



Meteorologist Tim Sedlock watches one of the on-board radar screens in the WMI trailer outfitted as ground operations center.



Osborn Wins Employee Award

Noël Osborn, geologist in the Planning and Management Division since 1989, won the OWRB's first Employee of the Quarter Award, instituted as part of the new Employee Recognition System. The award was presented March 27.

Osborn is credited with playing a major role in the Blaine Aquifer Recharge Project, one of the most complex groundwater investigations ever undertaken by the OWRB.



Former Director Gary Sherr, Noël Osborn and Executive Director Duane Smith

According to Executive Director Duane Smith, award criteria are: consistent quality in performance and productivity, outstanding performance on specific projects, and efforts by the nominee to improve job performance/professional development.

Osborn, formerly employed in the oil and gas industry, holds bachelor's and master's degrees from the University of Georgia.

Kerr Retires from OWRB

Robert S. Kerr, Jr., a member of the Oklahoma Water Resources Board since 1982 and its chairman for six terms, was honored at a dinner May 12. At that time, he was presented a Resolution of Appreciation for his distinguished career in water resources.

Kerr was honored as an Oklahoma Water Pioneer at the Governor's Water Conference in 1985, served as president of Oklahoma Water, Incorporated and the Water Development Foundation of Oklahoma; chairman of the Arkansas Basin Interstate Commission;

vice president of the Arkansas Basin Development Association and vice chairman of the Board of the National Waterways Conference.

Kerr, son of the late Senator Robert Kerr, said at the time he joined the Board, "My father's central interest in all the years of his public service was water resources, so I was born into it. But I like to think I came to it of my own convictions."

Kerr is director of the Robert S. Kerr Foundation and active in many civic organizations.

Griffin Environment Secretary

Governor Keating announced the appointment of Brian Griffin as Secretary of Environment on April 16. Griffin replaces Gary L. Sherrer who resigned March 31 to join KAMO, a power supplier in Vinita.

Griffin, an Oklahoma City attorney, is a Harvard graduate, with law degrees from the University of Oklahoma and Southern Methodist University. He also received a British law degree as a Rhodes Scholar at Oxford. In the Bush administration, he served as deputy assistant attorney general of the Tax Division of the U.S. Department



Brian Griffin

of Justice. In 1992 he was appointed chairman of the Administrative Conference of the United States.

Griffin is currently president of the Griffin Companies, a diversified holding company engaged in real estate development.

Governor Keating named Griffin to chair the Governor's Animal Waste and Water Quality Protection Task Force.

Smith, Griffin on Task Force

Governor Frank Keating announced appointments May 7 to the Governor's Animal Waste and Water Quality

Protection Task Force, created by executive order in mid-April. The Task Force is composed of eight private citizens and seven state agency representatives including OWRB Executive Director Duane Smith and Secretary of Environment Brian Griffin, who will chair the group. The Task Force will present an action plan to Governor Keating by December 1.

Other agencies include the Oklahoma Conservation Commission, Departments of Agriculture, Environmental Quality and Wildlife Conservation and the Scenic Rivers Commission.

Citizen members represent swine,

livestock and poultry producers, agriculture, soil conservation and law.

Help Available to Small Systems

The Oklahoma Water Resources Board Small Community Training and Technical Assistance Program makes on-site, hands-on assistance available to small communities and rural water and wastewater systems in improving operations, management, maintenance and compliance. Services are provided by the Oklahoma Rural Water Association at no cost to the user system. To request assistance, contact ORWA at (405) 672-8925.

New Law Allows Pump Installers To Connect Electricity to Pumps

Executive Director Duane Smith of the OWRB announced passage of House Bill 1144, a law that spells out the full-service role allowed water well drillers/pump contractors in completing pump installations.

Pump contractors in the water well drilling firms had traditionally connected electrical power to the pump as part of the complete well installation. Recently, however, electricians had contended only licensed electricians should install wiring to supply power to the well.

Smith said confusion regarding interpretation led the Water Resources Board to seek clarification on behalf of the water well drillers and pump contractors, whom the agency regulates. "Had the drillers/pump contractors not been allowed to install power to complete the well, in most cases, the well owner would have had to pay an additional charge to

the electrician, as well as the charge for a return visit by the pump installer," Smith pointed out. "This is definitely a law that helps the consumer."

Gary Glover, who oversees the drillers/pump contractors licensing program at the OWRB, said in addition to the greater cost, the previous interpretation could have cost delays, during which time a rural family, their livestock and gardens or crops might be deprived of water supply. "Many rural homes are remote and delays

and extra charges would be a hardship. Even more are the delays caused rural fire departments who are charged with providing fire protection in outlying areas," Glover said.

"Had the legislators not been so consumer-oriented, it could have presented problems to towns who rely on groundwater wells for water supply, as well," Glover said. He credited Senator Rick Littlefield and Representative Randy Beutler and Oklahoma drillers and pump contractors

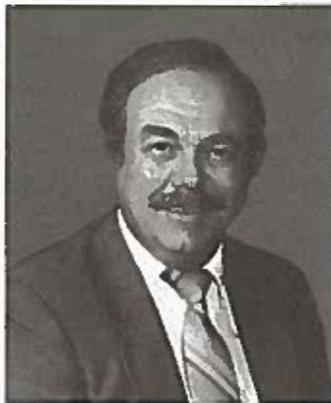
for their concern in capping the costs to consumers.

Cities and towns who rely on competitive bids for installation of wells and pumps might have been required to seek services on two separate bids -- one for drilling the well, another for connecting power.

Glover pointed out that the Water Resources Board, who regulates the drillers,

and Oklahoma Department of Health, who regulates the electricians, had worked together to create the law. Glover pointed out also that pump contractors are well trained and examined in their knowledge of handling pump power supplies as a requisite for licensing in Oklahoma.

The issue had been of concern to drilling and pump contracting firms, many of whom are small businesses in rural areas. "Many might have been forced out of business," Glover said. □



Gary Glover

THE FLOOD CURRENT

MAY - JUNE 1997

River's Capricious Course Damages Homes

When Bill and Karen Mercer built their home west of Norman in 1980-81, the (South) Canadian River lay a mile and a half away, a distance that appeared safe at the time. The Mercers liked their secluded five acres so much they staked out a site shaded by big cottonwoods for construction of a two story, four bedroom family home.

Today, the handsome cedar-sided structure leans precariously over the river, a ghost unwillingly abandoned

ings were appraised in 1986 at \$150,000.

When the home was built outside the incorporated limits of Norman, in Cleveland County, it met all siting and construction standards in place at the time. No flood damage ordinance was in place to restrict construction until 1988. In 1980, damage to the Mercer home by a river a mile and a half away seemed remote -- until the heavy rains that triggered the Mothers Day Flood of 1993.

The storm's day and night of rain caused the river channel to take a drastic easterly cut toward the homes of the Mercers and their neighbors. Other rains licked away at the soft banks, and a

for payment to policyholders whose buildings were subject to imminent collapse or subsidence due to erosion. It allowed payment toward relocating or demolishing the structure before the damage occurred. Among the requirements was that the community be enrolled in the National Flood Insurance Program and the homeowner have flood insurance.

Morris points out that the Upton Jones Amendment specifically targeted damage to structures located by "lakes, rivers or other bodies of water, subject to imminent collapse or subsidence as a result of erosion or undermining caused by waves or currents of water exceeding anticipated levels." The coverage was available to owners who had flood insurance in effect for two years.

Upton Jones proved vulnerable to abuse by owners along the nation's coasts, and thus too costly to insurers, so the U.S. Congress repealed the Amendment October 1, 1995. Settlement under terms of Upton Jones was available to homeowners whose flood



This photo of the Mercer home was taken on April 9, 1997, just a month before the Canadian River advanced 150 feet in two days.

to the river by its builders/tenants. The home is in imminent danger of loss by erosion and subsidence, its foundation sharply undercut by the river. The homeowner is puzzled and depressed by the dilemma in which he finds himself.

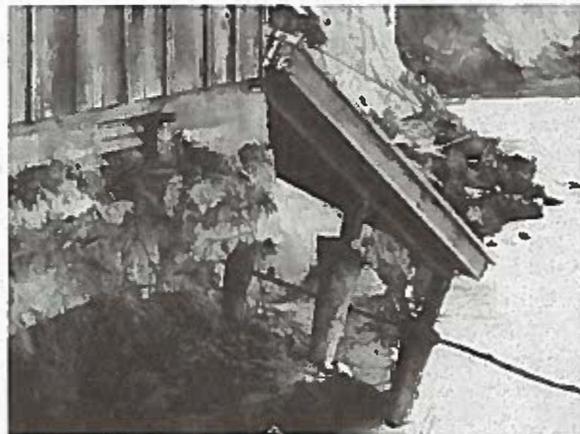
Neither policy provided for subsidence

Although the home is covered by homeowners and flood insurance, Mercer has been advised that homeowners insurance will not cover the loss. It is uncertain whether flood insurance will mitigate the loss, even when the structure is taken by the river. The home, its grounds and outbuild-

particularly damaging storm in 1995 cleaved away acres of soil and sand.

Early in May 1997, the relentless river advanced 150 feet in two days, tipping the Mercer deck, encroaching on the house foundation and sweeping away trees and the septic tank.

Ken Morris, OWRB National Flood Insurance Program (NFIP) coordinator, who visited Mercer at the abandoned home May 7, said the family's home might have been saved, had the Upton Jones Amendment still been in effect. The 1988 Upton Jones Amendment to the National Flood Insurance Act provided



The river undercut the deck, encroached on the foundation and swept away fences, trees and septic tank.

insurance predated by two years repeal of the Amendment.

Seven homes near the Mercer house were declared eligible and are presently in stages of removal or settle-

Continued on page 5

River, continued from page 4

ment. Two homes have been removed; one is settled but not yet removed; and four are in various stages of settlement. Three, including the Mercer home were not eligible because NFIP flood insurance had not yet been in place two years. Cost to the owners of moving the house and acquiring a suitable site is estimated to be \$40,000.

"The remedy seems to lie in new federal legislation similar to the Upton Jones Amendment to protect homeowners along the nation's inland waters," said Morris. "Oklahoma has a number of homes in potential jeopardy of loss or damage from erosion/subsidence, so many could face the tragic dilemma the Mercers face today."

In the meanwhile, communities and counties which participate in the NFIP are eligible to apply to the Federal Emergency Management Agency for Flood Mitigation Assistance. FMA planning grants assist communities in developing or updating a Flood Mitigation Plan, while project grants are available to communities for the implementation of measures to reduce flood losses. A Flood Mitigation Plan on file with FEMA is prerequisite for participation in the Flood Mitigation grant program.

However, for communities to be eligible for grants, states must contribute a 12.5 percent cash match for federal Flood Mitigation Assistance funding. According to Morris, creation of a State Hazard Mitigation fund to provide the match money is an issue legislatures must address in states which do not yet participate.

Participation in the program would make Oklahoma eligible for FEMA grant funds for relocation or demolition of vulnerable insured structures, floodproofing and elevation of structures and acquisition of insured buildings or real property. "In the long run, it would save millions of dollars paid in disaster assistance to repetitive loss structures," said Morris.

Meanwhile, the Mercers stay with friends indefinitely, waiting for the Canadian River to resolve the fate of their home. □

Planning Vital to Floodplain Management

Report from Ken Morris, Oklahoma Coordinator, NFIP

Gavin Brady, and Donnie Blanlot of the Water Board recently represented Oklahoma on a special Federal Emergency Management Agency (FEMA) Task Force that will guide national floodplain management into the 21st century. Also involved in this "unified program" that sets out objectives and responsibilities of federal agencies are the U.S. Army Corps of Engineers, National Park Service, Natural Resources Conservation Service and U.S. Forestry Service. Their decisions are expected to improve the NFIP and overall floodplain management throughout the United States.

At the annual meeting of the Association of State Floodplain Managers April 28-May 2 in Little Rock, Gavin Brady and I presented a paper on flood disaster mitigation in Ottawa County.

Two subdivisions southeast of Miami, established around 1980 -- just prior to the county's enrollment in the National Flood Insurance Program -- are frequently flooded by the Neosho River and backwaters from Grand Lake. Many of the 60 structures in the area were constructed as much as eight feet below the 100-year flood elevation.

The 21 homeowners who have federal flood insurance policies have collected more than \$650,000 in damage claims as a result of five major and several minor flooding events since

construction. One home has received \$100,000 through the NFIP; the current worth of the home and property -- \$20,000. Mitigation in such situations is most frequently achieved through three options: elevation of the homes at or above the base flood elevation, acquisition and relocation of the structures, or acquisition and demolition.

Unfortunately, the county cannot afford the required federal match for such costly activities.

It's easy to lay blame -- at the residents for building in an obvious floodway or at county officials for the lack of oversight and planning. Meanwhile, the federal government and all taxpayers repeatedly pay for the problem. Even more unfortunate is that this predicament is not

unique in the nation. The OWRB and FEMA will continue to work with local officials in seeking solutions to the dilemma in Ottawa County.

All other communities should continue to use good judgement, plan wisely and be conscientious members of the National Flood Insurance Program.

Finally, please mark your calendars for the annual meeting of the OFMA to be held at Roman Nose State Lodge September 10-12. The meeting will be highlighted by initiation of the OFMA Certification Program which seeks to strengthen the capabilities of community floodplain managers in Oklahoma. □



Meet the OFMA Board. From left: Carolyn Schultz, treasurer; Ken Morris, ex officio; Albert Ashwood, past chairman; Neill Pulliam, secretary, Region 2 representative; Donnie Blanlot, vice chair; Cliff Pitner, Region 3 representative; T.J. Davis, chair; Dan Cary, Region 1 representative; Anna Lee, Region 5 representative; Bob Bigham, Region 4 representative.

Mainstream, continued from page 4

Potts' Heroic Lifesaving Efforts Recognized

Chuck Potts' immediate response to an apparent heart attack perhaps saved the life of L.D. Robins, a resident of Forgan, Oklahoma. Robins was attending the regular meeting of the Oklahoma Water Resources Board at the OWRB offices on May 13, when he suffered an apparent heart attack.

Chuck Potts of the Water Quality Programs division, with offices adjoining the Board room, responded immediately and began administering CPR. He continued this life saving effort for five minutes until an emergency medical team arrived, and Potts continued CPR until Robins was stabilized for transportation to the hospital.

Governor Keating sent Potts a certificate and letter of appreciation, in recognition of his prompt response and rescue.

In the meanwhile, Robins has had a pacemaker installed and has returned to his home near Forgan.

Executive Director Duane Smith presents Chuck Potts an award from Governor Keating, recognizing his lifesaving efforts.



Longtime Board Secretary Died May 29

Betty Tyson, a secretary in the Planning and Management divisions since 1976, died at her son's home in Oklahoma City on May 29, 1997.

She had assisted in the OWRB Water Well Drillers Licensing Program for many years, and often administered the written tests. She had retired from the Water Resources Board in May 1996, but returned to work parttime in July 1996.

Tyson was a native of Vernon, Texas, where services were held June 2. She is survived by a daughter and two sons of Oklahoma City, two grandchildren and one great grandchild.

FINANCIAL ASSISTANCE PROGRAM UPDATE

Approved at April, May and June 1997 Board Meetings

FAP Loans

4.172% 1995 Bonds; 27 year maximum term

Woodward MA.....	\$ 345,000.00
Craig Co RWSG&SWMD #3.....	\$ 1,100,000.00
Warner UA.....	\$ 435,000.00

FAP Grants

Town of Olustee.....	\$ 41,900.00
Cardin SUA.....	\$ 79,500.00
Blackwell MA.....	\$ 19,550.00
Devol PWA.....	\$ 99,900.00

SRF Loans

Shawnee MA.....	\$ 3,344,200.00
Woodward MA.....	\$ 4,467,000.00
Poteau PWA.....	\$ 2,335,000.00

TOTALS

	FAP Loans	FAP Grants	SRF Loans
APPROVED	181	405	57
Amount	\$234,185,000.00	\$22,707,709.32	\$213,299,839.40
FUNDED	173	384	53
Amount	\$226,340,000.00	\$20,959,329.76	\$210,588,165.63

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