

Oklahoma

Water  
News

MONTHLY NEWSLETTER OF THE OKLAHOMA WATER RESOURCES BOARD

## Bigger is Not Always Better. 2100 SCS Lakes Prove It

*Towns shopping for water supplies look to new or modified SCS upstream watershed structures*

As rural water districts sprawl and the populations of small cities and suburban communities spill beyond their water supply, planners continue to seek reliable, affordable water. And while the demand is greater, the options are fewer.

Even if a community could afford to cost-share in a big federal water development project, few promising sites remain. And a community in a hurry for water probably could not wait the 23 years it typically takes to see a major federal reservoir through construction. These are the very reasons planners are looking to water supply storage in the smaller lakes constructed by the Soil Conservation Service of the U.S. Department of Agriculture. These watershed lakes may be the best water "bargain" for smaller communities and rural water districts thirsty for a water supply of two to six million gallons a day.

"It's cheaper and faster to include water supply as a secondary purpose to flood control in an SCS lake," says Don Vandersypen, assistant state conservationist. He points out that the authorizing legislation for the development of watershed lakes, PL 566, limits the size of SCS structures to 25,000

acre-feet. It also requires that their primary purpose be flood control. However, if water supply sponsors come on board early in the planning, 10,000 to 15,000 acre-feet of storage can be added at a cost much more reasonable than building a lake for that single purpose.

Indeed, so affordable are the costs that 26 SCS structures have been com-

pleted with public water supply storage, one is under construction and two more are planned.

The only requirements are that the sponsor—usually a municipality or a water district or two—owns title to the site and has its share of the construction costs in hand.

Another option is modification of an existing site, points out Chuck Thomas, SCS water resources planning coordinator. And to date, the SCS has modified four structures in the state to include water supply.

"However, in most cases, that's not as cost effective as building in the storage," he says. "Still another option may be the reallocation of water in-

*Continued on page 2*



Longmire Lake is a \$10 million Soil Conservation Service project under construction near Pauls Valley in which the city will impound 18,566 acre-feet of water for municipal and recreational use. The city will pay approximately \$7.5 million of the costs; SCS \$2.5 million. Completion of the rolled earth dam is expected in Spring 1989, then riprap will be applied to finish the structure.

*SCS Lakes, continued from page 1*

cluded for recreation or another purpose that's not as pressing to the community as water supply."

On completed structures with water available, the town or water district must work out an agreement with the landowner and SCS for the taking of water for public water supply.

To come on board as a sponsor of such a project, the community would have to make a request to the local conservation district. The request then comes to the SCS.

**Planning, authorization and construction take about 10 years as compared to 23 years for a major reservoir.**

"Our people determine if the proposed site has adequate yield. If it's an existing site, we determine if modification is appropriate, then we estimate the cost of construction or renovation," says Thomas. He explained that the Soil Conservation Service doesn't cost share on construction for water supply as do other federal agencies. "We can provide technical assistance, maps, guidance on acquiring land rights and review of appraisals."

The OWRB Financial Assistance Program may offer just the option some communities and water districts seek in affording their water supply costs, Vandersypen and Thomas suggest.

"So far, we haven't had a community or a water district ask us for help in financing water supply in one of these watershed lakes," says Keith McDonald of the OWRB Planning and Development Division. "If a town makes application, we sure would try to help them develop a water supply or finance distribution or treatment systems."

McDonald encourages any community or water district working with the SCS on such a plan to call the OWRB for information on the financial assistance program or come in for help in preparing a loan application. Information on the OWRB loan and grant pro-

gram is available by calling (405) 271-2555.

With roots in the Dust Bowl, the SCS is no "johnny-come-lately" to watershed development. The agency was created in 1933 to help farmers rejuvenate lands burned and broken by drought. The state's first SCS structure was Cloud Chief Lake completed in 1947 in the Cavalry Creek watershed near Cordell. Today the number of upstream watershed structures built by SCS in Oklahoma stands at 2100. According to Thomas, the SCS completes lakes roughly at the rate of 10 a year.

The SCS and Oklahoma claim the world's first upstream flood prevention project. In 1953, when the prototype was completed, 24 SCS structures secured the watershed of Sandstone Creek from floodwaters. In exchange for SCS construction, farmers applied land treatment measures throughout the 68,770-acre watershed in Roger Mills County.

The recent offerings of water supply storage in SCS structures does not indicate a change in the SCS mission. Far from it. Emphasis will remain on flood control, but SCS will also be responsive to community water supply needs.

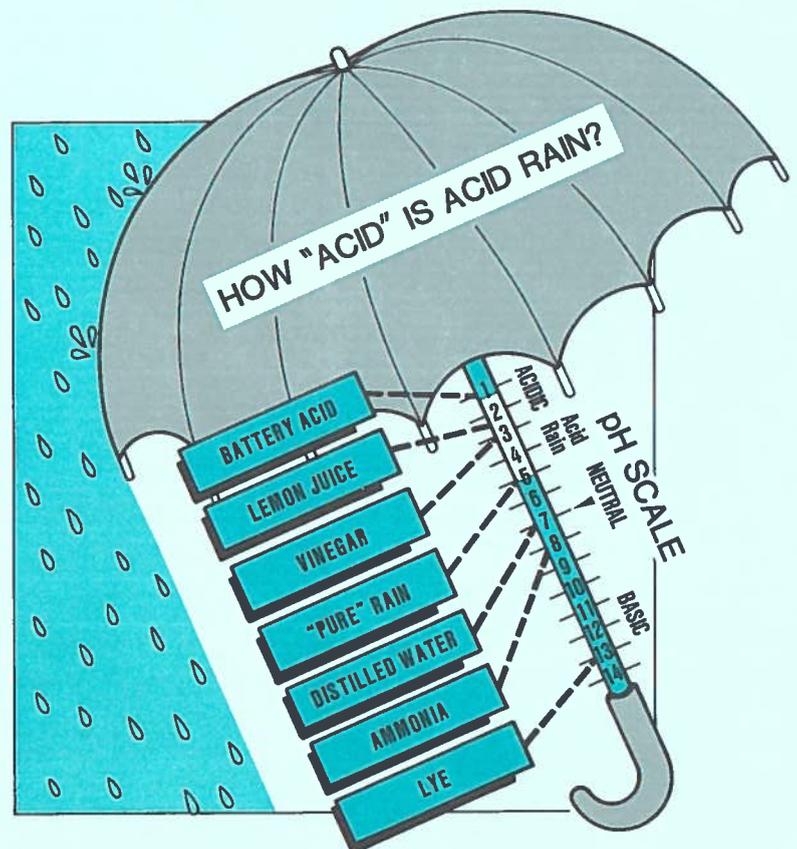
This decade has seen growing populations spill in unexpected directions at a time when big reservoir sites are scarce, cost sharing is prohibitive and major construction simply takes longer than most communities can wait. The time is surely right for local planners to consider pledging their water development money to an affordable SCS structure.



**Dick Seybolt Named to Board**

Gov. Henry Bellmon recently announced the appointment of Richard C. Seybolt of Miami to the Oklahoma Water Resources Board. Seybolt, owner of a recreational vehicle dealership, will represent recreational interests during his seven-year term on the OWRB.

Seybolt was formerly a Miami city commissioner and currently serves on the boards of directors of the Miami Area Economic Development Services and Dwight Presbyterian Mission. He is active in recreational industry trade associations.



"I have a genuine interest in the water resources of Oklahoma and in their proper use and regulation," says Seybolt. "I want all Oklahomans to have enough good, clean water. It is important that all areas have the water supplies that will encourage growth and economic expansion."

Seybolt and his wife, Arlene, have two sons, William and Robert.

### July Compact Meeting on Tap

Members of the Kansas-Oklahoma Arkansas River Compact Commission will meet July 27 in Wichita, Kansas. According to J.A. Wood, OWRB Stream Water Division chief, the meeting will take place at the Ramada Hotel, Broadview Place, 400 West Douglas.

Oklahoma is represented by Commissioners James R. Barnett, OWRB Executive Director; Lew Meibergen, Enid; and Dr. Tracy Norwood, Tahlequah. Paul Thornbrugh, of Tulsa, serves as a federal commissioner and chairman of the Commission which aims to protect the water interests of both Kansas and Oklahoma.

## OWRB Reaches Landmark Stream Study

OWRB stream water researchers reached an important milestone recently—they passed the halfway point in completed studies of the state's 49 stream systems.

Since 1980—when the first hydrologic study of four stream systems in the North Canadian River drainage basin was published—the OWRB has evaluated potential water appropriations in 27 stream systems. The "Hydrologic Investigation of the Illinois River," authored by Board engineer Terry Lyhane, and "Hydrologic Investigation of Mud Creek and Walnut Bayou," by Lawton Branch Manager Robert Fabian, propelled the OWRB 'over the hump' in completed stream studies.

"Hydrologic investigations are vital to the OWRB because they are used to appropriate fair and proper amounts of stream water to prospective users of non-domestic water," said J.A. Wood, OWRB Stream Water Division chief.

According to Wood, before a stream water permit can be issued by the Board, several statutory requirements must be met. Three of these criteria require a hydrologic study of the stream system to accurately assess whether or not a permit should be

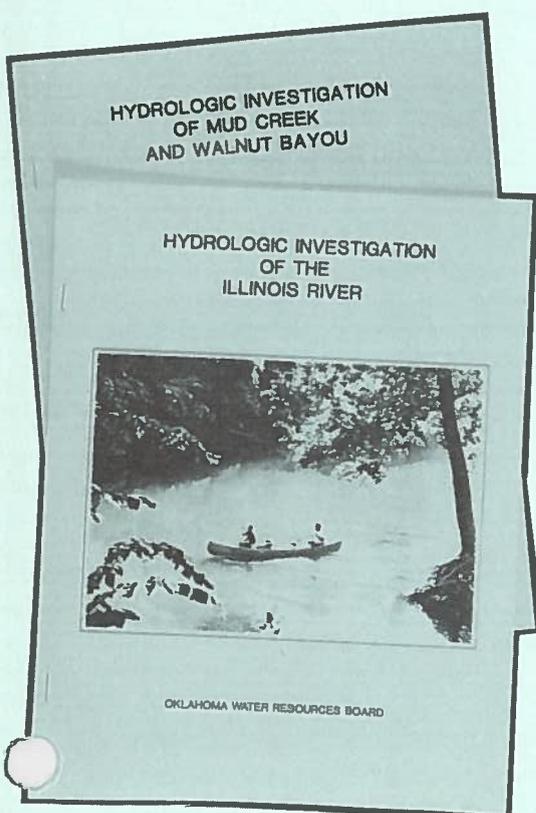
issued. First, a hydrologic study is necessary to determine the availability of water in a stream system. Second, hydrologic investigations aid in evaluating the impact of a proposed water withdrawal on existing users. Finally, for applications requesting that water be transferred outside the originating stream system, stream studies help determine area-of-origin water needs which have priority over needs outside that stream system.

In addition to the 27 completed studies, 15 more are in progress and seven have yet to be initiated. To date, more than 16 million acre feet of available water has been identified; about 14.5 million acre feet of this water has yet to be appropriated to Oklahomans for non-domestic beneficial use.

"We anticipate that within two years all hydrologic studies will be complete. Then we'll know how much water is available for appropriation over the entire state," Wood pointed out.

Stream water permits are not required for domestic or household use, such as watering a few domestic and farm animals or irrigating small gardens. Some beneficial uses of water

*Continued on page 4*



The topography of eastern Oklahoma's Illinois River Basin is distinguished by densely forested mountains and sheer rock cliffs. The Illinois, along with its tributaries (Barren Fork and Flint Creeks), are three of Oklahoma's six scenic rivers recognized by the State Legislature for their aesthetic and recreational qualities.

Continued from page 3

include irrigation, public water supply and oil and gas production.

The OWRB often receives help from the Corps of Engineers, Bureau of Reclamation, U.S. Geological Survey, Soil Conservation Service, National

Weather Service and other state and federal entities in gathering hydrologic data on state streams. Rainfall, runoff, evaporation and stream flow variations are all used to determine water availability in Oklahoma stream systems.

Copies of all completed hydrologic reports are available at the OWRB. For further information or to order the publications, call OWRB Librarian Susan Lutz at (405) 271-2553, or write to P.O. Box 53585, Oklahoma City, 73152.

**ACTIVE CONSERVATION STORAGE IN SELECTED OKLAHOMA LAKES AND RESERVOIRS  
AS OF MAY 21, 1988**

PLANNING REGION LAKE/RESERVOIR	CONSERVATION STORAGE (AF)	PERCENT OF CAPACITY	PLANNING REGION LAKE/RESERVOIR	CONSERVATION STORAGE (AF)	PERCENT OF CAPACITY
SOUTHEAST			Wister	16,554	61.1
Atoka	118,824	96.2	Sardis	300,492	99.3
Broken Bow	891,949	97.2	NORTHEAST		
Pine Creek	75,567	97.3	Eucha	79,567	100.0
Hugo	155,170	98.5	Grand	1,385,840	92.9
McGee Creek	108,224	98.6	Oologah	491,084	90.2
CENTRAL			Hulah	30,594	100.0
Thunderbird	105,925	100.0	Fort Gibson	363,330	99.5
Hefner	75,355	100.0	Heyburn	6,600	100.0
Overholser	8,120	50.9	Birch	19,087	99.4
Draper	78,673	78.7	Hudson	200,300	100.0
Arcadia	27,162	99.2	Spavinaw	30,000	100.0
SOUTH CENTRAL			Copan	41,332	95.2
Arbuckle	62,502	99.9	Skiatook	318,020	99.6
Texoma	2,493,600	94.5	NORTH CENTRAL		
Waurika	203,100	100.0	Kaw	428,600	100.0
SOUTHWEST			Keystone	616,000	100.0
Altus	132,886	100.0	NORTHWEST		
Fort Cobb	78,423	100.0	Canton	97,500	100.0
Foss	171,233	70.2 <sup>2</sup>	Optima	3,000	1 <sup>1</sup>
Tom Steed	86,052	96.7	Fort Supply	13,756	99.0
EAST CENTRAL			Great Salt Plains	31,400	100.0
Eufaula	2,187,888	93.9			
Tenkiller	598,041	95.3			
			<b>STATE TOTALS</b>	<b>12,128,750</b>	<b>95.0<sup>3</sup></b>

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.

This monthly newsletter, printed by the Central Printing Division of the Office of Public Affairs, Oklahoma City, Oklahoma, is published by the Oklahoma Water Resources Board as authorized by James R. Barnett, executive director. Ten thousand copies are printed and distributed monthly at an approximate cost of 20 cents each.

MARY E. WHITLOW, Editor

BRIAN VANCE, Writer

BARRY FOGERTY, Photographer

MARIE WELTZHEIMER, Artist

**OKLAHOMA WATER NEWS**

Monthly Newsletter of the  
Oklahoma Water Resources Board  
1000 N.E. Tenth, P.O. Box 53585  
Oklahoma City, Okla. 73152

Gerald E. Borelli, Chairman

Earl Walker

Ervin Mitchell

Bill Secrest

Ralph G. McPherson

Dick Seybolt

Ernest R. Tucker

Robert S. Kerr, Jr.

R. G. Johnson

