



OKLAHOMA

news

MONTHLY NEWSLETTER OF THE OKLAHOMA
WATER RESOURCES BOARD

Gerald E. Borelli, Chairman

Earl Walker • L.L. Males • John B. Jarboe • James H. Norick • R.G. Johnson • Ralph G. McPherson • Boyd Steveson • Ernest R. Tucker

Pollution Abatement Remedies Posed To Tar Creek Task Force

Alternatives for cleaning up the pollution from abandoned lead and zinc mines in Ottawa County's Tar Creek area were presented to the 23-agency Tar Creek Task Force at their monthly meeting July 16. Ron Jarman, OWRB Water Quality Division chief and Task Force co-chairman, proposed strategies that would pump, divert or seal the highly acidic water that began flowing from the mines in 1979.

The 435 abandoned mines contain 100,000 acre-feet of water, or an amount roughly equivalent to the water supply storage in Lake Thunderbird.

The OWRB, acting as lead agency in the state's effort to solve the pollution problems at Tar Creek, has been pursuing several courses of action in response to these problems, according to Jarman.

A water sampling program, begun in early 1980 and conducted by the Water Quality and Ground Water Divisions of the OWRB, has detected acute levels of contamination in area waters.

Main Hutcheson, OWRB hydrologist, said that samples of surface water collected from Tar Creek in mid-June indicated a low pH level of 2.7, making the stream waters 100 times more acidic than the acid rains which have caused fish kills in the northeastern United States. The pH scale measures the level of acidity, and Hutcheson said the figure was the most severe reading ever registered in an Oklahoma river.

However, the pH levels varied throughout the year-long sampling program, and at times were considerably less acidic. The most critical levels were measured following periods of heavy rains which caused mine waters to spill onto the surface.

"It appears that concentrations of metals in the creek pose no serious hazards for humans," Hutcheson said, "but they may adversely affect aquatic life in the Neosho River and in the (Grand) Lake of the Cherokees.

Sampling of the water showed concentrations of lead, zinc, aluminum, arsenic, nickel, iron, manganese and cadmium.

With the results of analysis in the hands of the Task Force, water sampling in the area will halt.

"Having monitored the quality of water throughout the year, during above average, normal rainfall and drought, we believe we've seen all the various cycles Tar

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19 Students Assist OWRB In Summer Employment Program

Opportunity for valuable experience was the main factor that drew 19 people to seasonal work at the Oklahoma Water Resources Board this summer. Employed in positions ranging from legal intern to clerk to engineer to water quality specialists, the student group has acquired widely diverse training.

The seasoning obtained through summer work with the OWRB attracted Art Cotton, political and environmental science major from OSU.

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STAFF PHOTO BY GARY GLOVER



Shown with OWRB Assistant Director Mike Melton (center) are summer employees Lorree Lockhart, June Elkins, Chuck Race, Shon Simpson, Art Cotton, Beverly Graham and Marie Kash.

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Creek can go through," Hutcheson said.

The Ground Water Division, charged primarily with inventorying wells and boreholes and collecting information on the quality of water wells, contributed data on the Boone Formation which underlies the Tar Creek area.

Jarman, citing the report prepared by the consulting firm of Hittman Associates, Inc., said that without treatment much of the water from the Boone Formation soon will be unsuitable for human consumption or other beneficial use.

The larger and deeper Roubidoux ground water formation, a source of municipal and industrial water for many communities in Oklahoma and the Midwest, has not been studied sufficiently to assess the extent of current or future contamination, he said.

Jarman said the Task Force must select and perhaps add possible solutions to the problem before turning the list back to Hittman Associates for further analysis. After the firm completes their assessments of costs and environmental impacts in late September, the Task Force will present final recommendations on cleanup strategies to Gov. Nigh's office.

Work Sessions, Hearings Slated In Custer and Grady Counties

The OWRB Ground Water Division has scheduled two public hearings in September for applicants and claimants for prior rights to the beneficial use of ground water in Custer and Grady Counties.

The Custer County hearing is set for Wednesday, September 2 at 9 a.m. in the City Council Chambers of the Clinton Municipal Building. OWRB staff members will be available at the same location before the hearing on Monday, August 31 from 1 p.m. to 5 p.m. and Tuesday, September 1 from 9 a.m. to 5 p.m.; and following the hearing Thursday, September 3 until 5 p.m. and Friday, September 4 from 9 a.m. to 1 p.m. to assist claimants in filing further information concerning determination of prior rights or answer questions concerning ground water use in Custer County.

The Grady County hearing is scheduled Wednesday, September 16 at 10 a.m. in Chickasha. Work sessions are scheduled prior to the hearing on Monday, September 14 and Tuesday, September 15 from 9:30 a.m. to 3:15 p.m.; and following the hearing on Wednesday, September 16 and on Thursday, September 17 and Friday September 18 from 9:30 a.m. to 3:15 p.m. The work sessions and hearing will be held in the Chickasha Library Conference Room.

Any person who used ground water under the requirements of the existing laws prior to July 1, 1973 is given the opportunity to establish a prior right. Exempt from permit requirements are ground water users who use water solely for domestic purposes or for watering livestock under normal grazing capacity of the land.

Sixth in a Series of Nine

Water Resources Must Be Used For the Equal Benefit of All

Representing agriculture on the Board since 1979 is John B. Jarboe, Tulsa attorney and farmer and rancher. Jarboe claims a lifelong interest in the cattle business, evident in his able management of two family farms—one in Clark County, Kansas; the other a cow-and-calf operation in Craig County, Oklahoma.

"Our Craig County ranch covers land leased by my grandfather from the Cherokee Indians over 100 years ago," he explains.

Consequently, Jarboe has firsthand experience in ranching where water is plentiful and where it is not. "My personal experience in southwest Kansas and the awesome prospect that usable water may one day disappear from the Ogallala area have made me appreciate the importance of thoughtful management of irreplaceable natural resources." Accordingly, Jarboe believes the adoption of the Comprehensive Water Plan is the most important issue that has come before the Board during his term.

As a student of the University of Tulsa College of Law, Jarboe was named outstanding law graduate in 1965. Following graduation, he served as a trial attorney for the U.S. Justice Department in Washington, D.C.

Currently, he is a member of the law firm of Jarboe Thompson, Thornbrugh and Holmes in Tulsa.

Jarboe believes one of the greatest problems facing industrialized northeastern Oklahoma, in addition to the control of pollution, is the efficient delivery of available water to large and small communities. "It is so important that we manage our resources so that there is plenty of water for present and future growth," he said.

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STAFF PHOTO BY GARY GLOVER

John B. Jarboe

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The entire state would benefit, in Jarboe's opinion, from legislation which would consolidate all authority for water quality management in a single agency, instead of fragmenting the responsibility among 10 state agencies.

Education is another of the key steps to public acceptance of our water problems, Jarboe believes. Before any statewide water transfer plan can be implemented, water-rich areas must be assured that redistribution would not impose upon their water rights. He also believes that financial assistance must be made available to eastern Oklahoma communities in order for them to develop systems which will make effective use of the water.

In that same regard, Jarboe believes communities should be informed about the OWRB's loan and grant program for financing development and improvements to community water systems. "These first steps are essential to gain support and acceptance of any water distribution system in the area from which water will be taken.

"I believe the state's most important challenge in this decade is twofold: first, the completion of planning which will allow the use of all water resources for the equal benefit of all Oklahomans; and second, the education of the public so that a water distribution system can be implemented without requiring undue sacrifice or bestowing undue benefit on any segment of the population," he concluded.

19 Students Assist, continued from page 1

"I've always wanted to work in government, and this is excellent on-the-job training in public administration," said Cotton, who is working as an intern in the Planning and Development Division.

Marie Kash, a CSU senior art student employed by the Administration Division has completed illustrations for a brochure and coloring book on water conservation and art slides for inclusion in an OWRB slide show.

Three workers in the Water Quality Division will make the switch later this year from seasonal status to a regular position. Donna Metcalf, a wildlife management major from OSU, Rob Simms, a physical education major from CSU, and Brooks Kirlin, a chemical engineering major from OU, plan to remain with the OWRB.

James R. Barnett, OWRB executive director, encourages hiring seasonal employees as a way to recruit people to careers in water.

"Working a summer or two with us often sparks their interest in a water-related career, and some of them seek us out for employment after graduation," he said.

Students still in school sometimes use the job as a way of earning money to meet expenses in the fall. Barbara Bowers, an education major at CSU who hopes for a career teaching and coaching, is in her second summer of work with the OWRB, employed as a clerk.

No one's effort goes unnoticed.

ACTIVE CONSERVATION STORAGE IN SELECTED OKLAHOMA LAKES AND RESERVOIRS AS OF JULY 20, 1981

| PLANNING REGION LAKE/RESERVOIR | CONSERVATION STORAGE(AF) | PERCENT OF CAPACITY |
|-----------------------------------|-----------------------------|------------------------|
| SOUTHEAST | | |
| Atoka | 87,000 | 70.4 |
| Broken Bow | 892,784 | 97.2 |
| Pine Creek | 73,620 | 94.7 |
| Hugo | 157,600 | 100.0 |
| CENTRAL | | |
| Thunderbird | 82,870 | 78.2 |
| Hefner | 71,850 | 95.3 |
| Overholser | 15,169 | 100.0 |
| Draper | 75,800 | 75.8 |
| SOUTH CENTRAL | | |
| Arbuckle | 61,388 | 98.1 |
| Texoma | 2,586,036 | 98.0 |
| Waurika | 132,640 | 65.0 ¹ |
| SOUTHWEST | | |
| Altus | 28,186 | 21.2 |
| Fort Cobb | 63,716 | 81.2 |
| Foss | 132,756 | 54.4 ² |
| Tom Steed | 68,367 | 76.8 |
| EAST CENTRAL | | |
| Eufaula | 2,314,147 | 99.3 |
| Tenkiller | 617,568 | 96.8 |
| Wister | 27,100 | 100.0 |
| NORTHEAST | | |
| Eucha | 39,784 | 50.0 |
| Grand | 1,443,550 | 96.8 |
| Oologah | 544,240 | 100.0 |
| Hulah | 17,401 | 56.8 |
| Fort Gibson | 365,200 | 100.0 |
| Heyburn | 6,527 | 98.8 |
| Birch | 18,805 | 97.9 |
| Hudson | 191,197 | 95.4 |
| Spavinaw | 27,600 | 92.0 |
| NORTH CENTRAL | | |
| Kaw | 428,600 | 100.0 |
| Keystone | 616,000 | 100.0 |
| NORTHWEST | | |
| Canton | 49,647 | 42.7 |
| Optima | 3,913 | - |
| Fort Supply | 12,995 | 93.4 |
| Great Salt Plains | 31,400 | 100.0 |

STATE TOTALS 11,148,903 85.8³

1. In initial filling stage
2. Temporarily lowered for maintenance
3. Conservation storage for Lake Optima not included in state total.

Data courtesy U.S. Army Corps of Engineers, Bureau of Reclamation, Oklahoma City Water Resources Department, and City of Tulsa Water Superintendent's Office.

"The summer employees make a significant contribution to the agency," Barnett said. "There are a number of manpower gaps that could not be filled except by the summer people."

In the Water Quality Division, David Lessman, OU chemical engineering major, is serving as an engineering aide; David Lollis of Weleetka is working as a water quality specialist; Shon Simpson, biology major from CSU, and Lee Ann Thompson, pre-pharmacy major at OSU, have been collecting and analyzing water samples as part of the Board's Clean Lakes Program; and Hassan Badkoobehi, with a master's degree in industrial engineering, is collecting water samples as part of a toxic

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19 Students Assist, continued from page 3
metals project.

In the Ground Water Division, June Elkins, criminal justice major from CSU, is serving as receptionist; La-quetta Tullis of Oklahoma City is assisting in processing and recording ground water permits; and Chuck Race, geology major from the University of Maine is involved in field inspections and well measuring.

Stream Water Division employed Abdulkarim Nik Manesh, who holds a master's degree from OU in geological engineering, as an engineer; and Lorree Lockhart of Mustang, to assist as a clerk in updating inactive files.

Glen Hammonds returned for his second summer as a legal intern for the Administration Division after graduating from OU law school. Robbie Elliott, an education degree holder from OBU, is employed as a clerk in the Tulsa branch office of the OWRB.

Beverly Graham, CSU public relations major, has been writing for the newsletter as well as assisting in the Planning and Development Division.



Governor's Water Conference Set December 1

The Governor's Second Annual Water Conference will be held at the Lincoln Plaza Inn in Oklahoma City on Tuesday, December 1. Theme of the conference will be "Water—a Time for Action."

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Individuals or organizations can request further information on the conference by writing OWRB offices, P.O. Box 53585, Oklahoma City, 73152 or calling (405) 271-2555.

Three OWRB Division Chiefs Rotated

Effective August 1, chiefs of OWRB's Ground Water, Engineering and Stream Water divisions moved to new posts. James R. Barnett, OWRB executive director, said the strategy is planned to give the division chiefs broader experience in all phases of the Board's operation.

J.A. Wood, Ground Water chief for seven and a half years, is the new chief of the Stream Water Division, replacing Harold Springer, who heads up the Engineering Division under the reorganization. Paul Wilson, 14-year OWRB veteran who has served as chief engineer, assistant director, acting executive director and chief of the Planning, Stream Water and Engineering Divisions, will replace Wood as Ground Water Division chief.

JULY CROP AND WEATHER SUMMARY

By mid-month, rain had fallen in all sections of the state and crop conditions remained good. Wheat harvest was virtually complete in mid-July, with 99 percent of the acreage harvested. The overall quality of the wheat was exceptional. Corn, cotton, sorghum, peanuts and soybeans were all in good to fair condition. Pastures and ranges were generally in good condition, although precipitation is still needed to stimulate growth and replenish low stock ponds in many areas.

Through the middle of the month, rainfall ranged from .06 in north central Oklahoma to 1.19 in the southeast. Temperatures averaged near normal in the south and were above normal in the remainder of the state.

Oklahoma Crop and Livestock Reporting Service

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