

OKLAHOMA WATER NEWS

Bimonthly Newsletter of the Oklahoma Water Resources Board

Be Careful, One Million of Us Drink Groundwater in Oklahoma

*Speakers at December 18 Water Conference
say message is clear: "An ounce of prevention . . ."*

Conference keynoter Ramona Trovato of the EPA said, nationally, 50 percent of us depend on groundwater for drinking water, and 40 percent of the basal streamflow comes from groundwater, so protection is important from a human health perspective, as well as an ecosystem perspective. In Oklahoma the reliance is even greater. We really need to start living the old adage, "an ounce of prevention is worth a pound of cure."

Trovato, Director of the Groundwater Protection Division, told the 350 conferees, "that's why EPA has developed the Groundwater Protection Strategy. The first goal is to prevent adverse effects to human health and the environment," she said. "We want to look at the resource as a whole instead of limiting our focus to control of underground storage tanks, injection wells or landfills." Trovato said it's important to examine the laws we have and apply them to the problems we have.

"We must protect the groundwater so that it remains a source of drinking water. Where it's connected to surface water, protect the resource so we don't degrade the quality of the surface water."

It is important that the states take the lead because they know best what their problems are and how to address them, she said. Trovato ex-

plained there are four categories to be included in a Comprehensive State Groundwater Protection strategy:

- establish a state goal;
- define roles and responsibilities;
- characterize the resource, set priorities;
- establish prevention control programs and coordinate them across the state.

"We asked the states for input and they told us that they need money; they need EPA to get its act together; and they need EPA to start working better with the other federal agencies," she said. "We will move in that direction."

She commended Oklahoma for having an approved wellhead protection program. Trovato said this year, EPA will give \$1.5 million to communities and \$1 million to the National Rural Water Association to support wellhead protection in rural areas.

Trovato emphasized a third program, the Pesticides in Groundwater Strategy. She explained EPA is now going to identify particular pesticides as "leachers" and require the state to develop a management plan.

The first panel, moderated by Kathy Peter, District Chief of the U.S. Geological Survey, defined the problems facing Oklahoma's groundwater basins. Peter pointed out that groundwater supplies 56 percent of the total

water used and provides drinking water to 41 percent of Oklahomans.

"Eighty percent of the rural drinking water in Oklahoma is groundwater, so these are the people who have the most to lose if a water supply is lost to contamination or depletion," she said. "Irrigation is the largest use, with 80 percent of the irrigation water pumped from the ground."

She said the Ogallala Aquifer, a portion of which underlies the Oklahoma Panhandle, is one of the largest continuous aquifers in the world. Development of high-capacity irrigation wells caused water levels to plummet in the 1970's. The number of high-yield wells increased from 450 in 1963 to 2,500 in 1984. However, during the 80's, high pumpage costs and high energy costs, changes in agricultural economics and a wetter climate allowed water levels in the aquifer to rise up to 15 feet, Peter said.

The most widespread contamination is nitrates originating from sewage, septic tanks, fertilizers and animal wastes.

Continuing the discussion of nitrates was panel member Phil Brown, Chief of Community and Business Programs of the Farmers Home Administration. Brown pointed out that the agency makes water loans to small towns. When nitrates invade the water supplies, the towns cannot afford the high costs of treating the water or replacing the supply.

"We are concerned because nitrate problems place our loans in jeopardy. It is critical to protect the wellhead early on," Brown emphasized. "Treatment is expensive, perhaps adding \$20 to each bill."

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Kathy McNally, Director of National Affairs of the Oklahoma Farm Bureau, and a farmer/rancher, said current fertilization practices are not causing high nitrate levels. Farmers use chemicals responsibly, she said.

Farmers are highly professional and are addressing environmental issues carefully because "we too rely on groundwater to drink," McNally said.

Last up on the "problems" panel was David Boyer, former Chief of the Environmental Bureau of the New Mexico Oil Conservation Division. Boyer advised the states to avoid inflexible federal prescriptive programs by developing their own regulatory program. The key to a strong oil and gas regulatory program is environmental awareness, he said. A successful program must have statutory authority, regulatory authority, staffing and public participation. Statutory authority must include requirements for protecting groundwater, public health and the environment.

"A successful program needs permitting authority, compliance evaluation and enforcement authority," he advised. Boyer emphasized that the regulatory agency must be responsive to the public and maintain dialogue with environmental and citizen groups. "If you don't establish that dialogue, you can't be successful because they won't trust what you're doing. All these build citizen confidence and eliminate the need for a prescriptive program from the feds."

The oil and gas industry has an opportunity to become proactive. It benefits them to define the issues and effect major, positive changes, he said.

Glenn Sullivan, principal engineer of Sullivan & Associates, chaired the second panel entitled "Protecting a Fragile Resource." Sullivan pointed out that in 1967, there were more than 100,000 barrels of saltwater going into the North Canadian River every day right here in Oklahoma City. Then it was not illegal, he said.

"At least half of the Vamoosa Formation has been contaminated by saltwater. Problems we had 50 years ago will continue to haunt us," Sullivan said.

Next to the podium was Dr. Larry

Canter, Director of the Environmental and Groundwater Institute at the University of Oklahoma. Canter pointed out that most of the work in groundwater management has been in remediation. He emphasized the "three Ps"—problems, prioritization, and prevention—as a strategy in protecting the fragile resource. He recommended a comprehensive study of the state's groundwater resources to identify all contaminant sources.

"Prioritization is a major area of need, then we must go the next step so that we have some kind of reasonable, workable system for environmental measurement.

"We need to develop more management strategies, then develop and coordinate programs. It is vital to communicate information about these protection programs to public interest groups, professionals and regulatory agencies," Canter said.

David Pope, Chief Engineer and Director of the Division of Water Resources of the Kansas Board of Agriculture, noted that Kansas has three levels of water management. Water laws deal with allocation of groundwater and surface water in a single, integrated statutory scheme.

"Secondly, we have partnerships with local units of government and groundwater management districts in managing aquifer systems," Pope added.

He said as a third management tool, there are special mandates, one of them requiring new water right applicants to file a conservation plan. "Last year the Kansas Legislature passed a law requiring conservation on old permits as well, especially in drought areas. A water conservation plan is a requirement for state financial assistance programs also," Pope said in closing.

Blaine Reely, Director of Public Works for Enid, described the city's protection strategies for the wellfields that supply municipal water. Reely pointed out that the city produces water from five wellfields in three separate aquifers in three counties.

"We use 155 wells, the farthest well lying 40 miles from downtown Enid," Reely said. "We can produce 27 million gallons a day, but average production is about 11 million gpd.

Water is of excellent quality, requiring only chlorination."

Reely pointed out that management is critical because the wellfields lie amid oil and gas pipelines and production sites; saltwater disposal pits; cattle herds; wheat-growing operations using pesticides, herbicides and fertilizers; and the polluted Cimarron River.

"Two hundred monitoring wells, water level recorders and rain gages help us oversee the system," he said.

Congressman Mike Synar, Chairman of the House Energy, Environment and Natural Resources commit-

A. Nancy Cain and Margaret Graham of the OWRB register conferees.

B. Lawton Channel 7 reporter interviews OWRB Director Patty Eaton.

C. Congressman Mike Synar called for cooperation in environmental programs.

D. 350 attended the 12th Annual Governor's Water Conference.

E. Ken Kirkpatrick of EPA Region VI answers questions from audience.

F. Terri Sparks of the OWRB greets Tim Baker of the OCC.

G. Sen. Don Nickles warned about overregulation in his address.

H. U.S.G.S. District Chief Kathy Peter moderated "Problems" panel.

I. Eaton presents award to Mona Waymire, daughter of Raymond Gary.

J. Panelist Phil Brown of FmHA warned of nitrate problems.

K. Brian Edmondson accepts posthumous award for his father.

L. Heber Finch, accompanied by wife Clorene, accepts award.

M. Dr. Larry Canter of OU talks about remedies for pollution.

N. Ramona Trovato, director of EPA Groundwater Protection Division, attended from Washington, D.C.

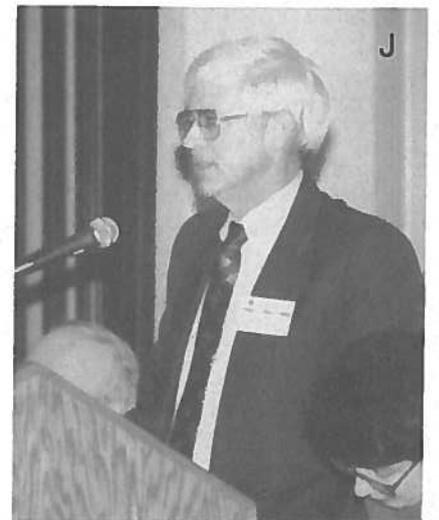
O. Rep. Larry Rice outlined upcoming environmental legislation.

P. David Pope, chief engineer for the Kansas Department of Water Resources, recaps successful programs.

Q. Sen. Ray Giles discusses prospects for new water/environmental laws.

R. Water Pioneer Jack Grimmatt accepts award from Patty Eaton.

S. Blaine Reely, Enid public works director, describes city's program.





Continued from page 2

ee charged that "Groundwater is not only the buried treasure, it is the nation's most buried environmental issue.

"There remains a lack of Congressional consensus on the extent of groundwater contamination in this country; on which groundwaters should be protected and at what level; on the extent of the federal role; on what additional regulation of potential sources of contamination is necessary; on what additional research is needed; and whether sufficient information exists on which to base a national policy."

He faulted EPA for incomplete and fragmented programs. "EPA programs have failed to articulate a national policy and protection goal.

"I believe an effective program is possible by financing, perfecting and fully funding existing laws," he said.

Synar expects reauthorization of the Clean Water Act this year to be a golden opportunity for the Congress to make groundwater protection a national goal. The Resource Conservation and Recovery Act (RCRA) and the Safe Drinking Water Act will also contain provisions for groundwater protection, he assured conferees.

Luncheon speaker Senator Don Nickles said, "We need to look at the Safe Drinking Water Act when it comes up for reauthorization in this Congress. We need to look at the costs to rural water districts and economic impacts," he warned.

He pointed out that the measure requires monitoring additional contaminants in drinking water. "In 1986 we monitored 12. By the year 2000, we could be monitoring 200 contaminants. That is enormously expensive, Nickles continued.

"We need to have a little economic sense," he said. He pointed out that as it stands now, every three years, an additional 25 contaminants will be added for monitoring.

Nickles also pointed out that reauthorization of RCRA would classify oilfield drilling fluids, wastes and water as hazardous material. "If you classify saltwater as a hazardous material, you've killed the oil industry in Oklahoma and the U.S.," Nickles said.

Presentation of Oklahoma Water Pioneer Awards closed the program of the Twelfth Annual Governor's Water Conference. Honored were Raymond D. Gary, former Oklahoma Governor; the late Ed Edmondson, former U.S. Representative; Heber Finch, Jr., rural water advocate; and conservationist Jack L. Grimmett. The Oklahoma Water Pioneer Award originated in 1985 as a means of recognizing Oklahomans who had made significant contributions to conserving, developing and protecting the state's water resources.



ABDA Meets in February

The 37th annual meeting of the Arkansas Basin Development Association will be held February 6 and 7 at the Marriott Hotel in Wichita, Kansas.

According to Glen Cheatham, Jr., ABDA Executive Vice President, speakers invited to the gathering include U.S. Senator Bob Dole and Nancy Dorn, Assistant Secretary of the Army for Civil Works. To register, call (918) 581-2806.



Kathy Martin of the OWRB Water Quality Division and Board Chairman Robert S. Kerr, Jr., hold an armful of teddy bears donated to the Jesus House in Oklahoma City by Water Resources Board employees in the weeks before Christmas. Martin said more than 50 teddy bears and other toys were delivered to the charity.

FINANCIAL ASSISTANCE PROGRAM UPDATE

Approved at December Board Meeting

Grants		Loans (5.292%; 28-year maximum term)	
Earlsboro Public Works Authority	\$70,000	Okay PWA	\$130,000
Seminole County RW&SWMD #1	\$50,000	Kremlin-Hillsdale RWD #1	\$270,000
Coal County RWD #5	\$75,000	Mayes County RWD #7	\$420,000
Pittsburg County RWD #14	\$100,000	Pauls Valley Municipal Authority	\$7,335,000
Town of Ripley	\$30,000	Guymon Utilities Authority ¹	\$301,000
Okay PWA	\$40,000		
Kremlin-Hillsdale RWD #1	\$100,000		

Approved at January Board Meeting

Grants		Loans	
Langston PWA	\$65,000	Langston PWA	\$170,000
		Bartlesville Municipal Authority	\$4,505,000

¹from State Revolving Fund (SRF) Program

Totals as of 1/15/92

	FAP Loans	FAP Grants	SRF Loans
Approved	90	252	3
Amount	\$78,705,000	\$15,481,660	\$26,959,500
Funded	78	231	3
Amount	\$62,405,000	\$13,861,327	\$26,959,500

**STORAGE IN SELECTED OKLAHOMA LAKES & RESERVOIRS
AS OF JANUARY 10, 1992**

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	124,100	100.0	N/A	Eufaula	2,314,600	2,314,600	100.0	8.3
Broken Bow	918,070	918,070	100.0	2.3	Tenkiller	654,100	654,100	100.0	5.4
Hugo ¹	187,603	187,603	100.0	4.9	Wister ¹	58,601	58,601	100.0	1.3
McGee Creek	113,930	113,930	100.0	0.0	NORTHEAST				
Pine Creek ¹	73,346	73,346	100.0	0.0	Birch	19,200	19,200	100.0	0.3
Sardis	274,330	274,330	100.0	0.0	Copan	43,400	43,400	100.0	0.1
CENTRAL					Eucha	79,600	79,600	100.0	N/A
Arcadia	27,520	27,520	100.0	1.5	Fort Gibson	365,200	365,200	100.0	0.8
Hefner	75,400	73,819	97.9	N/A	Grand	1,672,000	1,517,220	90.7	0.0
Overholser	15,900	15,900	100.0	N/A	Heyburn	7,105	7,105	100.0	0.7
Stanley Draper	100,000	82,278	82.3	N/A	Hudson	200,300	200,300	100.0	0.2
Thunderbird	119,600	119,600	100.0	0.1	Hulah	31,160	31,160	100.0	0.0
SOUTH CENTRAL					Oologah	553,400	553,400	100.0	5.8
Arbuckle	72,400	72,354	99.9	0.0	Skiatook	322,700	322,700	100.0	0.1
Texoma	2,643,300	2,643,300	100.0	22.5	Spavinaw	30,590	30,590	100.0	N/A
Waurika	203,100	203,100	100.0	19.3	NORTH CENTRAL				
SOUTHWEST					Kaw	428,600	428,600	100.0	2.1
Altus	132,830	97,150	73.1	0.0	Keystone	557,600	557,600	100.0	4.1
Ellsworth	72,490	67,282	92.8	N/A	NORTHWEST				
Fort Cobb	80,010	80,010	100.0	0.1	Canton	111,310	66,552	59.8	0.0
Foss ²	256,220	175,826	68.6	0.0	Fort Supply	13,900	13,900	100.0	1.1
Lawtonka	58,327	58,327	100.0	N/A	Great Salt Plains	31,420	31,420	100.0	1.5
Tom Steed	88,970	86,650	97.4	0.0	STATE TOTALS	13,132,232	12,789,743	97.4	2.7

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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