

OKLAHOMA WATER NEWS

Bimonthly Newsletter of the Oklahoma Water Resources Board



*from
the desk
of the
Director*

Duane A. Smith

It has been my privilege this summer to meet with the Choctaw and Chickasaw tribes, legislators and local leaders in the Kiamichi River Basin to cooperate in drafting a plan for developing the water resources of the region. House Concurrent Resolution 1066 of the 1999 Legislative Session illuminated specific goals and set a February 2000 deadline for submittal of the Kiamichi River Basin Water Resources Development Plan to the Senate and House of Representatives.

HCR 1066 set out these six "Cornerstone Principles."

(1) Implement a lake level management plan that will protect fishery and recreational interests by gradually increasing water levels to approximate normal elevation in early spring (March 1-31); maintaining stable or slightly increased levels April-August; and reducing level (but limiting drawdown to less than four feet) September-February to allow revegetation of shoreline habitat.

(2) Protect future local use of water by setting aside 20,000 acre-feet of Sardis water supply for future local use and/or economic development.

(3) Optimize water and wastewater financing opportunities by investigating options to finance infrastructure and develop local regional water supplies.

(4) Address obligation for federal construction costs and repayment of construction costs according to terms of the Sardis Reservoir (water supply) Contract.

(5) Protect present and future needs of the Kiamichi River Basin.

(6) Protect the integrity of the Kiamichi River.

Local interests and Choctaw and Chickasaw representatives agreed to extend the "Cornerstone Principles" to the lower basin region which includes Hugo Lake. The group aims to develop a Hugo Lake Management Plan, address wildlife management issues, negotiate payment by the Hugo Public Works Authority on its storage contract with the U.S. Army Corps of Engineers, and ensure an adequate future water supply.

This is an intimidating task to accomplish by February 1, 2000, but the Water Resources Board, Choctaw and Chickasaw tribes and local people involved at the conference table are enthusiastic, dedicated and optimistic that we will submit to the Legislature a landmark strategy that will satisfy all parties.

It is my extreme pleasure to work with this group. □

Oklahoma Water 2000: Blueprint for the Future Theme of Nov. 17 Governor's Water Conference

*20th Annual Conference spotlights water for the millennium:
secure supplies, good quality, futuristic financing strategies*

When the 20th Annual Governor's Water Conference opens on Wednesday, November 17, in Oklahoma City, the Water Resources Board and 30 other sponsors will present an agenda that foresees the future for water in Oklahoma. A parade of experts will predict water availability and demand, water quality and infrastructure financing strategies ahead in Year 2000.

The conference, entitled "Oklahoma Water 2000: Blueprint for the Future," will be held at the Clarion Meridian Hotel and Conference Center, 737 South Meridian.

The conference will begin with registration at 8 a.m. and opening remarks by Water Board Chairman Lonnie Farmer at 8:30 a.m. Lieutenant Governor Mary Fallin is invited to welcome conferees.

Anticipating the availability and quality of 2000 water supplies will be the concern of a panel of experts representing rural, municipal and regional water suppliers. Invited panelists are Gene Whatley, Oklahoma Rural Water Association; Chuck Thomas, Stillwater city commissioner; John Ward, Oklahoma Association of County Commissioners; and Zach Taylor, Association of Central Oklahoma Governments.

Federal agency heads are invited to speak in a panel projecting programs in Oklahoma in the twenty first century. Invited are Kathy Peter, District Chief, U.S. Geological Survey; Col. Leonardo V. Flor, District Engineer, U.S. Army Corps of Engineers; Larry Caldwell, State Conservation Engineer, Natural Resources Conservation Service; and Donald Moomaw, Deputy Area Manager, Bureau of Reclamation.

Carroll Fisher, Oklahoma Insurance Commissioner, will describe the insurance industry's support of the innovative hail suppression/weather modification activities set out in Senate Bill 101 of the 1999 Legislative Session. Before his election, Fisher has owned an insurance firm, taught insurance classes at Tulsa Junior College and been honored with many industry awards.



Carroll Fisher

In mid-morning ceremony, all Rural Economic Action Plan (REAP) grants for entire FY 2000 will be announced. Participating legislators and officials of cities, small towns and rural water districts will be recognized. REAP is an initiative of the 1996 Legislature to assist small communities and rural areas in improving water and wastewater infrastructure as means of stimulating economic development.

Invited for a return engagement at the Governor's Water Conference is Gregg Cooke, EPA Region 6 administrator, who will predict water quality trends. Cooke has practiced environmental law and served as assistant attorney general of Texas.

Chief Greg Pyle of the Choctaw Nation and Duane Smith of the OWRB, both of whom participate in designing a plan of development for the Kiamichi River Basin, will discuss cornerstone principles mandated by the Oklahoma Legislature. Smith will present an interactive GIS-based program on water resources of the Kiamichi Basin.

Luncheon speaker will be attorney Carolyn Richardson, Director of Environmental Advocacy for the California Farm Bureau Federation. The Federation challenges the authority of the EPA in regulating agricultural nonpoint sources under 303(d) of the Clean Water Act.

The Oklahoma Congressional Delegation, Speaker Loyd Benson, Rep. Randall Erwin, Sen. Mark Snyder and Sen. Rick Littlefield are also invited to address the luncheon session.

A tradition in closing the conference will be presentation of Oklahoma Water Pioneer awards recognizing the lifetime achievements of individuals in the planning, development, conservation and protection of Oklahoma's water resources.

Registration for the Governor's Water Conference costs \$30. For information, call Mary Whitlow, conference coordinator, at 405-530-8876. To register, call Mary Nell Brueggen at 405-530-8849.

To make room reservations at the special conference rate of \$59, single or double, call the Clarion Meridian Hotel and Conference Center at 405-942-8511 before November 8.

REGISTRATION

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

Please enclose **\$30** check or purchase order payable to **Oklahoma Water Resources Board**

Name _____

Organization _____

Address _____

City _____ State _____

Zip _____ Phone (_____) _____ - _____



3-Year Study of Ogallala Aquifer Completed

In an effort to better understand the hydrology of the Ogallala Aquifer in northwestern Oklahoma and portions of Kansas and Texas, the OWRB cooperated in a study by the U.S. Geological Survey. Since development of the Ogallala Aquifer for irrigation in the 1940s, water levels have declined sharply in small areas of Texas County where the aquifer is thickest, Richard R. Luckey told members of the Oklahoma Water Resources Board at the August 10 meeting. Lesser declines were noted in Cimarron County. Luckey is a hydrogeologist with the U.S. Geological Survey, who along with Mark F. Becker, recently completed a 3-year study of the Aquifer.

Only a small area of Beaver County demonstrated declines greater than 10 feet and Ellis County registered rises of more than 10 feet.

These findings emerged from the cooperative OWRB-USGS study of the aquifer to develop a groundwater flow model which will assist the Water Board in managing water supplies in the region.

Duane Smith, OWRB executive director, said public hearings on the study findings will be scheduled soon to allow input into the maximum annual yield and equal proportionate share determinations.

The area under scrutiny consists of 7,100 square miles in Oklahoma, a sector producing crops and livestock valued at \$4.5 billion. Annual water use amounts to 396,00 acre-feet, with Texas County accounting for 217,000 acre feet; Cimarron County, 70,000 acre-feet; and Beaver County, 41,000 acre-feet.

Irrigation accounts for 93 percent of total water use; livestock watering, approximately five percent. Oklahoma Ogallala areas east of the Panhandle were estimated to use 68,000 acre-feet per year. The saturated thickness or water producing zones of the sedimentary formations which make up the aquifer, ranges from 400 feet to less than 50 feet, averaging 125 feet in the study area. Luckey pointed out that the arid region receives little rainfall for recharge, estimated to be 4.0 percent of the precipitation in greater recharge zones and 0.37 percent of precipitation in lesser recharge zones. Because discharge exceeds recharge, groundwater storage is expected to follow current trends to 2020.

Luckey said the computer model forecast additional decline over some areas of Texas County, if current pumping rates are maintained. Water levels are simulated to remain stable or increase in much of Cimarron, Beaver and Ellis Counties.

“Previous studies indicated that Oklahoma portions of the aquifer would be dry by the year 2020,” Smith pointed out. “These are very encouraging results, and credit must go to the irrigators for increased efficiency in irrigation systems and methods.” He said groundwater withdrawn for irrigation has decreased one-fourth in the last three decades.

The USGS model also predicted declines of more than 100 feet in some areas in Kansas, 50 to 100 additional feet in several areas of Texas. □



Richard R. Luckey



Water Rights Undergo Review

Mike Mathis, Planning and Management division chief, announced that the Board’s periodic review of stream water permits will begin in September.

Letters to permit holders who have not used their full allocation of surface water once in a 7-year period will ask for voluntary cancellation or reduction of their allotment to reflect actual use. Mathis pointed out that

there is a waiting list for stream water allocations in some water-short areas of the state.

Permit holders who reported no water use or use of less water than allocated, but choose to retain their water right, will be offered an opportunity to schedule a hearing in the nearest OWRB Field Office.

Currie Appointed to Board

Governor Frank Keating announced the appointment of Harry Currie, Oklahoma City business owner, to the Oklahoma Water Resources Board. Currie will serve a 7-year term, replacing former Board Chairman J. Ross

Kirtley of Kingfisher.

Currie, owner and president of a bag manufacturing firm, is a member of the Oklahoma Community Sentencing Council,



Harry Currie

trustee and elder of the Del City Christian Church and former 2-term mayor of Del City. He has served as president of the Del City Chamber of Commerce and Kiwanis, member of the Oklahoma Mental Health Board and member of the Midwest City

Regional Medical Center Board of Trustees.

Currie is a graduate of Oklahoma State University and owns farming and ranching interests. He and his wife, Joan, have two adult children.

Brochure Named to ALA List

The American Library Association (ALA) recently recognized an Oklahoma publication as a “notable document” on its list of outstanding publications from 43 state and federal government sources. “Conserving Oklahoma’s Water,” a brochure published by the Oklahoma Water Resources Board, made the elite list compiled annually by the Notable Documents Panel of ALA’s Government Documents Round Table (GODORT.) Nominations to the list are made by librarians throughout the U.S. It was one of only six publications by state entities recognized throughout the nation and one of two from Oklahoma, the other being the Oklahoma Department of Libraries website.

The 25-page full-color brochure was written by Brian Vance of the OWRB Planning and Management staff, with graphic design by James Leewright and photography by Barry Fogerty. The booklet describes activities to reduce water demand and improve efficiency. It tells how to estimate how much water is used in an average home and how to use less. Homes, businesses, industry and public facilities can use the tips in the booklet to save water and reduce water bills.

According to Duane Smith, OWRB executive director, it is the third time a Water Resources Board publication

has been recognized by the prestigious ALA Round Table. Earlier, the “Oklahoma Water Atlas” and “Update of the Comprehensive Water Plan, 1995”, were named to the Notable Documents list.

The selections are considered by the ALA to be commendable documents less known outside their target audiences and of interest to many readers.

“Conserving Oklahoma’s Water” is free and available at OWRB offices at 3800 N. Classen, Oklahoma City, by calling (405) 530-8800, or on the web at www.state.ok.us/~owrb.

Fish-Friendly Turbines Coming?

Hydroelectric turbines that could virtually eliminate fish kills are being tested by the Corps of Engineers.

The first fish-friendly turbines will be tested at Bonneville Dam on the Columbia River near Portland, OR. Cost for the prototype turbine is estimated to be \$1.7 million, with subsequent models costing \$1.2 million.

The new turbines will be about six percent more efficient than older models, so they are expected to pay for themselves. More water through turbines and less over the spillway will increase power production by 25 percent.

Additionally, the new design reduces the chance that fish can slip by the blades and get caught in a pressure change. The plan calls for 100 percent survival. There are only five blades on the new engines, compared to six on previous models.

Board Offers Two Reports

Two new reports, “Groundwater Level Changes in Oklahoma 1978-1998” and “Hydrologic Investigation of the Red River Basin”, are now available from the Oklahoma Water Resources Board, according to Librarian Susan Birchfield.

Ground Water Changes is a result of 20 years measuring static water levels in 750 observation wells throughout Oklahoma. Emphasis of the network has been in high groundwater use areas. The aquifers most heavily monitored by the Board are the Ogallala, Rush Springs and alluvium and terrace deposits of the Cimarron River, North Canadian River and the North Fork of the Red River. The publication authored by OWRB Geologist Mark Belden is illustrated with color maps, along with pertinent graphs and tables.

Groundwater Level Changes in Oklahoma 1978-1998 costs \$10.

Hydrologic Investigation of the Red River Basin

compiles in one volume data gathered in 11 hydrologic investigations of stream systems that contribute flow to the Red River. Author of the report is Saji Varghese, hydrologic engineer. It is available for \$5.

Both reports are available by writing to the Oklahoma Water Resources Board, 3800 N. Classen, Oklahoma City 73118, or by calling 405-530-8800.

Water Rights, Well Logs Imaged

A futuristic leap in technology is underway at the Water Resources Board as members of the Planning and Management Division and Information Services Section prepare some 670,000 paper pages for imaging. Water rights permits and well logs will be stored on optical platters that hold 5.2 gigabytes (GB) each. Jann Hook, who oversees the project, says OWRB permits, well logs and other imaged documents will require some 34 GB of storage.

The project has been assisted by Jann Hook, Phyllis Robertson, Bob Sanbo, Susan Birchfield, Tori Sherrer, Jim Summers, Mike Albano, Mary Nell Brueggen, Cathy Poage, Lenora Guiles and Pat Kirkpatrick.



Cathy Poage of the Woodward Office and Lenora Guiles prepare water rights files for imaging.

Cherokee Port Organized

The new Cherokee Nation Port Authority held its first meeting recently in Tahlequah, according to Charles Gourd, administrator.

The industrial complex planned on 1000 acres of land along the McClellan-Kerr Arkansas River Navigation System could create 1500 jobs in the next 10 years, Gourd pointed out. The port site is on land placed in trust with the Department of Interior by the U.S. Army Corps of Engineers.

The Cherokee Nation also received a towboat surplus by the Corps.

Gourd said it will take three to five years to develop the infrastructure for an industrial complex similar to the Ports of Muskogee and Catoosa.

John Sparlin of the Corps and Glen Cheatham, Jr. of ODOT's Waterways Branch, and the ports have worked closely with the Cherokee Nation in laying groundwork.

Elected members of the Cherokee Nation Port Authority are B.J. Drummond, Tulsa business owner; Michael Hathaway, Washington, D.C. attorney; Dick Mayo, Sallisaw newspaper publisher; Jess Sixkiller, Phoenix economic development consultant; and George Underwood, former Tulsa University accounting professor.

Have a Drink, Rover

Perhaps a sports drink for dogs, similar to Gatorade for their owners, is the ultimate in pet pampering. According to U.S. Water News, an entrepreneur with a nauseous dog was told by the vet to feed the canine Gatorade to settle the pet's stomach.

Next followed a year and a half of research by the entrepreneur to find out what kind of sports drink would be healthy and tasty for dogs. He spent time with dogs and dog owners, humane societies and dog clubs to hit upon a palatable formula for the pets. The end result is "Rebound," the first sports drink for dogs.

A K-9 unit policeman credits it with providing his dog more energy and stamina and helping the dog to snap back when he was sick by replacing vitamins and minerals.

Vets, on the other hand, are reluctant to proclaim any scientific benefit, declaring dogs must first have a healthy diet with exercise.

Less is More in Viticulture

A study pioneered by a Washington state wine grape grower suggests that less may be more in the case of irrigation of grape crops. In six years of testing, Columbia

Crest Winery in dry south-central Washington state noted that less irrigation early in the season reduced labor, decreased pests and helped fruit ripen earlier.

It was an important step for a regional wine industry that's considered a youngster on the world scene.

In recent years the winery has reduced annual water use by 375 million gallons, saving \$30 million without compromising quality. Winery researchers, with the cooperation of Washington State University, found limiting water early in the season reduces leaf growth, which allows more sunlight to reach the fruit and saves

hours in vine trimming.

Before the study, protocol was to irrigate early in the year and cut back after bloom, so the fruit could ripen.

During the experiment, 64 acres of Sauvignon Blanc grapes were divided into sections and watered on different schedules -- from low water all season to lots of water all season. Low early-season watering resulted in fewer leaves and grapes with better flavor and color. Tasters agreed the practice translated into wines of fuller body and more attractive color.



Wes Watkins Lake, Dr. Joe Taron Dam Dedicated

In ceremonies August 9 attended by namesake, Congressman Wes Watkins, the Watkins Reservoir was dedicated northwest of Shawnee. The Pottawatomie County Development Authority, Shawnee Conservation District and the Natural Resource Conservation Service (NRCS) cooperated in the development of the multipurpose reservoir which will provide water supply to Shawnee, Tecumseh and other communities and rural water districts, recreation, and flood protection to the area. The reservoir is impounded by Dr. Joe Taron Dam on North Deer Creek.

The lake has been stocked by the Oklahoma Department of Wildlife Conservation but a "catch and release" policy is in place. The lake area features special jet ski and water skiing areas away from fishing areas, 29 recreational vehicle hookups, 33 primitive camp sites, 40 picnic sites, three boat ramps and three courtesy docks.

Mike Melton, assistant to the director, and Terri Sparks, OWRB planner, attended the afternoon dedication ceremony held at a park on the north side of the reservoir. □



Attending the dedication were Pottawatomie County Development Authority Trustees Max Hunt, Jean Shannon, Terry Powell, Congressman Wes Watkins, Trustee Karl Kozel, John Mueller, NRCS; Dr. Joe Taron, Trustees Curtis Stanford and Bruce Drawdy.

Ardmore Boy Scout Troop 5 Harvest Aquatic Plants for Wister

Boy Scout Troop 5 and their adult leaders from Ardmore recently assisted in the effort to restore the water quality in Lake Wister by harvesting bulrushes in Lake Murray for transplant in Lake Wister.

OWRB Water Quality specialists had determined turbidity and nutrient problems were caused by inflow of poor quality water, wind-driven waves constantly churning sediments and fluctuating water levels. Paul Koenig, Robin Randolph and Wick Warden of the OWRB, along with seasonal employees and volunteers, began a two-pronged effort to quiet the shallow waters.

Thousands of native aquatic plants harvested from other Oklahoma lakes were transplanted in the shallow waters and mud flats along the shore. A barrier of sturdy and environmentally friendly hay bales was constructed across the Lewis Creek Arm of the lake to protect the shoreline from buffeting by waves.

According to local authorities, some 2,000 pounds of sediments are removed daily at the water treatment plant that supplies water to 40,000 residents of LeFlore County.



Ardmore Boy Scout Troop 5 and adult leaders volunteered to harvest aquatic plants from Lake Murray to transplant at Lake Wister.



Feds to Cut Aid to Repetitive Flood Claims

As costs to repair flood damaged properties skyrocket, the federal government is trying the carrot and stick approach to get people to move to higher ground -- out of harm's way.

The carrot approach offers to buy repetitively flooded properties and relocate owners or commending communities who have made strides in disaster prevention. The Federal Emergency Management Agency lends technical support to cities and towns enrolled in Project Impact, an initiative encouraging towns to become disaster resistant.

Those are the "carrots."

The stick is FEMA's recent announcement that it will cut off federally subsidized flood insurance to those with a history of losses and increase premiums for those who choose to live in high-risk areas.

The proposal is part of FEMA's new focus on preventive rather than after-the-flood assistance. FEMA points out that 35,000 properties that are still in the National Flood Insurance Program have filed claims at least twice, costing the feds more than \$200 million a year.

In a recent report the National Wildlife Federation found

that, although repetitive loss properties are only two percent of all property in the federal insurance program, they receive 40 percent of its payouts.

In Illinois, where 30 of the nation's top 300 flood loss communities are located, 200 homes have collected more in insurance payments than they are worth.

Under FEMA's plan, flood insurance would no longer be provided to homeowners who have filed two or more claims that total more than the value of their home and who refuse to either elevate or accept a buyout. FEMA also wants to charge fair-market rates to people who live in high-risk areas, instead of the lower subsidized rate now available.

The agency hopes to save up to \$1 billion by 2010. Although there is no target date for enactment of new rules, FEMA plans to present them for congressional approval next year. People in floodplain areas will think FEMA's stand is harsh, but the agency counters that if you make the decision to live in flood-prone areas, you should not make taxpayers pay for that decision.

At the August 10 Board Meeting:

In opening remarks, Executive Director Duane Smith reminded Board members and staff that, at the invitation of Board Chairman Lonnie Farmer, the September Board meeting will be held in Frederick, at Southwest Bank at 9:30 a.m. Smith announced that conflicts make it necessary to reschedule the 20th Annual Governor's Water Conference in Oklahoma City on November 17, instead of October 13, as previously announced.

Joe Freeman, Financial Assistance Division chief, asked and received approval for an emergency grant of \$19,295 to Hobart Public Works Authority and a \$3.5 million State Revolving Fund loan to Stilwell Area Development Authority.

Water Quality Division Chief Derek Smithee presented an overview of the division's programs and activities, emphasizing the effort invested in the Beneficial Use Monitoring Program mandated by the legislature.

Richard Luckey, U.S. Geological Survey hydrologist summarized findings of a 3-year USGS study of the Ogallala Aquifer underlying the Panhandle and some western counties. Luckey projected some declines in water levels in Oklahoma; significant declines in areas in Kansas and Texas.

Mike Mathis, Planning and Management chief, asked and received approval for eight temporary permits and one regular permit for groundwater use; amendments to four. The Board denied the application for a temporary permit for groundwater use by Seaboard Farms, Inc., Beaver County, citing the 3-mile setback rule approved by the Legislature in May. The Board approved two regular permits for the use of stream water. Applications for Driller/Pump Contractor licenses were approved for Mark E. Holden, Woods

Pumping Service, Inc.; John Mark Bates, Clear Water Drilling; Robert Edwards, Sage Water Well Drilling; Justin McDaniel, Nipp Pump Service. ☐

FINANCIAL ASSISTANCE PROGRAM UPDATE

*Approved at July & August, 1999
Board Meetings*

FAP Loans

1999 Bonds; 30-year maximum term - Variable or Fixed Rate

Noble Co. RWD #2	\$ 520,000.00
Enid MA	\$ 2,510,000.00

CWSRF Loans

Enid MA	\$ 1,374,000.00
Stilwell DA	\$ 3,540,000.00
Warner UA	\$ 258,000.00

DWSRF Loans

Clinton PWA	\$ 644,000.00
El Reno MA	\$ 4,690,571.90

Emergency Grants

Noble Co. RWD #2	\$ 100,000.00
Hobart PWA	\$ 19,225.83

REAP Grants

Tillman Co. RWD #1	\$ 135,273.00
Locust Grove PWA	\$ 91,000.00
Osage Co. RWD #5	\$ 39,900.00
Whitefield MIA	\$ 80,000.00
LeFlore Co. RWD #17	\$ 99,000.00
Town of Ames	\$ 110,500.00
Hammon PWA	\$ 134,003.00

TOTALS AS OF AUGUST 10, 1999

APPROVED Amount	FAP Loans - 213 \$306,685,000.00	CWSRF Loans - 85 \$300,798,218.87
APPROVED Amount	Emergency Grants - 439 \$25,147,118.08	REAP Grants - 168 \$13,323,345.60
APPROVED Amount	DWSRF Loans - 5 \$15,088,246.90	Hardship Grants - 2 \$1,038,752.30

