



OKLAHOMA

water news

MONTHLY NEWSLETTER OF THE OKLAHOMA
WATER RESOURCES BOARD

Gerald E. Borelli, Chairman

Earl Walker • L.L. Males • John B. Jarboe • Ralph G. McPherson • Gary W. Smith • Ernest R. Tucker • Robert S. Kerr, Jr. • R.G. Johnson

\$25 Million Appropriation Lets State Cost-Share With Feds

The Second Session of Oklahoma's Thirty-Eighth Legislature took a big step toward solving the state's water problems with a July 12 appropriation of \$25 million to a statewide water development fund. The appropriation gives financial life to SB 145, a bill passed in late May setting up the mechanics of the fund.

The appropriation will be made to the fund to be used as collateral for revenue bonds issued by communities, water districts and other qualifying entities for development of water systems. Interest accumulated on the appropriated money may be used for emergency grants to these entities after approval by the Contingency Review Board, composed of the current Governor, Speaker of the House and Senate President Pro Tempore.

"This is something the people of the state have needed for a long time," said OWRB Executive Director James R. Barnett.

A statewide survey by the Planning and Development Division identified more than 350 cities, towns and rural water districts that need financial help from some source to correct water problems.

Adding to Barnett's concern is the expected increase in the number of people and industries moving to the state. Oklahoma Employment Security Commission studies project a net gain of 700,000 people for the state in the next 18 years. The Oklahoma City metropolitan area alone is expected to surge to over one million people by the year 2000, boosted by immigrants from other states looking for jobs in factories, industries and businesses.

With so many cities and towns lacking systems to adequately handle current needs, Barnett said the situation could only worsen without correction over the next several years. The \$25 million first-year appropriation is a step in the right direction, he said.

One little talked about feature of the bill is the provision that allows expenditure from the fund to cover

Continued on page 2



Board Opens Lawton Branch

A new OWRB branch office opened in downtown Lawton in early August should mean savings in time and money for the public, OWRB Assistant Director Mike Melton said in announcing the agency expansion to southwestern Oklahoma.

Citizens with water problems and needs characteristic of the area may now find help close at hand, reducing travel time and expenses often required in a trip to the OWRB offices in Oklahoma City, Melton pointed out.

The office, located at 601 C Avenue, Suite 101, initially will be staffed by an office manager, administrative assistant and field investigator. The staff will be able to assist area residents by processing ground and stream water right applications, assisting in the enforcement of minimum water well construction, well plugging and other well drilling laws, in the investigation and enforcement activities related to pollution complaints and generally working to protect the water in southwestern Oklahoma.

"Eventually, just about everything we can do here in Oklahoma City we'll be able to do at our branch offices. By spreading our technical capabilities and expertise, we can provide better service to the people of the state," Melton said.

\$25 Million, continued from page 1

Oklahoma's portion in cost-shared water projects with the federal government, such as bank stabilization, flood control, weather modification, hydroelectric power, water supply, irrigation and recreation.

In the past, the federal government put up all the money for construction of multipurpose reservoirs, requiring that a non-federal entity repay 100 percent of the water supply costs and 50 percent of the recreation costs over a 50-year period.

In that sense, state and local governments have always had to cost-share. For example, the present state or local share of cost on all Corps of Engineer projects averages 37 percent.

The concept of cost-sharing is undergoing change in the current administration. Although the new policy is still awaiting White House clearance, Assistant Secretary of Interior for Land and Water Resources Garrey Caruthers has indicated that "up-front" financing for projects is one component.

Upfront financing would require state or local governments to have cash on hand to pay a given percentage of the projects' costs.

In January, the Assistant Secretary of the Army for Civil Works instructed the Corps of Engineers to use the following guidelines for upfront financing by state and local sponsors of Corps projects when negotiating for new starts in 1983: for hydropower and municipal and industrial water supply parts of multipurpose projects upfront financing by state and local sponsors is to be 100 percent; recreation, 50 percent; flood protection, 35 percent; commercial navigation, 75 percent with agreements to repay the other 25 percent through long-term contracts; and planning and engineering costs are to be shared 50/50.

Continued on page 4

Four Thousand Permits Allocate Water in 49 Stream Systems

When an individual, municipality or other entity seeks a stream water permit from the Oklahoma Water Resources Board, what determines whether the permit is granted? Already, almost 4,000 such permits have been given, and from July 1981 to June 1982, the OWRB processed 266 new applications, a 30 percent rise from the year before. The complexity of sheer numbers added to the intricacy of studies necessary to fairly apportion the surface waters of the state have created a situation that sometimes requires clarification.

To simplify the task of equitably allocating surface waters, the OWRB Stream Water Division has identified 49 stream systems. Divided into two basins that catch and carry precipitation falling in the state, Oklahoma's rivers and streams are composed of the Arkansas River Basin's 26 stream systems in the north and the Red River Basin's 23 stream systems in the south.

"Stream system" is a term given to areas designated by the OWRB according to drainage area, where the amount of water available can be determined with reasonable accuracy. Considerations such as climatic zone and hydrologic factors sometimes help define a stream system.

For example, stream system 1-10 in Love and Carter Counties is a relatively small one. The system encompasses Walnut Bayou and its tributaries in an area where soil and vegetation conditions are fairly homogeneous. Only six permits are held in the system, one for water supply for the city of Healdton and the rest for irrigation and commercial uses.

To determine if water can be appropriated in a given stream system, OWRB staff members must address three issues.

First of all, the question of whether water is available must be answered. Reviewing continuous records of streamflow registered by approximately 120 gauges maintained statewide by the U.S. Geological Survey, reasonable estimates of the quantity and variability of flow for a given stream can be made. Where gauges are not located in the proper position for circumstances at hand, OWRB personnel undertake a study of the relationship between precipitation and runoff in the area. Combined with a look at other gauge records in the stream system, division staff members can ascertain the amount of water likely to be available.

Increasing population and escalating water demand haven't put all the state's stream water to use, but the strain is being felt. Two stream systems are fully appropriated: stream system 2-5-4 in Texas and Cimarron Counties, consisting of the North Canadian River and its tributaries (excepting the yield of Optima Lake, which has not yet been appropriated), and stream system 1-15-2 in the southwestern Oklahoma counties of Kiowa, Greer, Beckham and Roger Mills, where the North Fork of the

JULY CROP AND WEATHER SUMMARY

Near normal July temperatures and only slight precipitation have spelled good news to state farmers. The seasonable weather allowed virtual completion of wheat harvesting statewide, although some wet, overripe fields in the south central part of the state were abandoned.

Peanuts and cotton, rated in good to fair condition, were the only row crops not rated good all around as clear weather permitted steady row crop activity. Alfalfa and other hay harvesting made excellent progress in weather suited to cutting and baling. Pastures and ranges also continued to make excellent growth due to sunshine and adequate moisture.

Temperatures ranged from two degrees above normal in the northeast to two degrees below normal in the southwest.

Oklahoma Crop and Livestock Reporting Service

Red River flows above Altus dam. No permits in those systems can be granted on a regular, year-round basis.

Secondly, the applicant must assure the OWRB that there is a present and future need for water as it is applied to a beneficial use. Farmers seeking stream water must show how much land they intend to irrigate, while cities and towns must present population estimates in combination with consumption rates. Generally, then, the present and future need for any kind of use should be justified.

Finally, it must be determined if the permitted water use would interfere with domestic or prior appropriative users downstream. Domestic use—the use of water by an individual or family for household purposes, growing lawns, garden or orchards and for farm and domestic animals up to the normal grazing capacity of the land—has preference over any other use. The OWRB must also protect the dependable yield of any lakes or reservoirs downstream in the same system.

When all conditions are met, an applicant may be granted a permit for stream water and given two years to commence construction of works necessary to put the water to beneficial use. It's the "beneficial use" phrase, says J.A. Wood, OWRB Stream Water Division Chief, that best sums up the intent of Oklahoma stream water law.

"The permit requirements which applicants have to meet are safeguards. Stream water is public water, not private, so the laws were constructed to benefit and protect each member of the public," Wood said.



Survey Shows Western Water Levels Down

Results from the annual cooperative OWRB-U.S. Geological Survey program measuring 1100 wells in 77 counties show water level decreases in western Oklahoma and increases in the central and east. Ground Water Division chief Paul Wilson reports.

Comparing 1982 levels to those recorded in 1981, Texas County wells dropped .59 foot, while Cimarron County wells increased 1.06 feet and Beaver County wells increased .05 foot. Southwestern Oklahoma as a whole registered a decline of .68 foot. The largest decline was in southeast Texas County, where 28 wells averaged a drop of 4.14 feet.

Central Oklahoma reported an increase over 1981 of .07 foot, northeast Oklahoma an increase of 3.75 feet and southeastern Oklahoma an increase of .49 foot, Wilson said.

Bureau Names Hinds Regional Director

Oklahoma native Eugene Hinds, a veteran manager with the Bureau of Reclamation, has been appointed Regional Director of the Agency's Southwest Region headquartered in Amarillo, Texas. Hinds, who began his

ACTIVE CONSERVATION STORAGE IN SELECTED OKLAHOMA LAKES AND RESERVOIRS AS OF JULY 22, 1982

PLANNING REGION LAKE/RESERVOIR	CONSERVATION STORAGE (AF)	PERCENT OF CAPACITY
SOUTHEAST		
Atoka	122,300	99.0
Broken Bow	891,821	97.1
Pine Creek	77,700	100.0
Hugo	157,600	100.0
CENTRAL		
Thunderbird	105,925	100.0
Hefner	75,355	100.0
Overholser	15,169	100.0
Draper	78,900	78.9
SOUTH CENTRAL		
Arbuckle	62,571	100.0
Texoma	2,637,700	100.0
Waurika	203,100	100.0
SOUTHWEST		
Altus	123,168	92.6
Fort Cobb	78,053	99.5
Foss	146,661	60.2 ²
Tom Steed	88,971	100.0
EAST CENTRAL		
Eufaula	2,329,700	100.0
Tenkiller	627,500	100.0
Wister	27,100	100.0
NORTHEAST		
Eucha	79,485	99.8
Grand	1,415,201	94.8
Oologah	544,240	100.0
Hulah	30,594	100.0
Fort Gibson	365,200	100.0
Heyburn	6,600	100.0
Birch	19,200	100.0
Hudson	200,300	100.0
Spavinaw	29,991	99.9
NORTH CENTRAL		
Kaw	428,600	100.0
Keystone	616,000	100.0
NORTHWEST		
Canton	97,500	100.0
Optima	6,209	— ¹
Fort Supply	13,900	100.0
Great Salt Plains	31,400	100.0
STATE TOTALS	11,630,005³	97.0³

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

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

career with the Bureau in 1961, holds an agronomy degree from New Mexico State University.

Conservation Coloring Books Reprinted

The popular "Be A Water Watcher" coloring book has been reprinted and is again available to Oklahoma teachers. The book is intended to help instill an early awareness of water by teaching conservation techniques through line drawings with simple bold-type captions.

Mainstream, continued from page 3.

To order the free coloring book in classroom quantities, contact the Oklahoma Department of Education, Curriculum Section, 2500 North Lincoln, Oklahoma City, 73105.

Court Rules Water "Article of Commerce"

The Supreme Court moved in July to strike down state laws imposing bans on interstate water transport, saying that ground water is an "article of commerce" and thus subject to federal regulation under the interstate commerce clause of the Constitution.

"The multistate character of the Ogallala aquifer underlying appellants' tracts of land in Colorado and Nebraska, as well as parts of Texas, New Mexico, Oklahoma and Kansas, confirms the view that there is a significant federal interest in conservation as well as fair allocation of this diminishing resource," the opinion stated.

Well Drillers Symposium Set August 20

Geology for water well drillers, how to complete well logs, the value of logs, OWRB Rules and Regulations as they apply to drillers and a testing period for water well drillers seeking licensure will be on the agenda of the August 20 Oklahoma Water Well Drillers Symposium. Featured speaker will be Wayne Pettyjohn, PhD, head of the Department of Geology at Oklahoma State University.

The Symposium will be held at Oscar Rose Junior College in Midwest City from 9 a.m. to 3 p.m. under the sponsorship of the OWRB, Oklahoma Water Well Drillers Association and National Water Well Drillers Association.

There is no fee for the symposium and more information is available by calling Duane Smith at the Oklahoma Water Resources Board, (405) 271-2555.

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\$25 Million, continued from page 2

With the appropriation to the fund, Barnett said that Oklahoma becomes one of only about 12 to 15 states that have "read the handwriting on the wall" and can afford to participate in cost-sharing programs.

"It's a whole new world out there in financing water development. With the huge federal deficits, I don't think we'll ever see the federal contribution even close to what it was," Barnett said. "But even with the new guidelines, we'll be able to keep the federal programs going."

Some of the money has already been committed. Early next year, the OWRB will begin paying the state's share of water supply costs for Sardis (Clayton) Reservoir in southeastern Oklahoma. The OWRB has also told the Corps of Engineers that they may be interested in negotiating a cost-sharing deal on Parker Reservoir, a lake proposed in east central Oklahoma to provide flood control, recreation and water supply to the local area as well as several central Oklahoma communities.

Barnett said that even taking into account the significant contributions to be made through conservation over the years to come, water development is still a necessity.

"The appropriation was timely. It would have been irresponsible not to have put the state in a position to share in what federal funds will still be available. It's a way of increasing the investment in our future."

Barnett pointed to State Question 558 on the November 2 general election ballot as a way for Oklahomans to put their stamp of approval on the loan and grant provision of the bill. A proposed constitutional amendment would authorize the legislature to allocate state funds for local water projects, and a "yes" from a majority of voters would clear away constitutionality doubts so that the program could forge ahead.

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