

Oklahoma

Water
News

MONTHLY NEWSLETTER OF THE OKLAHOMA WATER RESOURCES BOARD

Board Welcomes Patty Eaton as OWRB Executive Director



Patricia P. Eaton

Patty Eaton, former Tulsa Water and Sewer Commissioner, was named executive director of the OWRB at the February 12 Board meeting. Earlier on the agenda, OWRB Chairman Robert S. Kerr, Jr., and the Board had accepted the resignation of James R. Barnett, executive director since 1977.

"It is with regret that the Board accepts the resignation of this able director," said Kerr. "The significant contributions Jim Barnett has made to this agency, the environment, and the water resources of Oklahoma will continue to benefit our citizens for

many years to come," he said.

Kerr pointed out many successful programs were initiated during Barnett's tenure, including the financial assistance program for sewer and water improvements, dam safety program, standards for groundwater quality, a strategy for floodplain management,

and computerization of all Oklahoma's surface and groundwater rights.

"Under Barnett's leadership, the Water Resources Board grew from 38 employees and an annual budget of \$811,000 in 1977 to a major environmental agency employing 108 people and an annual budget of \$8.2 million," Kerr said. "Today, the Water Resources Board has branch offices in Woodward, Lawton, Tulsa and McAlester."

Continued on page 2

PUBLIC HEARING NOTICE

TENTATIVE MAXIMUM ANNUAL YIELD

VAMOOSA-ADA GROUNDWATER BASIN

Pursuant to 82 O.S. Supp. 1990, §§1020.6 and 1085.2, a public hearing on the tentative maximum annual yield of fresh groundwater from the Vamoosa-Ada Groundwater Basin underlying Pontotoc, Seminole, Okfuskee, Creek, Pawnee, Osage, Payne, Lincoln and Pottawatomie Counties, Oklahoma, shall be held and conducted by the Oklahoma Water Resources Board on the date, location and time shown below.

March 26, 1991
Stroud Public Library, 210 W. Main
Stroud, Oklahoma, 1:00 p.m.

At the public hearing, the Board shall present evidence of geological findings and determinations upon which the tentative maximum annual yield of the basin has been based. The maximum annual yield has tentatively been determined to be 2,968,000 acre-feet of groundwater per year, with the annual equal proportionate part of the tentative maximum annual yield determined to be 2.0 acre-feet of groundwater per acre of land overlying the basin. Any interested party may appear and present evidence or comments in response to, in support of, or in opposition to the Board's tentative findings. Appearances at the hearing may be in person and/or by legal counsel. Evidence may be presented orally and/or in writing.

Prior to the public hearing, copies of materials relating to the maximum annual yield determination shall be available for examination and inspection at the OWRB's main office, 600 N. Harvey, Oklahoma City, and the Stroud Public Library. If there are any questions concerning this matter, please contact the OWRB's Groundwater Division by letter at the above address or by telephone at (405) 231-2576.

Eaton, continued from page 1

In announcing Eaton's appointment, Governor David Walters said that Eaton will also serve as Cabinet Secretary of the Department of Environment, a newly created post. She will assist in efforts to consolidate environmental programs as a step to attracting business and industry, at the same time, more effectively protecting Oklahoma's environment.

Eaton, her husband, Tulsa banker Leonard J. Eaton Jr., and their three children moved to Oklahoma in 1972. Eaton has been active in civic affairs and the arts in Tulsa, and was elected Water and Sewer Commissioner in 1980. Eaton served until 1986, when she resigned to run as an independent candidate for mayor. In 1988, she assumed the interim post as Director of City Development in Tulsa.



James R. Barnett

Eaton said she looks forward to her association with the Water Resources Board and that she has heard many good reports concerning the work of the agency. "A comment I heard many times in talking to Oklahomans is that OWRB people are professional, helpful and extremely capable in matters concerning water resources and the environment," she said.

"I am glad to be associated with the Water Resources Board and I am proud of the dedication and energy of the staff in accepting greater responsibility in environmental management. I will continue being a supporter and a builder," Eaton declared.



Flows Exceed 69 Million A/F

Preliminary estimates indicate that 69,147,000 acre-feet of water flowed out of Oklahoma through its major rivers in Water Year 1990 (October 1, 1989–September 30, 1990).

U.S. Geological Survey stream gages measured flows on the Red River at Index, Arkansas, at 22,030,000 acre-feet; on the Little River at Horatio, Arkansas, at 4,467,000 acre-feet; and on the Arkansas River at Van Buren, Arkansas, at 42,650,000 acre-feet.

According to J. A. Wood, OWRB Stream Water Division chief, 1990 flows were exceptionally high—28,240,000 acre-feet higher than the total of 40,907,000 acre-feet recorded in 1989 and nearly twice the average annual flow of 34,907,000 acre-feet.

Tulsa Branch 10 Years Old

The Tulsa Branch of the OWRB, the first of four such offices in Oklahoma, marks its tenth anniversary this month.

The Lawton office, established in March 1982, is the second oldest, followed by McAlester (November 1982) and Woodward (November 1987).

In early 1980 it became apparent that the expanded duties and diverse activities of the OWRB could be accomplished with greater efficiency with the addition of satellite offices in the state's four regions. The first step in achieving this goal of improved public service was the establishment of the Tulsa Branch office in March 1981. Current Branch Manager Rob Simms assumed that role in 1986.

Today, the four offices provide virtually all services offered by the Board's main office in Oklahoma City.

Compact Meeting March 25

Lewis Kamas, Oklahoma Commissioner to the Canadian River Compact, will attend the annual meeting of the Commission March 25 in Santa

Fe, New Mexico. The meeting at the National Education Association Building, 130 South Capitol Street, will begin at 10 a.m. and will be attended by representatives of Texas, New Mexico and Oklahoma, the compact's three signatory states. J. A. Wood, OWRB Stream Water Division chief, serves on the Commission's Engineering and Budget Committees; Dean Couch, OWRB General Counsel, serves on the Legal Committee.

This stream compact apportioning the interstate waters of the Canadian River was signed by the states and ratified by the U.S. Congress in 1951. It is one of four such agreements entered into by Oklahoma to promote comity with neighboring states.

Drillers' Seminar March 19

Duane Smith, Groundwater Division chief, announced that the Water Resources Board will sponsor a free workshop for water well drillers, monitoring well drillers and pump installers in the Woodward area. The seminar will be held from 8 a.m. to 4 p.m. in the Seminar Room at the High Plains Vo-Tech, 3921 34th Street in Woodward.

Smith encourages attendance by professionals employed by well drilling firms, engineering firms, environmental consulting firms, state and local agencies and electrical and plumbing contractors. Topics include changes in OWRB Rules and Regulations, monitoring well design, pump installation, completion of well logs, enforcement education and site selection, permitting, completion and abandonment of water wells.

OWRB Hydrologist Gary Glover will administer tests from 8–9 a.m. for water well drillers and monitoring well drillers seeking licensure. Applications will also be accepted for the pump installers exam, a test to be completed at home with the fee paid in advance.

The seminar is free, but Smith asks participants to make reservations by calling Cathy Poage at the OWRB Woodward Branch office, (405) 256-1014. Lunch is not provided.

Continued on page 5

THE FLOOD CURRENT

MARCH 1991

Diary Recalls 1866 Red River Flood

The following passage, submitted by Ruby Harris of Idabel, was printed in the "McCurtain Gazette" in April 1990. The account is from a diary kept by Henry C. Harris, who farmed the lowlands overrun by the Red River Flood of 1866. The days of the week and calendar dates of the flood coincide precisely with the worst days of the devastating flood 114 years later, in 1990.

Saturday, May the 5th, I arrived home from Richman at 8 o'clock a.m. We had a heavy rain.

Sunday the 6th I rested.

Monday the 7th Will Harris worked in the field removing the trees which had blown down during the storm on the night of the 6th. I sheared sheep. Heavy rains fell on the night of the 5th and 6th (also we had much wind and hail). Heavy rains on the 7th and 8th until 12 o'clock p.m.

Will and myself gathered all the horses, mules and cows out of the Bend and drove them to the prairie. I also moved my family out the same day but we could not reach the hills

on account of the water. I left my family at Little John's and Will and myself returned home. We had to swim the Ben Lewis Lake to reach the house. We sent our horses out . . . I killed one alligator near the house. Thursday the 10th the river continues to rise about one inch an hour and the water is now in the yard.

Got breakfast and went to the river in a boat to rescue some cattle.

Raised the corn in the crib.

**Friday the 11th . . .
water is two feet
in the house. Put
the chickens on top
of the house.**

The fireplace caved in the blocks washed from under the northeast corner of the house.

Raised household furniture.

River continues to rise. So ends the 12th of May, 1866.

We went to sleep and awoke at 1 o'clock a.m. and I was sure the house would fall before day at 2 a.m. The rest of the chimney fell.

On Saturday the Steamer Texas passed going up the river (a fine float, too).

We cooked by hanging a pot from the rafters and suspending an oven over it.

We removed everything out of the house into the smoke house by use of the boat.

The river at 3 o'clock was at a standstill.

Tried to reach my family and was nearly drowned so returned to the house.

The kitchen fell in.

On Monday the 14th the river began to fall way rapidly.

My farm was destroyed by the river changing its course.

So ends the overflow of 1866.

Flood Data Center Offers Help

Public officials or citizens searching for information concerning floods or floodplain management can contact the Floodplain Management Resource Center (FRC) in Boulder, Colorado. The FRC is housed at the University of Colorado's National Hazards Research and Applications Information Center.

The data collection and management system was set up by the National Association of State Floodplain Managers in 1989 to encourage the sharing of technical reports, manuals, research projects and related information throughout the country. The FRC collects, catalogues and summarizes these data and enters it into a bibliographic data base.

To date, the FRC contains more than 400 documents related to flood-proofing, flood control, floodplain hydrology and hydraulics, planning, disaster preparedness, arid issues and stormwater management. The goal of the Resource Center is to put this and other valuable information in the hands of the people who need it most—floodplain managers.

Continued on page 4



Though millions have been spent on prevention measures, floods continue to plague southeast Oklahoma.

Continued from page 3

There is no fee for using the Center's services; however, a slight charge may be assessed for photocopies. The FRC welcomes donations of documents or audio-visual presentations on floodplain management.

For information or to donate, call (303) 492-6818 or write to the National Hazards Research and Applications Information Center, IBS 6, Campus Box 482, Boulder, CO 80309-0482, attn: Floodplain Management Resource Center.

Hurricane Hugo Proved Value of NFIP Building Standards

Buildings on the South Carolina coast that were constructed to meet or exceed minimum requirements of the National Flood Insurance Program fared significantly better in the face of Hurricane Hugo than those that were not.

Buildings meeting NFIP standards for coastal areas are constructed so that the expected storm waves and winds do not greatly damage or destroy the building. Along the South Carolina coast, the Federal Emergency Management Agency's damage assessment teams found that such buildings received only minor damage, except where the wave heights from Hugo exceeded the anticipated 100-year flood level.

Buildings that were substantially damaged by Hugo's winds and water will have to be rebuilt in compliance with NFIP standards, making them better able to withstand the next hurricane. A structure is "substantially damaged" if the cost to restore the building to pre-flood condition equals or exceeds 50 percent of the building's pre-damage value.

Buildings that were substantially damaged and located in designated coastal barrier areas may be rebuilt, if state and local requirements permit, but they will no longer be insurable by the NFIP. The insurance unavailability is the result of the Coastal Barrier Resources Act of 1982, which prohibits NFIP coverage of new or substantially improved buildings in the areas designated by Congress.

To assist builders and local officials along the Carolina coast in the rebuilding effort, FEMA and the National Association of Home Builders conducted workshops in Charleston and Myrtle Beach. The NFIP standards for design and construction in coastal areas were reviewed and discussed in detail during these sessions, and information materials were distributed for use by the local builders.

—article courtesy of FEMA



Bill Changes NFIP Rates

The Budget Reconciliation Act of 1990 will implement several changes to the NFIP, including extension of the program to September 1995.

To recoup costs of NFIP administration, a flood insurance policy fee of \$25 (with the exception of Preferred Risk Policies) will be added to premiums of all new and renewal business. Also, the "basic limits" amounts of insurance for building coverage will increase on or after April 1, 1991. There will be no modification to contents coverage.

Other changes, effective October 1, include a probation surcharge increase from \$25 to \$50, and an increase from \$500 to \$750 will be assessed on the standard deductible for policies rated on the basis of subsidized rates.

DATE OF DECLARATION	DESCRIPTION	DATE CLOSED
June 1955	flood & tornado	December 1959
April 1956	tornadoes	June 1959
May 1957	flood	August 1960
July 1959	flood	May 1961
November 1959	heavy rains & flooding	May 1961
July 1960	heavy rains, hail, flooding & tornadoes	March 1962
May 1968	heavy rains & flooding	September 1970
October 1970	tornadoes, heavy rains & flooding	January 1973
September 1971	heavy rains & flooding	April 1973
January 1972	severe storms & flooding	April 1973
June 1973	severe storms, flooding & tornadoes	March 1976
October 1973	severe storms & flooding	April 1978
December 1973	severe storms & flooding	June 1976
March 1974	heavy rains & flooding	March 1976
June 1974	severe storms & flooding	April 1978
November 1974	severe storms & flooding	June 1977
July 1975	severe storms, flooding & tornadoes	August 1978
December 1975	severe storms & tornadoes	April 1978
April 1976	severe storms & tornadoes	November 1981
June 1976	severe storms & flooding	November 1981
April 1979	severe storms & tornadoes	August 1982
November 1981	severe storms & flooding	July 1984
June 1982	severe storms & flooding	August 1984
June 1983	severe storms & flooding	May 1985
October 1983	severe storms & flooding	December 1986
May 1984	severe storms & tornadoes	December 1986
May 1984	severe storms & flooding	open
October 1986	severe storms & flooding	open
May 1987	severe storms & flooding	open
May 1990	severe storms, flooding & tornadoes	open

continued from page 2

According to Smith, "this workshop is an opportunity to increase knowledge and expertise in the industry, and it provides participants opportunities to present suggestions and input."

Ag Chemicals Falling in Rain

Researchers are literally looking to the skies in isolating pollutants. Agricultural chemicals, long suspect in cases of groundwater pollution, have lately been detected in rain water, reports the Iowa Department of Natural Resources.

According to "U.S. Water News," evidence is mounting that herbicides and pesticides are present in significant amounts in rain water. Tests by Iowa researchers, expanding on research by the U.S. Department of Agriculture, show traces of the herbicide, atrazine, are present in rain throughout Iowa's corn-growing regions.

Researchers point out that during the spring corn-planting season, rainfall in the state often contains over 10 parts per billion atrazine. The amount of atrazine and other chemicals decreases as the year advances, registering 2 to 3 ppb in the summer and barely perceptible in the winter.

Iowa rainfall studies, which began in 1982, have also detected simazine, alachlor, metolachlor, cyanazine (Bladex), metibuzin (Sencor) and pendimethalin (Prowl). Testing will continue at five locations until the rainfall studies are completed in 1992.

FINANCIAL ASSISTANCE PROGRAM UPDATE

Approved at February Board Meeting

Grants

Braggs PWA—\$70,000
Chattanooga PWA—\$50,000
Keota PWA—\$15,000

Loans

(current rate—6.592%)
Creek County RWD—\$540,000

Totals as of 2/12/91

	Loans	Grants
Approved	74	217
Amount	\$75,595,000	\$13,718,155
Funded	58	192
Amount	\$47,260,000	\$11,983,442

Pesticide or "Watercide"? Read the Label

-cide: suffix, "killer"—If only pesticides would stay where they are put, they would probably poison only those organisms for which they are intended. But they don't always remain in one place. As soon as pesticides (including insecticides, herbicides, rodenticides and fungicides) are applied, water and air can begin to transport them through biological channels much like the piping system that routes water to your home. These channels can lead into multiple levels of the food chain and cause unintentional damage to living organisms—including humans—because pesticides are toxic by virtue of their purpose.

Excessive or unnecessary pesticide use can result in accumulations of these mobile and persistent toxic

concentrated each step higher on the food chain, a phenomenon biologists call "biomagnification."

There are thousands of pesticides registered in the U.S., many detectable in our lakes, streams, rivers and aquifers. Did you know that concentrations of DDT, outlawed in 1972, have been measured in the body tissues of Antarctic seals as well as the snow there? This not only illustrates the persistence of some pesticides, it also shows how easily human activities can affect even the most remote parts of our fragile planet.

Before using pesticides, consider environmentally healthy alternatives, such as using natural predators, pulling weeds or using a mousetrap instead of poison. After all, the best way to stop polluted runoff from pesticides



Always read the label carefully before applying lawn fertilizers, pesticides and herbicides. Excess use of these toxic chemicals may cause contamination of surface and groundwater supplies.

chemicals becoming a semi-permanent part of the environment. By some estimates, homeowners use approximately 10 times more pesticides per acre than farmers. When excess pesticides are washed or blown into street gutters, storm sewers and streams or lakes, surviving algae and bacteria efficiently concentrate the toxics. Minnows can feed on pesticide-laden microorganisms, small fish feed on the minnows and bigger fish on the small fish. As a result, the chemicals in many bug sprays and weed killers can become more con-

is to stop using pesticides. If you decide against safer alternatives, read and follow the directions carefully to hinder pesticide residues from getting into local water supplies. Also, check the weather forecast. If it rains soon after you apply pesticides, you could be washing money down the street gutter, besides polluting the receiving waters. Furthermore, use only what you need. Give extra pesticides to a friend or neighbor, save it or turn it in during a community hazardous waste pick-up day.

Texas Water Commission

**STORAGE IN SELECTED OKLAHOMA LAKES & RESERVOIRS
AS OF FEBRUARY 22, 1991**

PLANNING REGION LAKE/RESERVOIR	CONSERVATION STORAGE (acre-feet)	PRESENT STORAGE (acre-feet)	PERCENT OF STORAGE		PLANNING REGION LAKE/RESERVOIR	CONSERVATION STORAGE (acre-feet)	PRESENT STORAGE (acre-feet)	PERCENT OF STORAGE	
			conservation	flood				conservation	flood
SOUTHEAST					EAST CENTRAL				
Atoka	124,100	120,568	97.2	N/A	Eufaula	2,314,600	2,278,272	98.4	0.0
Broken Bow	918,070	906,625	98.8	0.0	Tenkiller	654,100	651,218	99.6	0.0
Hugo ¹	187,603	187,603	100.0	0.1	Wister ¹	58,601	58,601	100.0	0.8
McGee Creek	113,930	113,688	99.8	0.0	NORTHEAST				
Pine Creek ¹	73,346	73,346	100.0	0.1	Birch	19,200	17,603	91.7	0.0
Sardis	274,330	274,259	99.6	0.0	Copan	43,400	39,310	90.6	0.0
CENTRAL					Eucha	80,000	79,600	99.5	N/A
Arcadia	27,520	27,520	100.0	0.3	Fort Gibson	365,200	365,200	100.0	0.2
Hefner	75,400	55,743	73.9	N/A	Grand	1,672,000	1,512,920	90.5	0.0
Overholser	15,900	8,979	56.5	N/A	Heyburn	7,105	7,105	100.0	0.3
Stanley Draper	100,000	77,643	77.6	N/A	Hudson	200,300	200,300	100.0	1.6
Thunderbird	119,600	119,600	100.0	1.3	Hulah	31,160	23,770	76.3	0.0
SOUTH CENTRAL					Oologah	553,400	553,400	100.0	8.4
Arbuckle	72,400	72,400	100.0	1.5	Skiatook	322,700	276,798	85.8	0.0
Texoma	2,643,300	2,618,215	99.1	0.0	Spavinaw	30,590	30,590	100.0	N/A
Waurika	203,100	199,460	98.2	0.0	NORTH CENTRAL				
SOUTHWEST					Kaw	428,600	427,424	99.7	0.0
Altus	132,830	89,735	67.6	0.0	Keystone	557,600	545,785	97.9	0.0
Ellsworth	72,490	59,470	82.0	N/A	NORTHWEST				
Fort Cobb	80,010	79,087	98.9	0.0	Canton	111,310	98,431	88.4	0.0
Foss ²	256,220	174,778	68.2	0.0	Fort Supply	13,900	13,900	100.0	0.6
Lawtonka	56,574	46,660	82.5	N/A	Great Salt Plains	31,420	31,420	100.0	1.0
Tom Steed	88,970	71,719	80.6	0.0	STATE TOTALS				
						13,130,879	12,588,073	95.9	1.9

¹ Seasonal pool operation

² Conservation pool lowered to enhance project operation

N/A—not applicable; no flood storage allocation.

Data courtesy of the U.S. Army Corps of Engineers, Bureau of Reclamation, Oklahoma City Water Resources Department, City of Tulsa Water Superintendent's Office, City of Lawton, City of Altus, Altus Irrigation District, Foss Reservoir Master Conservancy District and Fort Cobb Master Conservancy District.

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OKLAHOMA WATER NEWS

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