

OKLAHOMA WATER NEWS

Bimonthly Newsletter of the Oklahoma Water Resources Board

Groundwater Topic of Dec. 18 Water Conference

How much? Where is it? How can we protect the "buried treasure" from pollution?

Too often in their quest for black gold Oklahomans overlook another buried treasure, groundwater. Oklahoma's fresh water wealth lies in 23 major groundwater aquifers and in dozens of other basins of significant yield. Hydrogeologists estimate the abundance in the major basins at 320 million acre-feet of water, perhaps half of which is recoverable.

But lying silently in caches underground or in alluvial beds along streams does not always protect it from pollution by agricultural chemicals, human, animal and industrial wastes, and petroleum and other by-products of oil/gas activity. It is this concern upon which national and regional experts will focus at the Governor's 12th Annual Water Conference in Oklahoma City on December 18.



Gov. David Walters

The meeting will get underway with registration at 8 a.m. at the Marriott Hotel, 3233 Northwest Expressway.

Register now on page 2 of this issue!

The theme of the day-long program is "Groundwater, Oklahoma's Buried Treasure. How Well Will We Manage It?" The Governor's Water Conference is coordinated by the Oklahoma Water Resources Board and sponsored by 28 water-related organizations, said Patty Eaton, Secretary of Environment and executive director of the OWRB. Eaton announced the keynote speaker will be Ramona Trovato, Director of the Groundwater Protection Division of the U.S. Environmental Protection Agency in

Washington, D.C. Trovato's address, entitled "New Respect for an Old Resource," will focus on EPA strategies to abate groundwater pollution and protect drinking water supplies.

Trovato, with 18 years experience with the EPA, is responsible for implementing Comprehensive State Groundwater Protection Programs and EPA programs in Wellhead Protection, Underground Injection Control and Sole Source Aquifer Management. She has also served as a liaison between headquarters and regional offices and worked in EPA's Region III Central Regional Lab as a chemist and manager of the inorganic chemistry lab.

The first panel discussion, moderated by Kathy Peter, District Chief of

Continued on page 2



U.S. Sen. Don Nickles



U.S. Rep. Mike Synar

the U.S. Geological Survey, is entitled "Defining the Problems." Panelists include David G. Boyer, Hydrogeologist with K. W. Brown Environmental Services, College Station, Texas; Kathy McNally, Director of National Affairs for the Oklahoma Farm Bureau; and Phil Brown, Chief of Community and Business Programs with the Farmers Home Administration.

A second panel, "Protecting a Fragile Resource," will be moderated by Glenn Sullivan, a partner in Sullivan & Associates Engineering of Norman. Presenting various strategies for preventing pollution and restoring groundwater quality will be panelists Dr. Larry W. Canter, Director of the Environmental and Groundwater Institute at the University of Oklahoma; Blaine Reely, Director of Public Works, City of Enid; and David Pope, Chief Engineer, Division of Water Resources of the Kansas State Board of Agriculture, Topeka.

In the program segment preceding lunch, conferees will hear remarks from Rep. Mike Synar concerning water issues before the Congress, including reauthorization of the Clean Water Act.

Featured speaker on the luncheon program will be Sen. Don Nickles, who will present his perspective of Capitol Hill. Other members of the Oklahoma Congressional Delegation will be invited to comment on water

and environmental legislation before Congress.

Following the remarks of the Congressional Delegation will be comments concerning environmental legislation expected in the upcoming session of the Oklahoma Legislature by Sen. Ray Giles, Chairman of the Senate Committee on Natural Resources; and Rep. Larry Rice, Chairman of the House Committee on Energy, Environment and Natural Resources.

The luncheon program and the Governor's Water Conference will conclude with the presentation of 1991 Oklahoma Water Pioneer Awards by Robert S. Kerr, Jr. and OWRB Executive Director Patty Eaton. Each year since 1985, the Governor's Water Conference has honored Oklahomans who have made notable contributions in the planning, development, management and conservation of Oklahoma's waters. Water Pioneers are presented framed awards and their names are engraved on a bronze plaque displayed at the conference.

Registration for the conference costs \$25, which includes lunch. For further information on the Twelfth Annual Governor's Water Conference, or to receive a printed brochure, call OWRB conference coordinators Mary Whitlow and Brian Vance at (405) 231-2523 or 231-2502.

To register by phone, call (405) 231-2521.



Cimarron Report Available

According to OWRB Stream Water Division Chief J.A. Wood, the hydrologic study of the Cimarron River is complete and available at Board offices in Oklahoma City.

Like all hydrologic investigations conducted under a cooperative agreement between the OWRB and U.S. Army Corps of Engineers, the "Hydrologic Investigation of the Cimarron River" is used by the Water Board to determine overall water availability within the Cimarron River basin. Collected data published in the study help the Board to determine the impact of proposed withdrawals on existing water users, identify area-of-origin needs and calculate water available for appropriation on either a regular or seasonal basis. Also included is information required for the planning, design, construction and operation of future reservoirs and related water development projects.

Oklahoma is divided into 49 stream systems; the Cimarron River is the forty-fourth stream system for which hydrologic reports have been completed, Wood said. The Poteau and Grand Rivers remain the only stream systems on which studies have not yet been undertaken while the mainstem of the Arkansas River (composed of three stream systems) is currently under investigation.

The Cimarron River report can be obtained by calling OWRB Librarian Susan Lutz at (405) 231-2553 or writing the OWRB at P.O. Box 150, Oklahoma City, OK, 73101-0150.

USGS Asks for Papers

On February 20, the Water Resources Division of the U.S. Geological Survey's Oklahoma District will sponsor a conference focusing on the quality of central Oklahoma's Garber-Wellington Aquifer. The meeting will be held at the Marriott Hotel, 3233 Northwest Expressway, in Oklahoma City.

According to USGS District Chief Kathy D. Peter, the federal agency is now soliciting presentations and papers from the water resources com-

Governor's Water Conference
% Oklahoma Water Resources Board
P.O. Box 150
Oklahoma City, OK 73101-0150

Please make \$25 check, money order or purchase order payable to **GOVERNOR'S WATER CONFERENCE**. No refunds after December 12. Registration includes luncheon.

Name _____

Representing _____

Address _____

City _____ State _____

Zip _____ Phone (____) _____

munity in Oklahoma. While the subjects of presentations should preferably be related to the Garber-Wellington's quality, topics may also include any aspect of the hydrology of the aquifer or general groundwater quality. Presentations will be limited to 30 minutes, including time for questions. Abstracts will be limited to two pages, single-spaced, and will be subject to editorial review by the USGS.

Those interested in participating in the conference should submit abstracts. For more information, contact Scott Christenson, Alan Rea or Kathy Peter at (405) 231-4256.

Summit Team Submits Findings

The Oklahoma Rural Development Summit, convened by Gov. David Walters July 1, has prepared recommendations to assist local communities in improving their economic health. The Summit will submit its list to Gov. Walters this month.

Supporting rural leadership, strengthening rural infrastructure systems and increasing rural employment and business development are the objectives of the Summit. The Rural Development Summit Team is comprised of top-level policymakers who are charged with the development of a comprehensive, strategic policy which will culminate in a long-range action plan for rural Oklahoma.

While the economy has been in a general decline in Oklahoma, the rural areas have been hardest hit.

"Despite that fact, there is a tremendous potential for economic development in our rural areas," Gov. Walters said. "It is time to provide our full support to the rural communities in an effort to accentuate the talent and resources that the rural areas have to offer," he added.

The Summit Team is comprised of Oklahoma Cabinet officials, state agency heads and top leaders from the public and private sectors.

Lt. Gov. Jack Mildren pointed out that young people are leaving the small towns. "We must find incentives to encourage our young people to return and create job opportunities that will keep them in Oklahoma," he said.

Board Tours Tar Creek, Assesses Cleanup

According to a preliminary report which assesses acid mine water pollution at Tar Creek, further remedial work will be required to adequately clean up surface and groundwater pollution in the former Picher mining district of far northwest Oklahoma.

Results of the report, assembled by the Robert S. Kerr Environmental Laboratory, were discussed October 16 as the nine-member Oklahoma Water Resources Board and agency staff inspected progress at Tar Creek, north of Miami. The tour was preceded by the Board's monthly meeting which was held in Miami. Occa-

waters at the Tar Creek project area indicate that, while remedial work has been effective to some extent, more groundwater monitoring is needed to fully evaluate protective measures. We believe that more elaborate and comprehensive strategies should be implemented to better protect the Roubidoux from pollution and significantly decrease the amount of acidic waters discharging from the mines," according to Dave Dillon, chief of the OWRB's Water Quality Division.

When Tar Creek was selected as one of the first pollution sites to re-



Sen. William Schuelein, Board member R.G. Johnson, Rep. Larry Roberts and Water Board Chairman Robert S. Kerr, Jr., discuss additional remediation needs at the Tar Creek Superfund project.

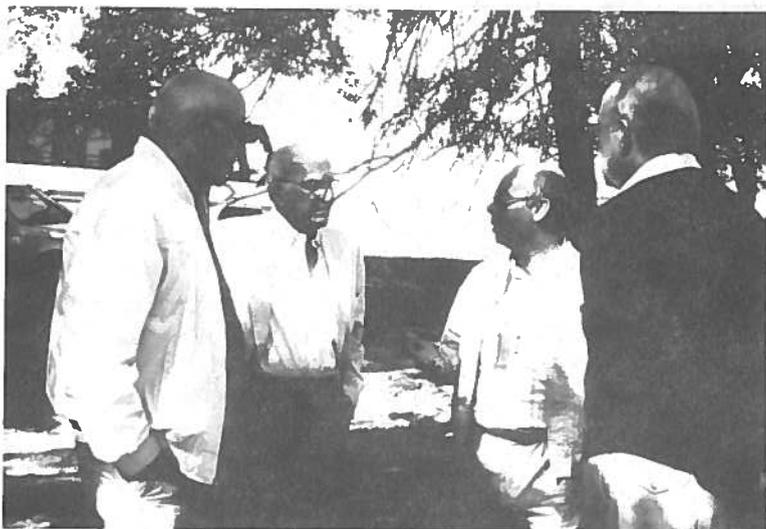
sionally, the Board holds meetings outside of the agency's main Oklahoma City office to enhance contact with the public throughout the state.

For 10 years, the OWRB has supervised a federal Superfund project which seeks to protect human health and monitor land and water in the Tar Creek area. In 1986, two remedial actions were completed: the plugging and sealing of more than 80 abandoned water wells to protect the Roubidoux Aquifer, a prime source of area drinking water underlying the mine workings; and the construction of three dike and diversion projects to divert surface flows around sinkholes and mine cave-ins at the site. The Roubidoux lies at a depth exceeding 1000 feet in some areas.

"Monitoring of wells and surface

ceive attention under the federal Superfund program, among cleanup options considered was construction of a treatment plant to remove and treat some 26 billion gallons of water from mine workings underlying the 50-square-mile area. Estimated at \$50 million for construction of the plant alone, this alternative was judged to be economically infeasible, forcing implementation of less expensive measures, Dillon pointed out.

"We believe that more wells should be located and plugged to prevent downward migration to the Roubidoux. Also, efforts should be pursued to more effectively decrease infiltration of surface flows into the mines and subsequent outflows into the Tar Creek area." Dillon added that more and better monitoring of



Board member Mike Henson, Main Hutcheson, Water Quality Division Chief Dave Dillon and tour guide John Mott observe progress at Tar Creek.

surface and groundwaters is needed to appraise the effectiveness of remediation.

The OWRB and U.S. Geological Survey are currently developing a two-year monitoring plan to study underground water supplies in the region and determine whether contamination currently exists or if there is

potential for future pollution of the Roubidoux. In addition, EPA is conducting a five-year review of the effectiveness of remedial action taken in the \$6 million Superfund project. The federal evaluation is one of the first such assessments to be conducted in the country and the first in EPA's Region VI.

Automobiles Contribute to Water Pollution

Regularly, rainfall and runoff flush loose particles and liquids from the ground into our water supplies. These substances constitute a mixture called nonpoint source pollution that contaminates the runoff which replenishes our vitally important water supplies. The U.S. Environmental Protection Agency estimates that nonpoint sources account for more than one-half of the pollution in our surface and groundwater supplies. Much of this pollution, named for its diffuse nature, can be traced to irresponsible use or disposal of pesticides and fertilizers, household chemicals, paint or just about anything else humans leave on the ground. One of the most significant and visible of all nonpoint pollution sources is the automobile.

Think of all the automotive products you use that you would not want infiltrating your drinking water. Gasoline, motor oil, brake and transmission fluid, antifreeze, battery acids, tire residue and a host of solvents, waxes and cleaning chemicals are common water pollutants. Of course,

you would not knowingly mix any of these products with your drinking water. But do you ever inadvertently rinse them from your driveway into the gutter or leave them on the ground for the rain to wash into the nearest drainage ditch?

Used motor oil is estimated by some experts to comprise as much as 40 percent of the pollution in American waterways. Leaking crankcase plugs, defective valve cover gaskets and the illicit disposal of used oil

contribute an estimated annual average of 240 million gallons to our environment. The answer: repair leaks and dispose of used oil by taking it to a service station or other recycler.

Antifreeze is a toxin which serves a legitimate function in the radiator, but when spilled into the environment (a particularly *illegitimate* use of antifreeze) its sweet aroma and taste attracts and kills household pets and other animals. Simply hosing the contents of a drained radiator into the street rinses poison into an environment that can no longer dilute everything we put into it. Some radiator shops will accept waste antifreeze although many prefer not to advertise it. (It costs money to have a recycler pick it up.) For our children's sake, locate a business that will accept it or save it for a local or regional hazardous collection day.

Also consider engine solvents, tar or grease removers and other tire and upholstery cleaners used in America's driveways that often end up in our water. It may be impossible to collect the rinsewater after using these products, but we must recognize the connection between them and water pollution, and learn to be frugal in our use of these materials or use less toxic products. The automobile is an entrenched part of American culture, and likely to remain so for many years. As population and traffic both increase at astronomical rates, so too does our responsibility as motorists to recognize how our use of the car affects the water we depend upon and, therefore, our very lives.



The Oklahoma Water News is printed on recycled paper in biodegradable oil-based soybean ink.

FINANCIAL ASSISTANCE PROGRAM UPDATE

Approved at October Board Meeting

Grants		Loans (5.292%; 28-year maximum term)	
North Miami	\$15,000	Nichols Hills Municipal Authority	\$2,760,000
Cherokee County RWD #9	\$13,465		

Approved at November Board Meeting

Grants		Loans	
Fairview Utilities Authority	\$25,000	Fairview Utilities Authority	\$550,000
		El Reno Municipal Authority	\$515,000

Totals as of 11/13/91

	FAP Loans	FAP Grants	SRF Loans
Approved Amount	85	244	2
Funded Amount	\$67,305,000	\$14,951,660	\$26,659,500
	74	226	2
	\$58,755,000	\$13,475,469	\$26,659,500

Twelfth Annual Governor's Water Conference

December 18, 1991
Marriott Hotel, Oklahoma City

- 8 a.m. Registration, Coffee**
- 8:30 Welcome**
Robert S. Kerr, Jr., OWRB Chairman
- 8:45 Keynote**—Ramona Trovato, Director
Groundwater Protection Division, U.S. EPA
- 9:10 Panel—Defining the Problems**
Moderator:
Kathy Peter, District Chief, USGS
Panelists:
David G. Boyer, Hydrogeologist
K. W. Brown Environmental Services

Kathy McNally, Director of National Affairs
Oklahoma Farm Bureau

Phil Brown, Chief
Community and Business Programs, FmHA
- 10:10 Coffee Break**
- 10:30 Panel—Protecting a Fragile Resource**
Moderator:
Glenn Sullivan, Engineer
Sullivan & Associates
Panelists:
Dr. Larry W. Canter, Director
OU Environmental & Groundwater Institute

David Pope, Chief Engineer
Kansas Division of Water Resources

Blaine Reely, Director of Public Works
City of Enid
- 11:30 The Washington Perspective**
U.S. Rep. Mike Synar
- Noon Luncheon Program**
Introductions and Remarks—Mr. Kerr
Address
Sen. Don Nickles
Observations from the Oklahoma Legislature
Sen. Ray Giles, Rep. Larry Rice
Oklahoma Water Pioneer Awards
Adjournment

Program Encourages Insurance Purchases

The Federal Insurance Administration and Federal Emergency Management Agency, the agencies which administer the National Flood Insurance Program, recently announced creation of a new program which they believe will greatly increase flood insurance purchases.

According to Wallace Stickney, newly appointed FEMA director, the primary goal of the Mortgage Portfolio Protection Program is to notify and then require, if necessary, the purchase of conventional flood insurance policies by property owners whose structures are susceptible to flood damage. The program provides lenders with a tool for bringing existing mortgage portfolios into compliance with the mandatory flood insurance purchase requirements of the Flood Disaster Protection Act of 1973. The strategy will depend heavily on lenders notifying borrowers of the need for the purchase of flood insurance for endangered homes and properties. If a homeowner fails to voluntarily obtain a required flood policy, the lender may "force place" the policy which will cost significantly more than regular coverage. If the insured later obtains adequate insurance, then the policy may be cancelled and a refund obtained.

11 million homes lie in hazard areas

Ken Morris, state NFIP coordinator, says that while there are 11 million insurable households in the U.S. residing in special flood hazard areas, where the risk of flooding is relatively high, only 15 percent of them are covered by flood insurance under the NFIP. "The remaining households need coverage and lenders and mortgage servicers involved with those mortgages are required by law to ensure that they are adequately protected by flood insurance," Morris said.

"Ideally, we hope homeowners respond voluntarily by calling their insurance agents rather than having a policy force placed," he emphasized.

**STORAGE IN SELECTED OKLAHOMA LAKES & RESERVOIRS
AS OF NOVEMBER 13, 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	123,475	99.5	N/A	Eufaula	2,314,600	2,314,600	100.0	5.3
Broken Bow	918,070	918,070	100.0	5.2	Tenkiller	654,100	654,100	100.0	3.1
Hugo ¹	187,603	187,603	100.0	15.1	Wister ¹	58,601	58,601	100.0	21.1
McCree Creek	113,930	113,930	100.0	5.5	NORTHEAST				
Pine Creek ¹	73,346	73,346	100.0	16.1	Birch	19,200	14,609	76.1	0.0
Sardis	274,330	274,330	100.0	7.7	Copan	43,400	32,845	75.7	0.0
CENTRAL					Eucha	79,600	63,500	79.8	N/A
Arcadia	27,520	27,520	100.0	0.5	Fort Gibson	365,200	364,452	99.8	0.0
Hefner	75,400	73,819	97.9	N/A	Grand	1,672,000	1,438,470	86.0	0.0
Overholser	15,900	15,900	100.0	N/A	Heyburn	7,105	7,105	100.0	0.4
Stanley Draper	100,000	82,278	82.3	N/A	Hudson	200,300	200,300	100.0	1.1
Thunderbird	119,600	119,600	100.0	0.3	Hulah	31,160	20,411	65.5	0.0
SOUTH CENTRAL					Oologah	553,400	488,808	88.3	0.0
Arbuckle	72,400	72,400	100.0	1.6	Skiatook	322,700	285,786	88.6	0.0
Texoma	2,643,300	2,643,300	100.0	5.0	Spavinaw	30,590	28,000	91.5	N/A
Waurika	203,100	203,100	100.0	1.1	NORTH CENTRAL				
SOUTHWEST					Kaw	428,600	411,652	96.1	0.0
Altus	132,830	69,631	52.4	0.0	Keystone	557,600	524,359	94.0	0.0
Ellsworth	72,490	60,178	83.0	N/A	NORTHWEST				
Fort Cobb	80,010	80,010	100.0	0.1	Canton	111,310	59,282	53.3	0.0
Foss ²	256,220	171,350	66.9	0.0	Fort Supply	13,900	11,463	82.5	0.0
Lawtonka	58,327	57,049	97.8	N/A	Great Salt Plains	31,420	29,548	94.0	0.0
Tom Steed	88,970	75,769	85.2	0.0	STATE TOTALS				
						13,132,232	12,450,549	94.8	2.9

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 and City of Lawton.

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