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INTRODUCTION

Recent milestones for the Kansas Water Marketing Program and the Kansas Water Assurance Program included:

- 2001 marked the 25th anniversary of the first contract with a water user approved under the Water Marketing Program
- 2001 marked the 15th anniversary of the Memorandum of Understanding between the State of Kansas and the U.S. Department of the Army which was the impetus for the creation of the Water Assurance Program
- In 2002, a contract with the U.S. Corps of Engineers was signed for water supply storage in Kanopolis Lake

These two programs are operated in concert with the Multipurpose Small Lakes Program, by the Kansas Water Office to further the agency's mission:

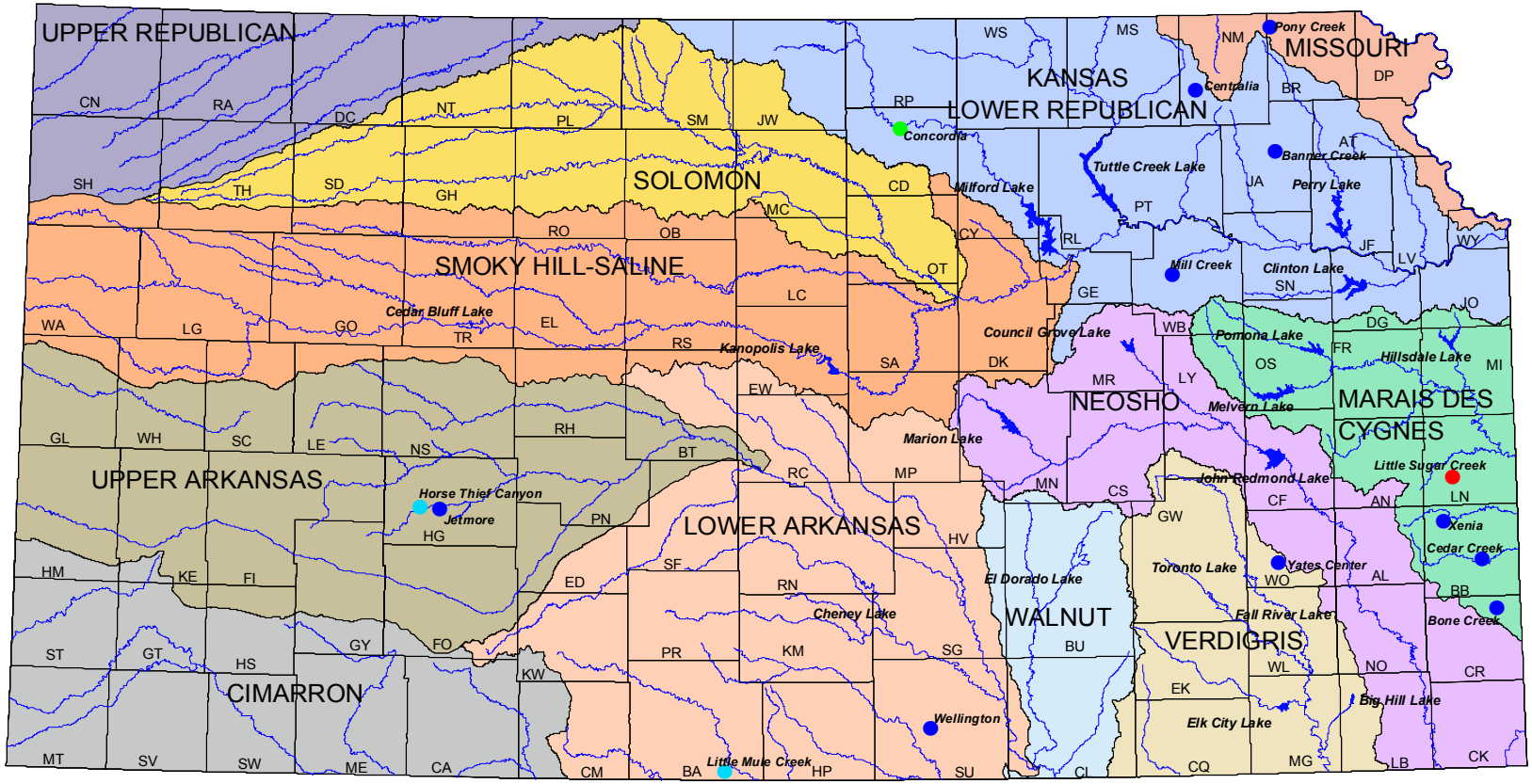
> To achieve pro-active solutions for water resource issues of the state and to ensure an adequate supply of good quality water to meet the needs of the people and the environment of Kansas.

This is accomplished through the development, management, and maintenance of the public water supply programs of the Kansas Water Office. In addition, these programs further the purpose of maintaining, preserving, and protecting the state's sovereignty over all the waters within the state.

The water supplies made available under these programs provide water directly or indirectly to approximately 110 communities, 108 rural water districts, and five public wholesale water supply districts, as well as commercial and industrial water users. These water supplies serve a part or all of 30 Kansas counties and a population estimated at 1,180,658 people.

The Kansas Water Office currently has water supply storage space in thirteen federal reservoirs in the eastern one-half of the State of Kansas. Ten of these lakes (Big Hill, Clinton, Council Grove, Elk City, Hillsdale, John Redmond, Kanopolis, Marion, Melvern, and Milford) have storage space which is being used for Water Marketing purposes. Eight lakes (Council Grove, John Redmond, Marion, Melvern, Milford, Perry, Pomona, and Tuttle Creek) have storage which has been purchased for the Water Assurance Program. Currently, there are ten constructed multipurpose small lakes in the Program with one scheduled to be built. The Kansas Water Office has control of part or all of the public water supply storage in seven of those lakes. This document describes the current status of these three programs.

Kansas Water Marketing, Water Assurance District and Multipurpose Small Lakes Program Lakes



Multipurpose Small Lakes Program Projects

● Construction ● Existing ● Initial Talks ● Proposed

Water Marketing and Water Assurance District Lakes

STATUS OF THE WATER MARKETING PROGRAM

Purpose

The purpose of the water marketing program is to develop adequate water supply storage to meet, as nearly as practicable, present and anticipated municipal and industrial water needs through the purchase of water supply storage in federal reservoirs, which is then sold to water supply users, in the best interests of the state.

Program Background

Although 2001 was the 25th anniversary of the first Water Marketing Program contract with a water supply customer, the study, planning, and establishment of the program spanned nearly 20 years prior to the signing of that contract.

The effects of several significant events converged during the 1950s which led to the creation of the State Water Marketing Program:

- The floods of 1951, followed by the drought of 1952 through 1957, made Kansans aware of the need to combine planning for future water supply needs with planning for controlling floods.

- The Kansas Water Resources Board (now the Kansas Water Office) was created in 1955 with responsibility for water resources planning, water policy development, and coordination of water-related activities at all levels of government.

- In 1958, the Federal Water Supply Act was passed with provisions which would allow a non-federal entity to add water supply storage space to planned flood control structures. The non-federal entity would be required to repay the costs of the add-on water supply storage space.

- Also in 1958, Kansas voters approved a constitutional amendment which would allow the state to financially participate in the development of flood control works or works for the conservation or development of the state's water resources.

The newly created Kansas Water Resources Board began work on comprehensive studies of the state's water resources. The 1961 Legislature approved the general concepts embodied in a report presented by the agency with the passage of a Concurrent Resolution (1961 H.C.R. 5) which allowed the state to provide assurances to the federal government for repayment of costs for add-on water supply storage in five major federal reservoirs: Elk City, Council Grove, John Redmond, Milford, and Perry lakes. The resolution further required the Legislative Council to conduct a comprehensive study to determine the state's role in financing the costs of add-on conservation water supply storage. The Council's report, "A Suggested Water Development Program for Kansas," was prepared with the assistance of the Kansas Water Resources Board and submitted to the 1963 Legislature. The 1963 Legislature enacted the State Water Plan Act (K.S.A. 82a-901 *et seq.*), which made provisions for state financial participation in water projects

and directed the Kansas Water Resources Board to submit a comprehensive State Water Plan to the 1965 Legislature.

As a result of the Board's report to the 1965 Legislature, the first phase of the State Water Plan was enacted in 1965 (K.S.A. 82a-927 *et seq*.). The Board was given authority to provide assurances to the federal government regarding the need for future municipal and industrial water supply storage in any proposed or authorized water project in Kansas (K.S.A. 82a-933). In addition, the agency was given authority to enter into agreements with the federal government for repayment of the costs for such water supply, subject to legislative approval through appropriations (K.S.A. 82a-934). These authorities were transferred to the Director of the Kansas Water Office, with the approval of the Kansas Water Authority, in 1981 when the Water Resources Board was abolished.

In carrying out the authorities and directives embodied in the laws passed in 1963 and 1965, the Water Resources Board provided assurances to the federal government for repayment of costs of water supply storage and signed agreements for water supply storage space in nine federal lakes in the eastern one-third of the state. (See details of contracts beginning on page 13.) In addition, the Board carried out detailed studies of pricing and revenues relating to the sale of water from state controlled storage in those lakes.

The 1974 Legislature enacted the State Water Plan Storage Act (K.S.A. 82a-1301 *et seq*.) establishing the basic framework of the current Water Marketing Program. Although the Act has been amended several times since 1974, certain underlying policies have been retained:

- The state will require payment of water storage costs by the entities using and benefiting from the program equal to the total state's costs of providing the water supply.

- The State of Kansas should retain material and fiscal control of the waters stored in the reservoirs covered by agreements with the federal government.

- The state will only sell raw (untreated) water to users at the reservoir. This means the state is not responsible for the delivery or treatment of water.

- The entire system of reservoirs is to be treated as one large reservoir pool for pricing purposes, so that no particular user or region of the state receives preferential treatment in the pricing of water.

Amendments to the law over the years have included, but are not limited to:

- Adjustment in the 50% minimum annual payment requirement such that the purchaser may negotiate a graduated minimum "take or pay" schedule.

- Provisions that a contract may be negotiated with a user for water supply not yet owned or controlled by the state (with payment deferred until the state does own or control such storage).

- Establishment of a rate setting formula with a 2.5 cents per thousand gallons conservation storage water supply development charge and a surcharge on the remainder of the contracted quantity after calculation of the minimum annual charge.

- Requirement that purchasers have a state approved water conservation plan prior to approval of a water purchase contract.

By 1974, a program structure for Water Marketing was in place for the Kansas Water Resources Board to recoup the state's costs for the add-on water supply storage space by contracting with municipal and industrial water users to provide them with water supply from state-controlled storage. With the signing and approval of the first water supply contract with a water user in 1976, the State Water Marketing Program became operational. Thus, a state-federal-local partnership was formed to help the state meet the future water supply needs of its citizens.

Program Expenditures

Capital Costs:

Under the Federal Water Supply Act of 1958, the State of Kansas could repay the costs of the add-on water supply storage in large federal lakes over 50 years at interest rates ranging from 2% to 4%. A total of 662,510 acre-feet of water supply storage space is included in the eleven lakes used to operate the State Water Marketing Program (See Table 1). This includes the water supply storage space in Kanopolis Reservoir which was acquired in 2002. The estimated yield capability of this storage space is 246.80 million gallons per day (mgd) during periods of prolonged drought (such as that experienced from 1952 to 1957).

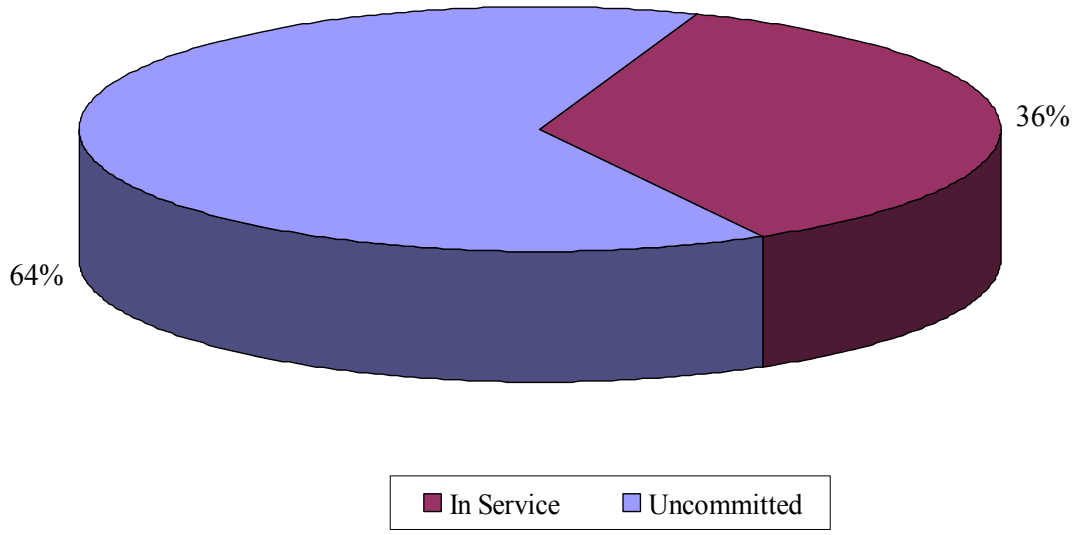
TABLE 1

Water Marketing Program Storage and Yield
In Million Gallons Per Day (MGD)

Reservoir	Acre-Feet Contracted	Estimated Contracted Yield (MGD)	Acre-Feet In Service	Estimated In-Service Yield (MGD)	Amount Under Contract (MGD)
Big Hill	25,700	7.11	9,200	2.55	1.25
Clinton	89,200	17.5	53,500	10.50	17.50
Council Grove	18,200	3.76	18,200	3.76	3.41
Elk City	20,180	12.54	20,180	12.54	2.49
Hillsdale	53,000	15.20	7,500	2.15	6.72
John Redmond	27,450	19.90	27,450	19.90	6.60
Kanopolis	12,500	12.88	12,500	12.88	1.10
Marion	31,930	4.26	31,930	4.26	1.87
Melvern	14,350	2.07	14,350	2.07	1.95
Milford	245,000	90.65	46,650	17.26	20.00
Perry	125,000	60.93	0	0.00	0.00
TOTALS	662,510	246.80	241,460	87.87	62.89

By exercising options available to the state under the contracts with the U.S. Corps of Engineers, the state has deferred payment on approximately 421,050 acre-feet of water supply storage, or 64% of the total available under contract with the federal government, as seen in Figure 1. That portion of the storage space which has been called into service and upon which the state must make or has made payment to the Corps totals 241,460 acre-feet, with an estimated yield of

Figure 1
Storage Under Contract with the Corps
Total = 662,510 Acre-Feet



87.87 mgd.

Payments to the Corps for in-service water supply storage space began with the first of 50 annual capital cost payments (principal and interest payment for construction costs) on John Redmond Lake storage in 1974 of $228,639. Capital cost payments increased over time as new lakes were added to the program. By 1986, the state was making payments to the federal government on nine lakes totaling $1,485,105. A policy decision in 1986 to defer payments on future use storage in Big Hill, Clinton, Hillsdale, Milford, and Perry lakes reduced the annual capital cost repayment obligation by approximately $800,000 per year beginning in 1987. Capital cost payments totaled $785,033 in 2002; however, with the addition of Kanopolis Lake in 2002, the capital cost payments will increase to $1,019,425 in 2003.

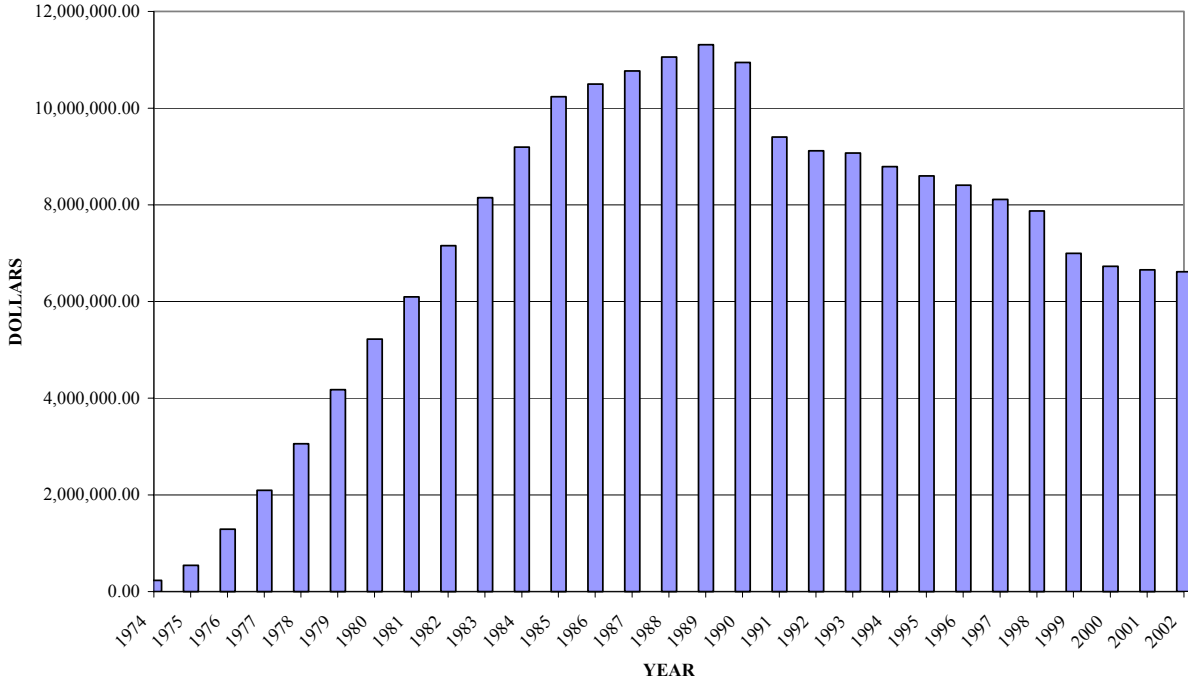
General Fund Shortfall

Cumulative capital cost payments to the Corps reached $26,517,435 in calendar year (CY) 2001. The cumulative revenue for repayment of the capital costs reached $19,859,730 in CY 2001[1], or approximately 75% of the cumulative repayment to the Corps. The $6,657,705 difference

[1] At the time of publication of this report, all receipts for calendar year 2002 have not been billed or received.

between cumulative payments and revenue constitutes the amount of money advanced from the State General Fund during the early years of the program which remains to be paid back. During those early years there were few contracts with purchasers in place to produce adequate revenue. This difference is referred to as the General Fund Shortfall and as more contracts with purchasers have been signed over time and revenue generated, the shortfall has dropped from a high in 1989 of approximately $11,311,480 to the CY 2001 level of $6,657,705. Figure 2 depicts the level of cumulative dollars which represent the State General Fund Shortfall.

Figure 2
CUMULATIVE SHORTFALL



Operation and Maintenance

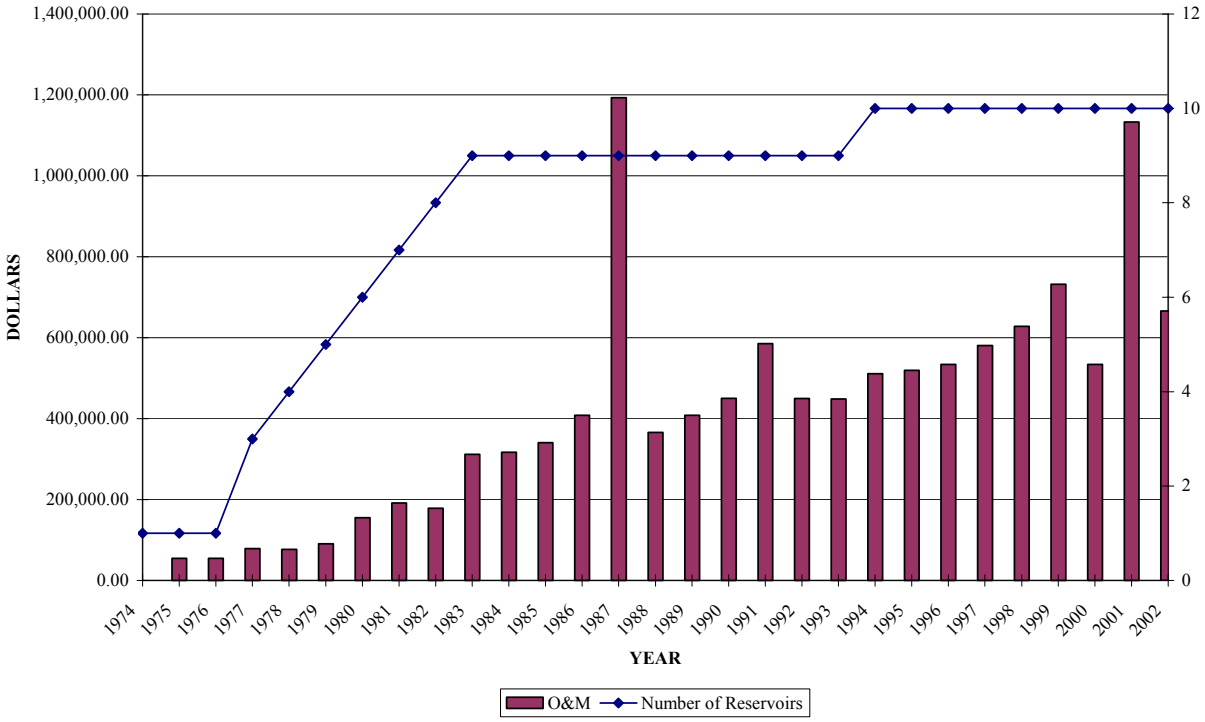
Through contracts with the federal government, the state has agreed to pay the annual operation, maintenance, and repair costs incurred by the Corps for that portion of the storage space which the state has called into service. These costs vary from year to year and from lake to lake. As the lakes age and federal dam safety regulations become more stringent, these costs can be expected to rise. In addition, events such as the floods of 1993 will require unusual spikes in the operation and maintenance costs. It should be noted here that in the case of the 1993 floods, the state did qualify for federal disaster assistance through the Federal Emergency Management Agency (FEMA) for monies to offset some of the added repair costs.

In 1987, a major increase in operation and maintenance costs for John Redmond Lake caused a marked increase in the rate charged to customers. In response to concerns that this type of problem might recur, the Kansas Water Authority took action to create an Operation and Maintenance Set-Aside Account. Up to 1 cent per 1,000 gallons of revenue from purchasers is set aside in this account to offset unusual operation and maintenance charges, in an attempt to

prevent large increases in the rate charge. The balance in this account at the end of fiscal year (FY) 2001 was $72.18.

Figure 3 depicts the historic operation and maintenance costs associated with in-service storage.

Figure 3
OPERATION AND MAINTENANCE COSTS



Program Revenue

Purchasers of water supply under the Water Marketing Program are charged at a price per 1,000 gallons sufficient to repay the state for costs associated with the program. From 1976 to 1982, the rate was calculated based upon two components. The first component represented the total estimated costs over time to make all payments to the Corps for capital costs, operation and maintenance, and interest at 5% on the General Fund Shortfall. The second component was a one-half cent charge for administration and enforcement of the program.

Since 1983, the rate charged to purchasers has been based upon five components set out by statute (K.S.A. 82a-1308a).

Component 1: The capital cost component is based upon the total principal and interest payments to be made over the entire repayment period (up to 50 years) under contracts with the federal government. These costs are divided by the estimated volume of water (in 1,000 gallons) to be paid for by purchasers during the same time period.

Component 2: The operation and maintenance rate component is based upon the previous year's actual operation and maintenance costs divided by the previous year's actual volume of water paid for by purchasers.

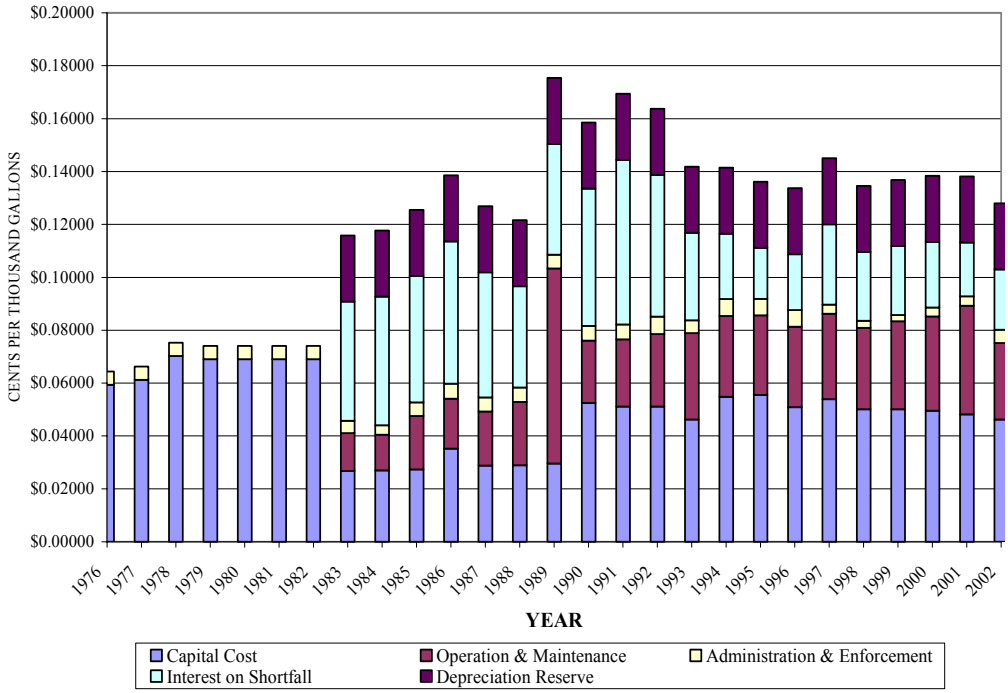
Component 3: Likewise, the administration and enforcement costs are the actual costs to the state to operate and administer the program divided by the volume of water paid for by purchasers.

Component 4: Interest on the State General Fund Shortfall is discussed in more detail earlier in this report. This component is calculated by determining the total shortfall for the year, multiplying the shortfall by the average interest rate charged by the State Pooled Money Investment Board (PMIB), and dividing the result by the volume of water paid for by purchasers.

Component 5: The depreciation reserve rate component is 2.5 cents per 1,000 gallons and is set by statute.

Figure 4 shows a comparison of the historic annual rate components under the Water Marketing Program.

Figure 4
WATER MARKETING PROGRAM
RATE COMPONENTS



Each year the rate is recalculated based upon actual expenses incurred in operation of the program using a formula set out in the law and rules and regulations governing the program. The first 14 contracts negotiated with purchasers prior to 1983 have a rate charge which can be no higher than 10 cents per 1,000 gallons. By volume, the first 14 contracts with fixed (or capped) rates constitute 71% of the total water under contract with purchasers. The first of these

contracts is to expire in 2016. Until that time, the rate for those purchasers will remain at 10 cents per 1,000 gallons. The remaining 21 contracts, negotiated after 1982, have rates that are adjusted annually.

Conservation Storage Water Supply Fund

1983 amendments to the State Water Plan Storage Act (K.S.A. 82a-1301 *et seq*.) created the State Conservation Storage Water Supply Fund (K.S.A. 82a-1315b), which serves as a savings account to be used for acquisition and development of conservation water supply storage in lakes deemed necessary to implement the State Water Plan. All Water Marketing Program revenue which is not credited to meet each year's calculated capital cost, operation and maintenance, administration and enforcement, and operation and maintenance accrual fund expense is deposited in this "Development" Fund. Since the creation of this Fund, it has been used to fund:

Multipurpose Small Lakes Projects[2]	$2,105,674
A portion of annual payments to the Corps for capital costs in 1990 and 1991	$709,498
Initial payment for Kanopolis	$642,272

The balance in this account at the end of FY 2001 was $79,915.

Program Update

Water supply contracts under the Water Marketing Program have, from the program's inception in 1974, been based upon the state providing water supply service to purchasers from water that is held in state-owned storage space. The quantity of water obligated to purchasers is based upon an estimate of the quantity of water which can be expected to be withdrawn from storage with a 2% chance of shortage during a drought having a statistical chance of occurrence once every 50 years. This is referred to as the 2% chance yield. Yield which is based on several factors varies from lake to lake as can be noted in Table 1 shown earlier in this document and the information provided on each lake. A few of the factors affecting reservoir yield are the rate of sedimentation in each lake, the lake surface area and elevation, the size of the watershed and the number of senior water rights within the watershed which have a direct influence on the inflow into the lake, and evaporation. These are factors that occur around the immediate area of the lake. Factors such as water quality releases and the water use requirements downstream also influence the yield of a reservoir.

The first yield analyses on water supply storage space under contract with the federal government were conducted in the mid-1970s and had not been updated or recalculated since that time. During calendar year 1996, the rules and regulations relating to the calculation of the 2% chance yield of reservoirs were revised. The major change in the rules and regulations pertains to the methodology to be used to estimate the 2% chance yield. The drought of 1952 through 1957 is now considered to be the continuous drought of record, or the 50-year drought (K.A.R. 98-5-1(f)). In addition, K.A.R. 98-5-8 sets forth the procedures to use the drought of record to calculate the 2% yield.

[2] See further explanation of this program later in this report.

Under these new rules and regulations, the Kansas Water Office proceeded with the recalculation of the yields for the eleven lakes in the Water Marketing Program. The first recalculation was completed for Milford Lake in 1996. Due in large part to depleted inflows into the water supply storage space at Milford, the lake's 2% chance yield has been recalculated to be 111 million gallons per day (MGD), down 17.62 MGD from the earlier estimate of 128.62 MGD.

John Redmond Lake was the second lake which underwent a recalculation of yield. This lake has experienced sedimentation deposition that differs significantly from that which was expected during the project design. Relative to design expectations, the flood control pool has excess capacity and the conservation pool has diminished capacity. The diminished storage capacity of the conservation pool can be recovered, but results in a lower yield until corrective measures are taken. John Redmond Lake's 2% chance yield has been recalculated to be 19.9 MGD for the original water supply pool purchased from the Corps to serve the Water Marketing Program. The yield for this storage had formerly been calculated to be 26.5 MGD. That portion of the water supply pool which was recently purchased under the 1985 MOU with the Corps is calculated to yield 7.3 MGD. The Kansas Water Office has requested that the Tulsa District Corps of Engineers conduct a study to determine the feasibility of a pool raise to restore storage lost to sedimentation.

Additional yield recalculations on the remaining nine lakes were completed in 2002.

Methodology to Determine Water Demands

During CY 1995 and 1996, the Kansas Water Office developed a methodology to be used in projecting population and water demands for every city, rural water district, and county in Kansas. The projections have been developed for the years 2000, 2010, 2020, 2030, and 2040. These projections are needed to provide basic information for water marketing contracts, multipurpose small lakes analyses, regional public water supply planning, basin level planning and other *Kansas Water Plan* programs. This comprehensive development of population and water demand projections ensures that the projected water needs of each water user will be derived in a fair and uniform manner.

The population projections were prepared by developing a linear regression equation for each city, county, and water district. The projections were based on U.S. Census population data and/or data on the number of active residential water service connections. Considerable local input was obtained and used during the development of population estimates and projections to determine the most accurate growth rate for water utilities during the four or five years prior to the development of the projections. In general, each water utilities' average gallons per capita per day (gpcd) from 1991 to 1995 was used to make water demand projections.

Kanopolis Reservoir

The Kanopolis Dam is located on the Smoky Hill River in Ellsworth County, Kansas. The lake is approximately 19 miles west and 16 miles south of Salina, Kansas. The dam was constructed primarily for flood control with releases for water supply and alleviation of stream pollution.

Plans for construction of a dam on the Smoky Hill River were under way in 1938, but actual construction did not occur until 1940 and continued until 1942. World War II interrupted the construction of this project, but it was resumed in 1946 with completion in 1948. Modifications were then made in 1968.

In 1977, the Kansas Water Resources Board, predecessor to the Kansas Water Office, began making inquiries about the purchase of storage space in Kanopolis Reservoir. At that time there was no water supply storage for municipal and industrial purposes. A feasibility report called for the inclusion of sufficient water supply storage to provide a yield of 25,000 acre-feet per year sustained yield for municipal and industrial purposes. Until a reallocation study could be completed, the Corps of Engineers was willing to sell water to the State of Kansas under a surplus water agreement. That was not the long-term solution the State was looking for at the time. If the Kansas Water Office wanted water supply from Kanopolis Lake, it would have to pay dearly for it – 1980 updated costs. The Kansas Water Office could not justify the cost and the increase in the water rate for its customers.

When the Corps of Engineers offered a Memorandum of Understanding in 1985 that would allow the State of Kansas to purchase reallocated storage in other reservoirs at original construction costs, Kanopolis Lake was not included. A reallocation report was needed because no water supply storage was expressly allocated for municipal and industrial use. However, the U.S. Congress made provisions in the Water Resources Development Act of 1999 to provide special pricing for the purchase of water supply storage in Kanopolis by the State of Kansas.

The year 2002 marked the culmination of much discussion and negotiation by many people in the state and their counterparts in federal government when the contract to purchase water supply storage space from Kanopolis was signed.

Negotiations

Public Wholesale Water Supply District No. 23, a newly formed public water supplier in the Neosho Basin, has requested a water supply from Big Hill Lake. A standard contract has been submitted to the district, and a date has been set for the first negotiation session.

Public Wholesale Water Supply District No. 15 located in the Hays and Russell area has requested a water supply from Kanopolis Lake. A standard contract has been submitted to the district, but they have not yet met with the Kansas Water Office for the first negotiation session.

The City of Louisburg has submitted an application for water supply from Hillsdale Lake and requested to begin negotiations. The request will be taken to the next Kansas Water Authority meeting for approval.

Douglas County Rural Water District No. 3 has requested an additional water supply from Clinton Lake. A standard contract has been submitted and negotiation sessions have occurred. However, additional negotiations with other contract holders from Clinton Lake will be required before a contract can be signed.

APPLICATIONS AND CONTRACTS

Current Purchaser Contracts

A list of applications, contracts, quantities purchased, and the balance of yield available are on the following pages. Also included is a map showing each lake and area served by current contracts.

Pearson-Skubitz
Big Hill Lake
Big Hill Creek, Kansas

Federal Authorization: Flood Control Act approved October 23, 1962, (House Document HD 572, 87th Congress, 2nd Session) and Water Supply Act of 1958 (Title III, P.L. 85-500), as amended.

Construction and Filling: Construction of project facilities was initiated in December 1973. Dam construction began in FY 1978. Gates were closed to begin impoundment of water on March 31, 1981.

Assurances: An assurance resolution for inclusion of immediate use water supply (1.1 million gallons per day) and future use water supply (3.4 million gallons per day) was adopted May 4, 1966, by the City of Coffeyville. On June 24, 1967, and September 11, 1970, the Kansas Water Resources Board adopted assurance resolutions for repayment of water supply storage costs.

Water Supply Contract (DACW45-74-C-0021): On June 18, 1973, the Kansas Water Resources Board, acting on behalf of the State, signed a contract for 25,700 acre-feet of storage space in Big Hill Lake. On October 12, 1974, the Secretary of the Army approved the contract. The contract called for the immediate use of 9,200 acre-feet and future use of 16,500 acre-feet of storage.

Lake Storage

Feature	Elevation (msl)	Usable Storage* (Ac-Ft.)	2% Chance Drought Yield (mgd)
Flood Control	858.0 – 867.5	12,700	
Water Supply	814.0 – 858.0	25,700	8.39
Total		38,400	

*Storage remaining after 100 years of sedimentation

Water Supply Costs: An agreement prior to construction was required because 46.9 percent of the project's initial costs were allocated to water supply, and this exceeded the 30 percent allowed for future use water storage under the federal Water Supply Act of 1958. The State may call for the future use storage in two (2) increments. Payment on this portion of the storage space is deferred until it is called into service by the State of Kansas; however, interest accrues on the initial costs of this storage until it is called into service.

Item	Immediate Use	Future Use
Water Supply Storage, Acre Feet	9,200	16,500
First Costs	$2,511,758	$4,465,256
Repayment Interest Rate	4.012%	4.012%
Annual Repayment	$119,390	
Present Value (payment deferred)		$6,882,786 Interest
Free Period	None	April 1981 to March 1991
		2 (none used)

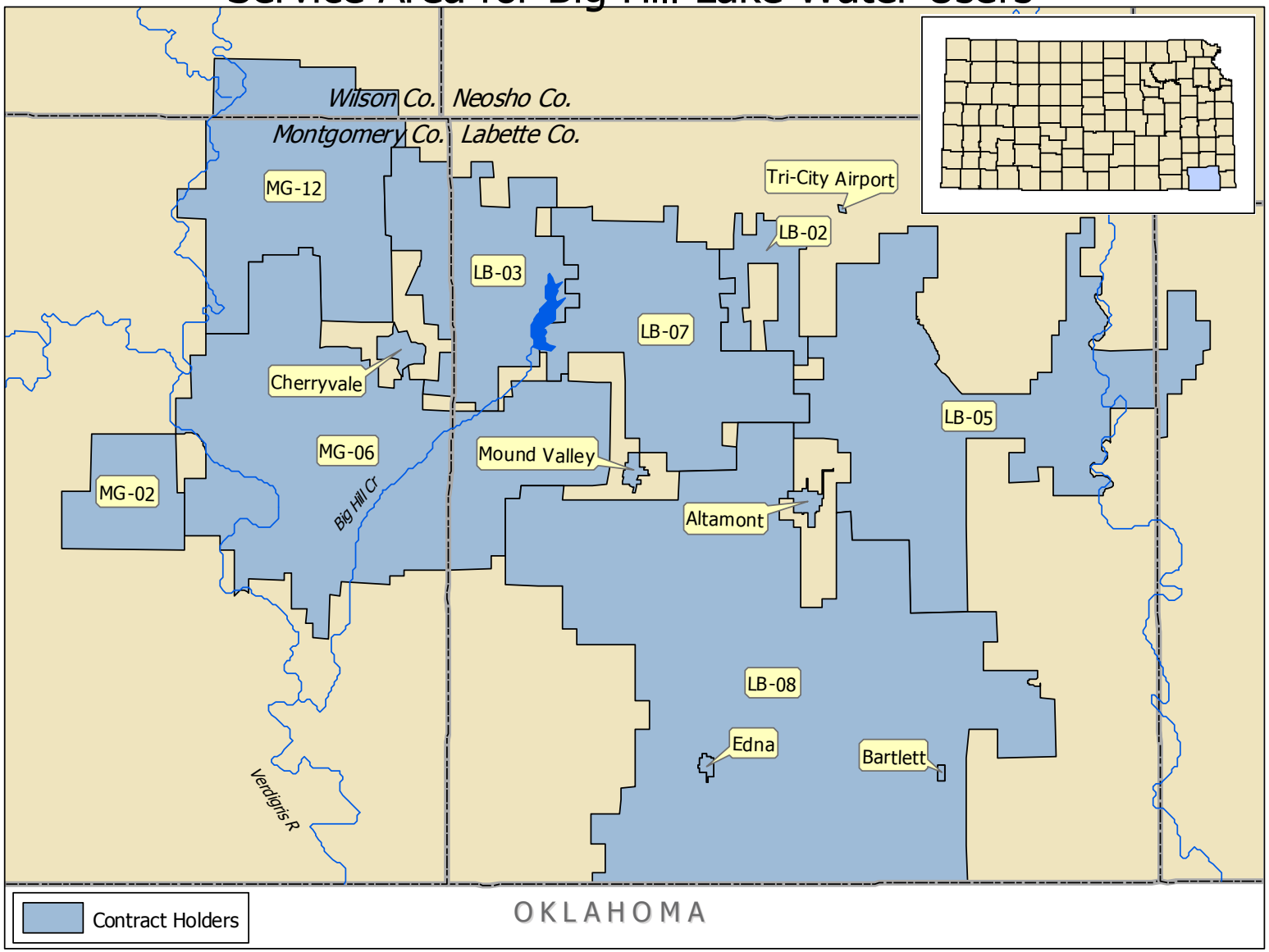
TABLE 2

BIG HILL RESERVOIR						
App. No.	**Applicant**	**Date Filed**	**Application Expires**	**Quantity Requested MGY**	**Contract Number**	**Quantity Contracted MGY**
145	PWWSD #4	9/25/1997			98-1	454.700
	Altamont					
	Bartlett					
	Cherryvale					
	Edna					
	Labette RWD #8					
	Mound Valley					
	Labette RWD #2, 3, 5, & 7					
	Montgomery RWD #2, 6, & 12					
	Tri-City Airport					
168	PWWSD #23	6/20/2002	6/20/2012	991.200		
	Altoona					
	Wilson RWD #10					
	Buffalo					
	Wilson RWD #11					
	Fredonia					
	Wilson RWD #1, 2, 5, 7, 11 & 13					
	Neodesha					
	Montgomery RWD #12					
	Wilson RWD #3, 4, 6, 8 & 12					
	Thayer					
	Neosho RWD #1 & 5					
	Montgomery RWD #9					
	Neosho RWD #4					
	Neosho RWD #3					
	Galesburg					
	Neosho RWD #6, 7, 9, & 12					
	Woodson RWD #1					
	SUBTOTAL			991.200		454.700

Quantity Available	3,062.000
Less Quantity Under Contract	(454.700)
Uncommitted	2,607.300
Less Quantity in Applications	(991.200)
BALANCE	1,616.100

MGY: Million Gallons per Year

Service Area for Big Hill Lake Water Users



Clinton Lake
Wakarusa River, Kansas

Federal Authorization: Flood Control Act approved October 23, 1962, (House Document HD 572, 87th Congress, 2nd Session) and Water Supply Act of 1958 (Title III, P.L. 83-500), as amended.

Construction and Filling: Project construction began January 27, 1972. The gates were closed to begin permanent impoundment on November 30, 1977.

Assurances: On August 25, 1965, the Kansas Water Resources Board provided an assurance for 110,400 acre-feet of water supply storage.

Water Supply Contract (DACW41-77-C-0149): On October 19, 1977, the Kansas Water Resources Board, acting on behalf of the State, signed an agreement for 89,200 acre-feet of water supply storage in Clinton Lake. Some language in that agreement was unacceptable to the Secretary of the Army, so representatives of the State and Secretary of the Army met on August 17, 1978, to resolve differences. A slightly revised agreement was negotiated; adopted by the Board at their meeting on September 6, 1978; and signed by the Secretary of Army on October 30, 1978.

Lake Storage:

Feature	Elevation (msl)	Usable Storage* (Ac-Ft.)	2% Chance Drought Yield (mgd)
Flood Control	875.5 – 903.4	258,300	
Conservation Storage	Below 875.5	110,400	
Water Supply		89,200	17.5
Water Quality		9,500	
Total		368,700	

*Storage remaining after 100 years sedimentation.

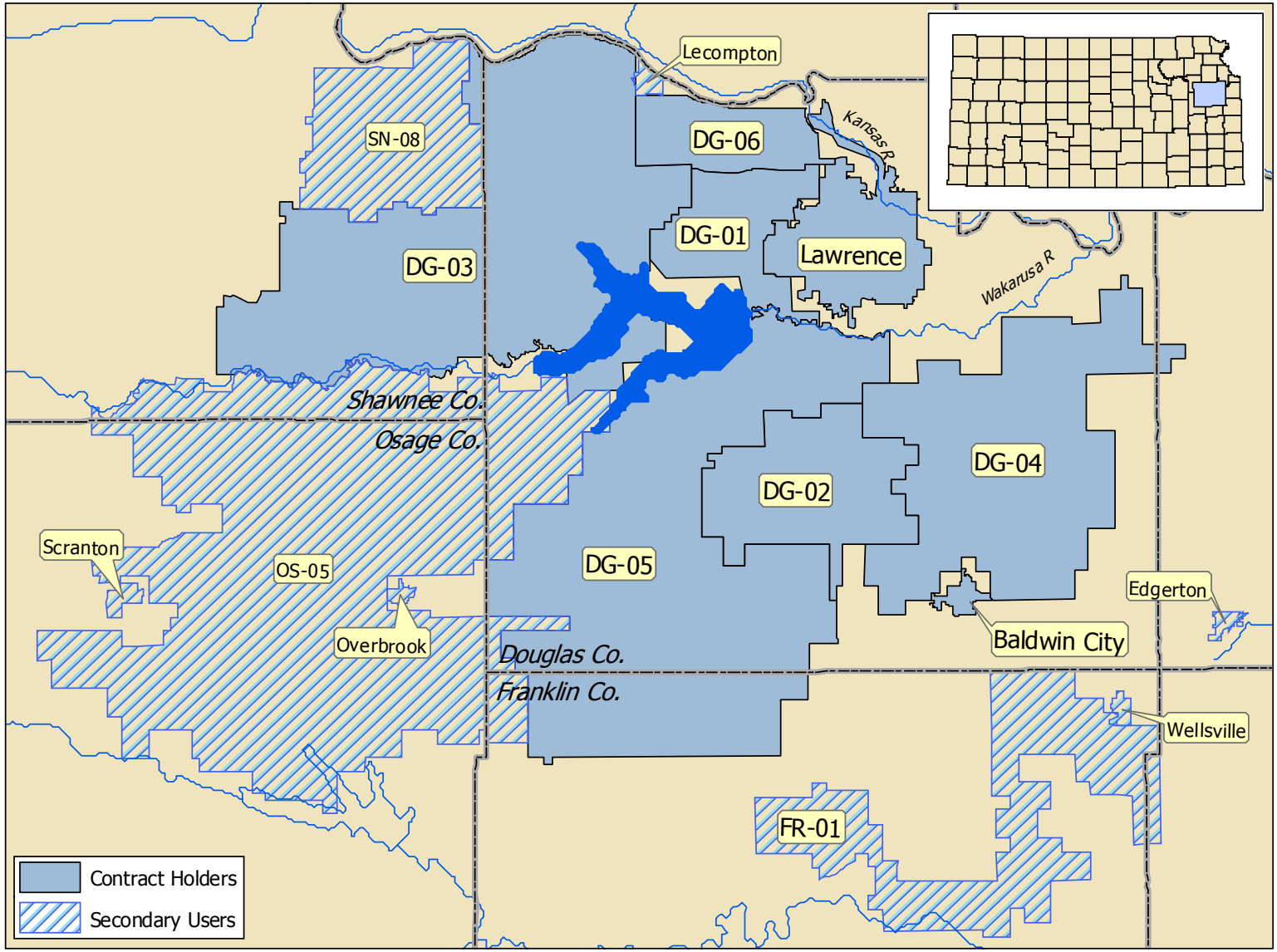
Water Supply Costs: The contract between the federal government and the State of Kansas provided for calling the contracted for storage space into service in ten (10) increments. In light of the fact that the City of Lawrence and other users in Douglas County were waiting to contract for use of water from state-owned storage, the State called for an "immediate use" first increment quantity of 53,500 acre-feet of storage space. The remaining 35,700 acre-feet of storage was designated as "future use" and payment is deferred on this storage until it is called into service.

Item	First Increment Use	Future Use
Water Supply Storage, Acre-Feet	53,500	35,700
First Costs	$4,185,858	$2,031,918
Interest Rate	3.502%	3.502%
Annual Repayment	$168,692	
Present Value (payment deferred)		$3,289,945 Interest
Interest-Free Period	None	November 1964 to October 1974
Future Use Increments		Ten (10), one (1) used

TABLE 3

CLINTON RESERVOIR						
App. No.	**Applicant**	**Date Filed**	**Application Expires**	**Quantity Requested MGY**	**Contract Number**	**Quantity Contracted MGY**
1	Lawrence, City of	4/18/1974			77-1	3,468.885
11	Douglas RWD #5	5/23/1974			77-2	45.618
29	Baldwin City, City of	1/13/1975			77-3	323.129
	Edgerton, City of					
	Wellsville, City of					
	Franklin RWD #1					
30	Douglas RWD #1	2/5/1975			77-4	47.519
34	Douglas RWD #3	5/12/1975			79-1	684.273
36	Douglas RWD #4	8/19/1975			77-5	68.427
40	Douglas RWD #2	2/3/1977			83-4	0.000
46	Douglas RWD #3	8/15/1978			79-1	
47	Douglas RWD #6	12/11/1978			79-2	23.774
54	Douglas RWD #3	4/30/1979			79-1	
	Lecompton					
	Osage RWD #5					
	Scranton					
	Overbrook					
	Shawnee RWD #8					
55	Douglas RWD #6	5/8/1979			79-2	
103	Lawrence, City of	6/29/1984			90-5	1,387.554
104	Douglas RWD #5	7/27/1984			90-6	
115	Douglas RWD #6	5/31/1989			90-2	9.510
116	Douglas RWD #5	6/12/1989			90-6	
117	Douglas RWD #2	6/13/1989			90-3	80.782
118	Douglas RWD #4	7/18/1989			90-4	
123	Douglas RWD #1	1/31/1990			90-1	14.256
136	Douglas RWD #5	5/15/1995			95-3	128.301
137	Douglas RWD #4	5/22/1995			95-2	105.492
138	Baldwin City, City of	5/28/1995	5/28/2005	255.000		
163	Douglas RWD #3	10/23/2001	10/23/2011	200.000		
	SUBTOTAL			455.000		6,387.520
					Quantity Available	6,388.000
					Less Quantity Under Contract	(6,387.520)
					Uncommitted	0.480
					Less Quantity in Applications	(455.000)
MGY: Million Gallons per Year					**BALANCE**	(454.520)

Service Area for Clinton Lake Water Users



Council Grove Lake
Neosho River, Kansas

Federal Authorization: Flood Control Act approved May 17, 1950, (House Document HD 442, 80th Congress, 2nd Session) and Water Supply Act of 1958 (Title III, P.L. 85-500), as amended.

Construction and Filling: Project was completed and closure and impoundment of water initiated on November 1, 1964.

Assurances: In 1960, the cities of Council Grove and Emporia, Kansas, each adopted an assurance resolution for 3 mgd from the project for future use. In 1961, the Kansas Legislature adopted House Concurrent Resolution No. 5 which provided an assurance that the water supply storage costs would be repaid.

Reallocated Storage Under 1985 MOU: On December 11, 1985, the Kansas Water Office and the Corps of Engineers entered into a Memorandum of Understanding regarding the reallocation of water quality storage space in Council Grove Lake to water supply. The reallocated storage space was to be made available to the State of Kansas for purchase at original construction costs, original interest rates, with a ten-year interest-free period and with the provision that the State pay for the reallocated storage in one lump sum payment. The provisions of the MOU were to expire on June 30, 1996. After that date, the State would be required to pay for reallocated storage at updated construction costs (i.e., what it would cost to build the dam today) with interest calculated at the current federal rate.

Water Supply Contracts (DACW56-75-C-0052 and DACW56-96-WS-0004): On August 29, 1974, the Kansas Water Resources Board, acting on behalf of the State of Kansas, signed the first agreement for 24,400 acre-feet of water supply storage in Council Grove Lake. The Corps of Engineers suggested some changes in wording of the contract document as well as the amortization schedule. The Kansas Water Resources Board signed the revised agreement on March 12, 1976, and it was signed by the Secretary of the Army on November 24, 1976.

The second contract for 8,000 acre-feet of storage reallocated by the Corps from water quality to water supply under the provisions of a 1985 Memorandum of Understanding was approved and signed by the Corps on June 26, 1996.

Lake Storage:

Feature	Elevation (msl)	Usable Storage* (Ac-Ft.)	2% Chance Drought Yield (mgd)
Flood Control	1274.0 – 1289.0	62,100	
Conservation Storage	1240.0 – 1274.0	41,900	
Water Supply		32,400	6.7
Water Quality		9,500	Not calculated
Total		104,000	

*Storage remaining after 50 years sedimentation, based on 1985 Tulsa Corps' sediment survey.

Water Supply Costs:

Item	Immediate Use	MOU Storage
Water Supply Storage, Acre-Feet		8,000
Water Marketing	18,200	
Water Assurance	6,200	
Allocated First Costs	$1,461,764	$1,287,468
Repayment Interest Rate	2.699%	2.699%
Annual Repayment		N/A
Water Marketing	$38,936	
Water Assurance	$42,121	
Interest-Free Period	November 1964 to October 1974	Same
Future Use Increments	None	None

TABLE 4

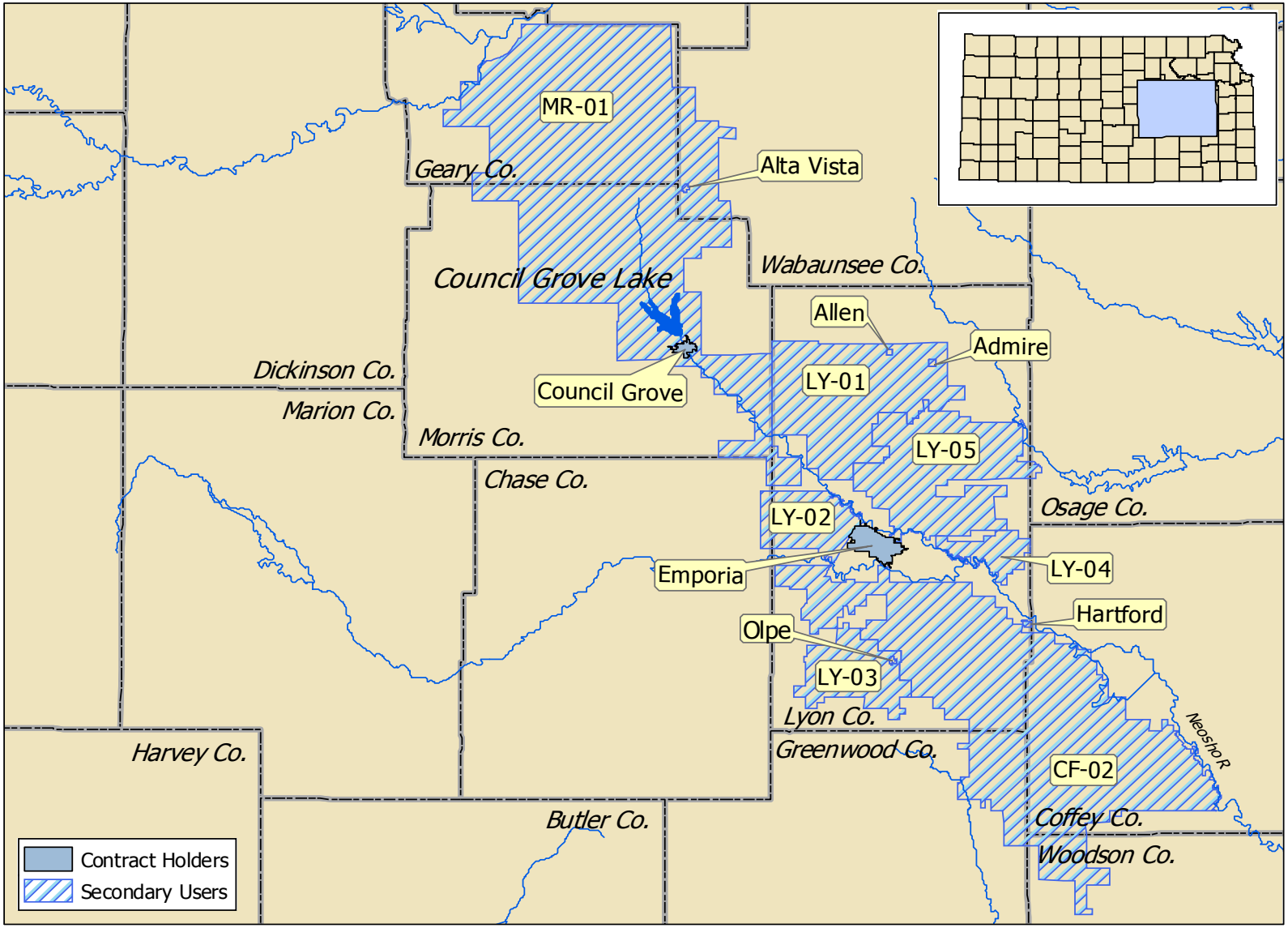
COUNCIL GROVE RESERVOIR

App. No.	Applicant	Date Filed	Application Expires	Quantity Requested MGY	Contract Number	Quantity Contracted MGY
35	Emporia, City of	7/7/1975			81-2	1,095.000
	Coffey RWD #2					
	Hartford, City of					
	Lyon RWD #1					
	Admire, City of					
	Allen, City of					
	Lyon RWD #'s 2, 4, and 5					
	Olpe, City of					
	Lyon RWD #3					
130	Council Grove, City of	7/24/1992			93-4	150.000
78	Council Grove, City of	3/20/1981			93-4	
	Morris RWD #1					
	Alta Vista					
	SUBTOTAL			0.000		1,245.000

Quantity Available	2,446.000
Less Quantity Under Contract	(1,245.000)
Uncommitted	1,201.000
Less Quantity in Applications	0.000
Subtotal	1,201.000
Less Quantity Under Assurance	(436.00)
BALANCE	765.000

MGY: Million Gallons per Year

Service Area for Council Grove Lake Water Users



Elk City Lake
Elk River, Kansas

Federal Authorization: Flood Control Act approved August 18, 1941, (House Document HD 440, 76th Congress, 1st Session) and Water Supply Act of 1958 (Title III, P.L. 85-500), as amended.

Construction and Filling: Project was completed in March 1966 for full flood control regulation.

Assurances: On November 5, 1956, and August 5, 1960, the City of Independence adopted an assurance resolution for 5 mgd. On June 1, 1960, the City of Coffeyville adopted an assurance resolution for 5 mgd. On June 11, 1960, the Kansas Water Resources Board adopted an assurance resolution for 10 mgd. In 1961, the Kansas Legislature adopted House Concurrent Resolution No. 5 to provide assurance that the water supply storage costs would be repaid.

Water Supply Contracts (DACW56-76-C-0132 and DACW56-96-WS-0005): An agreement with the U.S. Corps of Engineers originally for 24,300 acre-feet of water supply storage was signed by the Kansas Water Resources Board on March 12, 1976, and signed by the Secretary of the Army on November 24, 1976. Based upon a 1992 sediment survey conducted by the Tulsa Corps of Engineers, the storage remaining after 50 years of sediment deposition is now estimated to be 20,180 acre-feet.

The second contract is for 10,000 acre-feet of storage reallocated by the Corps from water quality to water supply under the provisions of a 1985 Memorandum of Understanding and was approved and signed by the Corps on June 26, 1996.

Lake Storage:

Feature	Elevation (msl)	Usable Storage* (Ac-Ft.)	2% Chance Drought Yield (mgd)
Flood Control	796.0 – 825.0	240,010	
Conservation Storage	764.0 – 796.0	35,130	
Water Supply		30,180	10.62
Water Quality		4,950	Not calculated
Total		275,140	

*Storage remaining after 50 years of sedimentation, based on the 1992 Tulsa Corps' sediment survey.

Water Supply Costs:

Item	Immediate Use	MOU Storage
Water Supply Storage, Acre-Feet	20,180	10,000
Allocated First Costs	$2,146,666	$1,150,580
Repayment Interest Rate	2.742%	2.742%
Annual Repayment	$77,272	N/A
Interest-Free Period	April 1996 to March 1976	Same
Future Use Increments	None	None

TABLE 5

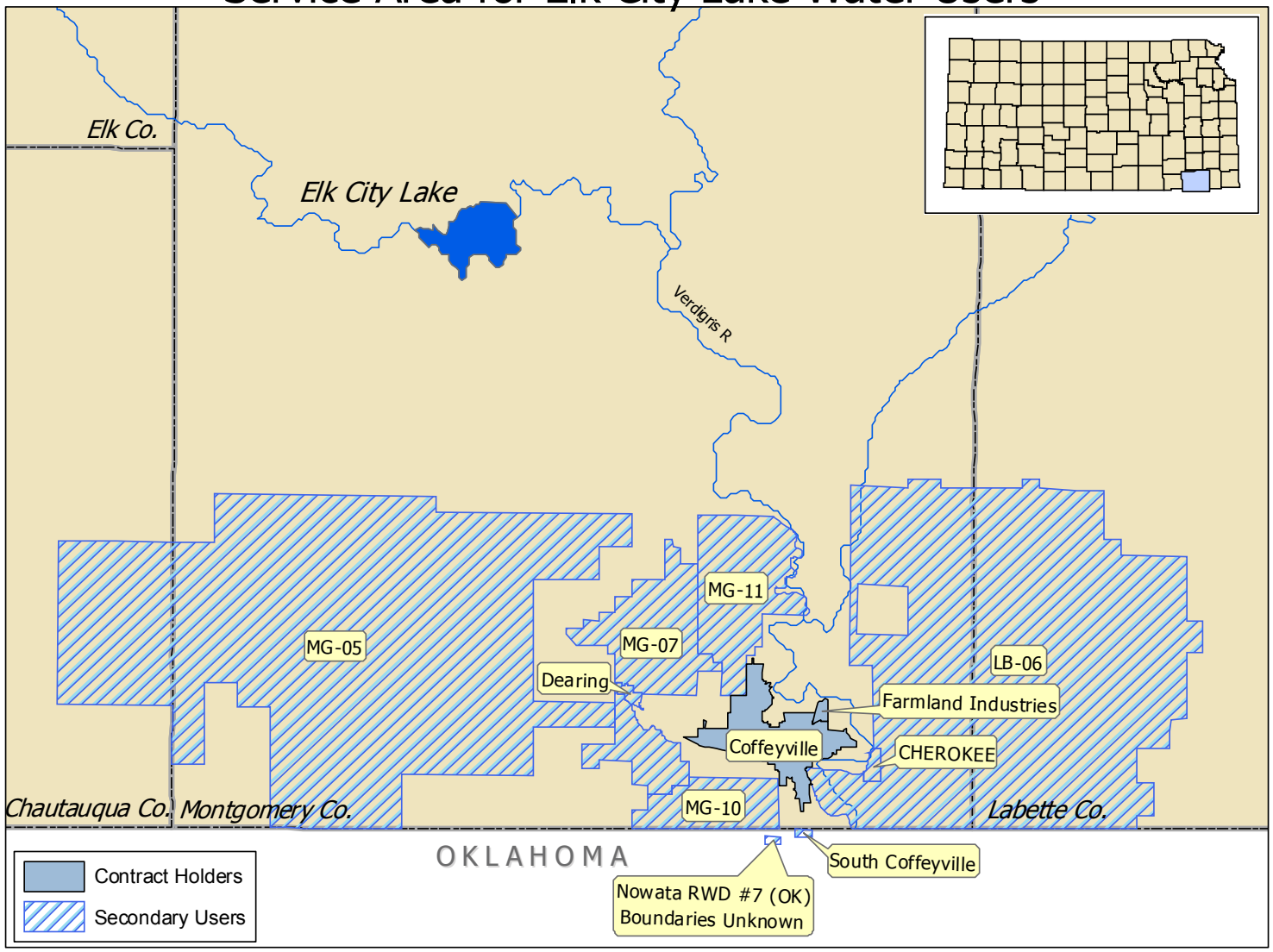
ELK CITY RESERVOIR

App. No.	Applicant	Date Filed	Application Expires	Quantity Requested MGY	Contract Number	Quantity Contracted MGY
64	Coffeyville, City of	1/24/1980			81-5	300.000
81	Coffeyville, City of	4/10/1981			81-5	
	Cherokee Water Corporation					
	Dearing					
	Montgomery RWD #7					
	Labette RWD #6					
	Montgomery RWD #5					
	Montgomery RWD #10					
	Montgomery RWD #11					
	Nowata RWD #7, OK					
	South Coffeyville, OK					
151	Farmland Industries, Inc.	2/10/1999			99-5	608.000
	SUBTOTAL			0.000		908.000

Quantity Available	4,003.000
Less Quantity Under Contract	908.000
Uncommitted	3,095.000
Less Quantity in Applications	0.000
BALANCE	3,095.000

MGY: Million Gallons per Year

Service Area for Elk City Lake Water Users



Hillsdale Lake
Big Bull Creek, Kansas

Federal Authorization: Flood Control Act approved September 3, 1954, (House Document HD 549, 81st Congress, 2nd Session) and Water Supply Act of 1958 (Title III, P.L. 85-500), as amended.

Construction and Filling: Construction began in FY 1975. Closure of the gates to begin permanent impoundment of water took place on September 19, 1981.

Assurances: On August 25, 1969, the Kansas Water Resources Board provided an assurance for 68,000 acre-feet of water supply storage space.

Water Supply Contract (DACW41-74-C-0098): On January 11, 1974, the Kansas Water Resources Board, acting on behalf of the State, signed an agreement for 53,000 acre-feet of storage for water supply purposes. The Secretary of the Army signed the contract on April 9, 1974. Supplemental Agreement No. 1 to the contract was approved by the Water Resources Board on March 13, 1980, and by the Secretary of the Army on June 10, 1980.

Lake Storage:

Feature	Elevation (msl)	Usable Storage* (Ac-Ft.)	2% Chance Drought Yield (mgd)
Flood Control	917.0 – 931.0	81,000	
Conservation Storage	Below 917.0	68,000	
Water Supply		53,000	15.20
Water Quality		15,000	
Total		149,000	

*Remaining storage after 100 years of sedimentation.

Water Supply Costs: A contract was required before construction began since the allocated water supply costs were 34.6 percent of the project costs and this exceeded the 30 percent allowed under the federal Water Supply Act of 1958. The contract also specifies that the State may call the "future use" portion of the storage space into service in up to five (5) increments.

Item	Immediate Use	Future Use
Water Supply Storage, Acre-Feet	7,500	45,500
First Costs	$3,314,167	$20,107,508
Repayment Interest Rate	4.012%	4.012%
Annual Repayment	$163,597	
Present Value (payment deferred)		$30,993,896
Interest-Free Period	October 1981 to September 1991	
Future Use Increments		Five (5), None used

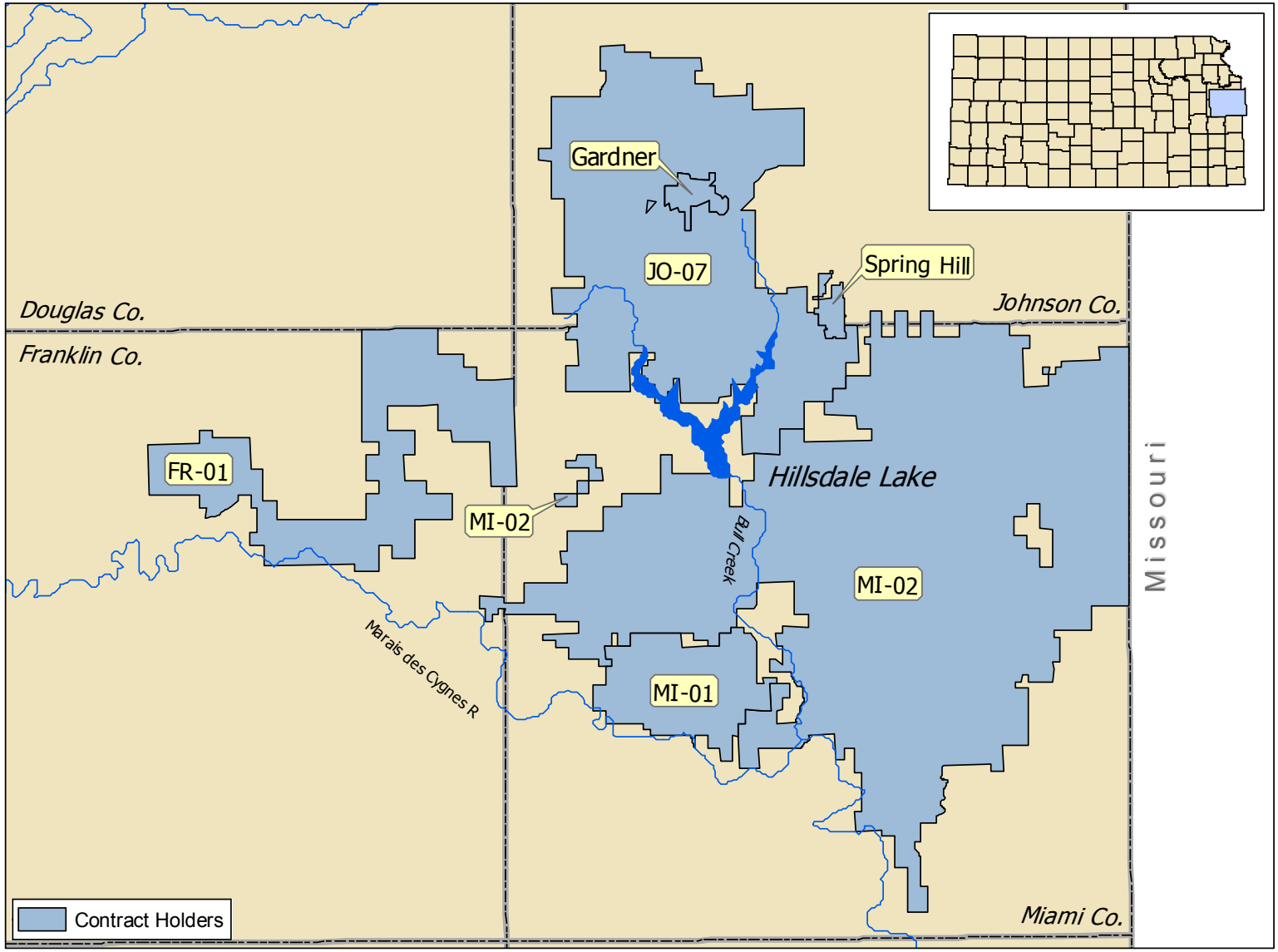
TABLE 6

HILLSDALE RESERVOIR						
App. No.	**Applicant**	**Date Filed**	**Application Expires**	**Quantity Requested MGY**	**Contract Number**	**Quantity Contracted MGY**
21	Miami RWD #2	6/28/1974			81-1	239.440
108	Spring Hill, City of	5/18/1987			87-1	110.000
139	Olathe,City of	9/22/1995	9/19/2005	2,260.000		
140	Gardner, City of	4/8/1996			96-2	1,155.000
141	Paola, City of	5/22/1996	5/22/2006	365.000		
143	Miami RWD #2	9/23/1996			96-1	470.560
148	Johnson RWD #7	8/31/1998			98-4	434.000
156	Miami RWD #1	3/21/2000			00-3	10.000
157	Franklin RWD #1	5/8/2000			01-1	33.000
158	Miami RWD #1	8/25/2000	8/25/2010	50.000		
159	Duke Energy North America, LLC	2/12/2001	2/12/2011	2,920.000		
160	Spring Hill, City of	3/9/2001	3/9/2011	206.000		
169	Louisburg, City of	7/26/2002	7/26/2012	40.100		
	SUBTOTAL			5,841.100		2,452.000

Quantity Available	5,548.000
Less Quantity Under Contract	(2,452.000)
Uncommitted	3,096.000
Less Quantity in Applications	(5,841.100)
BALANCE	(2,745.100)

MGY: Million Gallons per Year

Service Area for Hillsdale Lake Water Users



John Redmond Reservoir
Neosho River, Kansas

Federal Authorization: Flood Control Act Approved May 17, 1950, authorized "Strawn" Dam and Reservoir (House Document HD 442, 80th Congress, 2nd Session), and Water Supply Act of 1958 (Title III, P.L. 85-500), as amended. P.L. 85-327, dated February 15, 1958, renamed the project.

Construction and Filling: The project was completed for full flood control operation in July 1964; however, closure and impoundment were initiated on September 1, 1964.

Assurances: In January 1960, the Governor of Kansas requested water supply storage be incorporated in John Redmond Reservoir. In 1961, the Kansas Legislature adopted House Concurrent Resolution No. 5 which recognized the non-federal obligation for inclusion of storage.

Water Supply Contracts (DACW56-75-C-0029 and DACW56-96-WS-0003): On July 23, 1974, the Kansas Water Resources Board, acting on behalf of the State, signed an agreement for purchase of 34,900 acre-feet of water supply storage. (Based on sediment survey completed in 1993 by the Tulsa Corps, storage space remaining after 50 years of sediment deposition is now estimated to be 27,450 acre-feet.) Revision in contract wording requested by the Corps was approved and signed by the Water Resources Board on June 18, 1975, and signed by the Secretary of the Army on October 8, 1975. Supplemental Agreement No. 1 was approved by the Water Resources Board on May 19, 1978, and by the Secretary of the Army on December 12, 1978.

The second contract for 10,000 acre-feet of storage reallocated by the Corps from water quality to water supply under the provisions of a 1985 Memorandum of Understanding was approved and signed by the Corps on June 26, 1996.

Lake Storage:

Feature	Elevation (msl)	Usable Storage* (Ac-Ft.)	2% Chance Drought Yield (mgd)
Flood Control	1039.0 – 1068.0	565,300	
Conservation Storage	1020.0 – 1039.0	49,160	
Water Supply		37,450	27.2
Water Quality		11,710	Not calculated
Total		614,460	

*Storage remaining after 50 years of sedimentation, based on the Tulsa Corps' sediment survey.
**Yield recalculated in 1996.

Water Supply Costs:

Items	Immediate Use	MOU Storage
Water Supply Storage, Acre-Feet		6,500
Water Marketing	27,450	
Water Assurance		3,500
First Costs	$4,498,911	$832,485
Repayment Interest Rate	2.67%	2.67%
Annual Repayment		
Water Marketing	$157,580	
Water Assurance		$29,137
Interest-Free Period	October 1964 to October 1974	Same
Future Use Increments	None	None

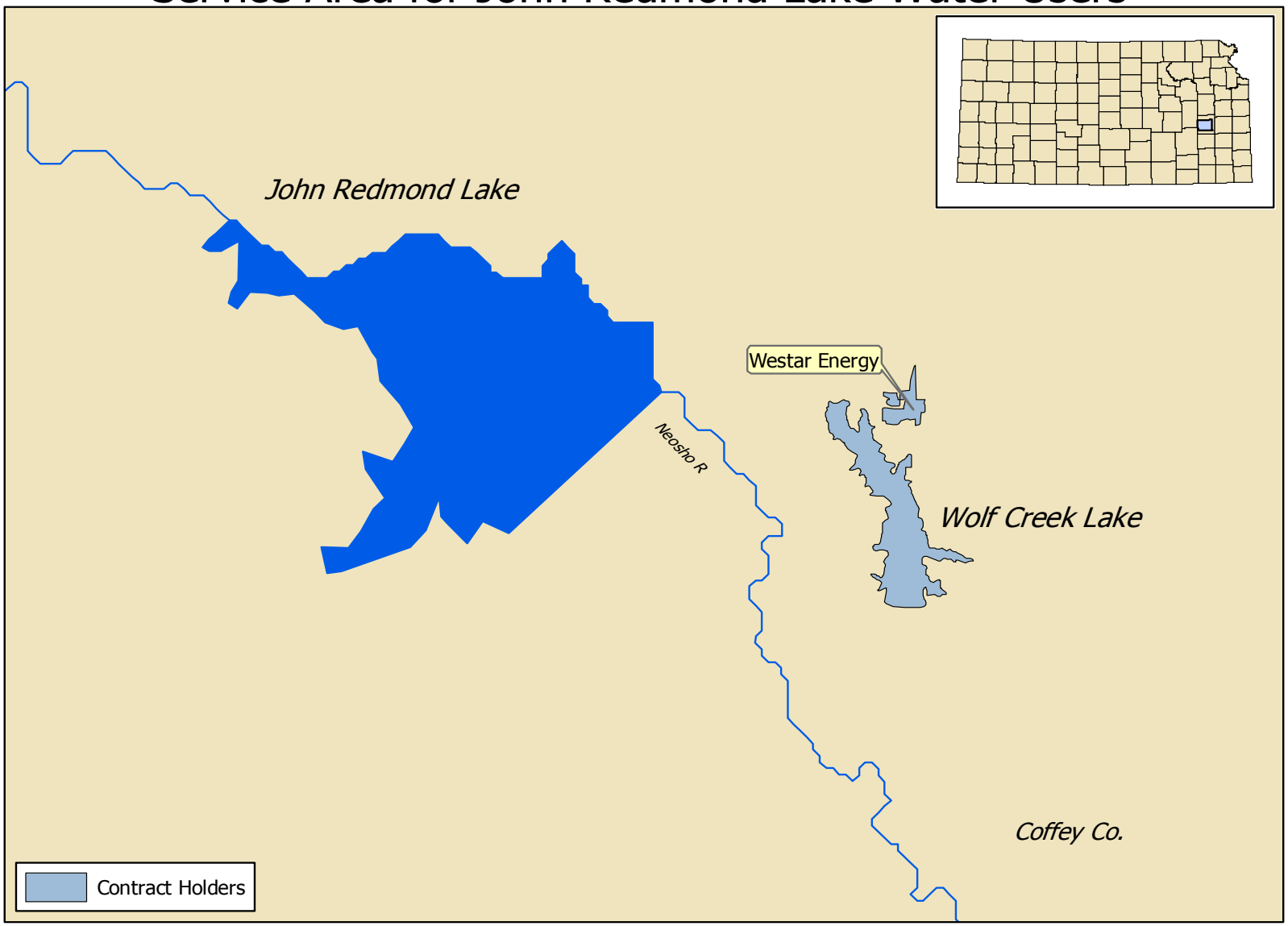
TABLE 7

JOHN REDMOND RESERVOIR						
App. No.	**Applicant**	**Date Filed**	**Application Expires**	**Quantity Requested MGY**	**Contract Number**	**Quantity Contracted MGY**
4	KG&E (Westar Energy)	5/1/1974			76-2	9,672.000
	Quantity adjusted in CY 1997					2,408.500
	SUBTOTAL			0.000		2,408.500

Quantity Available	6,442.000
Less Quantity Under Contract	(2,408.500)
Uncommitted	4,033.500
Less Quantity in Applications	0.000
BALANCE	4,033.500

MGY: Million Gallons per Year

Service Area for John Redmond Lake Water Users



Kanopolis Lake
Smoky Hill River, Kansas

Federal Authorization: Flood Control Act of 1938, Public Law 75-761, as modified by the Flood Control Act of 1941, Public Law 77-228, and 1944; and the Water Supply Act of 1958 (Title III, P.L. 85-500).

Construction and Filling: The project, which is located on the Smoky Hill River in Ellsworth County, Kansas, approximately 19 miles west and 16 miles south of Salina, was completed and placed in operation in May 1948. Kanopolis is the oldest federal lake in the State of Kansas.

Assurances: No assurances were provided to the federal government at the time of construction of Kanopolis Lake. In the past, several entities have shown interest in acquiring a water supply. These entities have included the cities of Salina, McPherson, and Lindsborg, Post Rock Rural Water District, Public Wholesale Water Supply District No. 10, and the Kanopolis Irrigation District. The City of Salina filed an application for storage in 1963. To date, no action has been taken on this application. Post Rock Rural Water District filed an application to divert natural flow and also had a surplus water contract with the Corps of Engineers. In 1989, the District filed an application with the Kansas Water Office under the Water Marketing Program. This resulted in a signed contract contingent upon the Kansas Water Office acquiring storage space in the reservoir.

The Kansas Water Resources Board began inquiring about purchase of storage in 1977 and first filed a water reservation right for conservation storage water supply capacity on February 23, 1977; however, it was withdrawn July 24, 1985. On October 29, 1990, the Kansas Water Office again filed a water reservation right.

Water Supply Contract (DACW41-02-L-0001): On June 12, 2002, the Kansas Water Office, acting on behalf of the State of Kansas, signed an agreement for purchase of 12,500 acre-feet of water supply storage. The Kansas City Corps of Engineers' District Engineer then signed the agreement on June 17, 2002, bringing an end to 25 years of negotiations.

Lake Storage:

Feature	Elevation (msl)	Usable Storage* (Ac-Ft.)	2% Chance Drought Yield (mgd)
Flood Control	1463.0 – 1508.0	362,254	
Conservation Storage	1431.0 – 1463.0	26,833	
Water Supply		12,500	12.8**
Multi-Purpose		14,333	Not calculated
Total		389,087	

*Estimated storage remaining after 100 years of sedimentation.
**Yield calculated in 2002.

Water Supply Costs:

Item	Immediate Use
Water Supply Storage, Acre-Feet	
Water Marketing	12,500
First Costs	$4,181,167
Repayment Interest Rate*	5.625%
Paid Up Front	$642,272
Annual Repayment	
Water Marketing	$234,392
Interest-Free Period	May 1948 to May 1958

*Interest rate adjusted at five-year intervals.

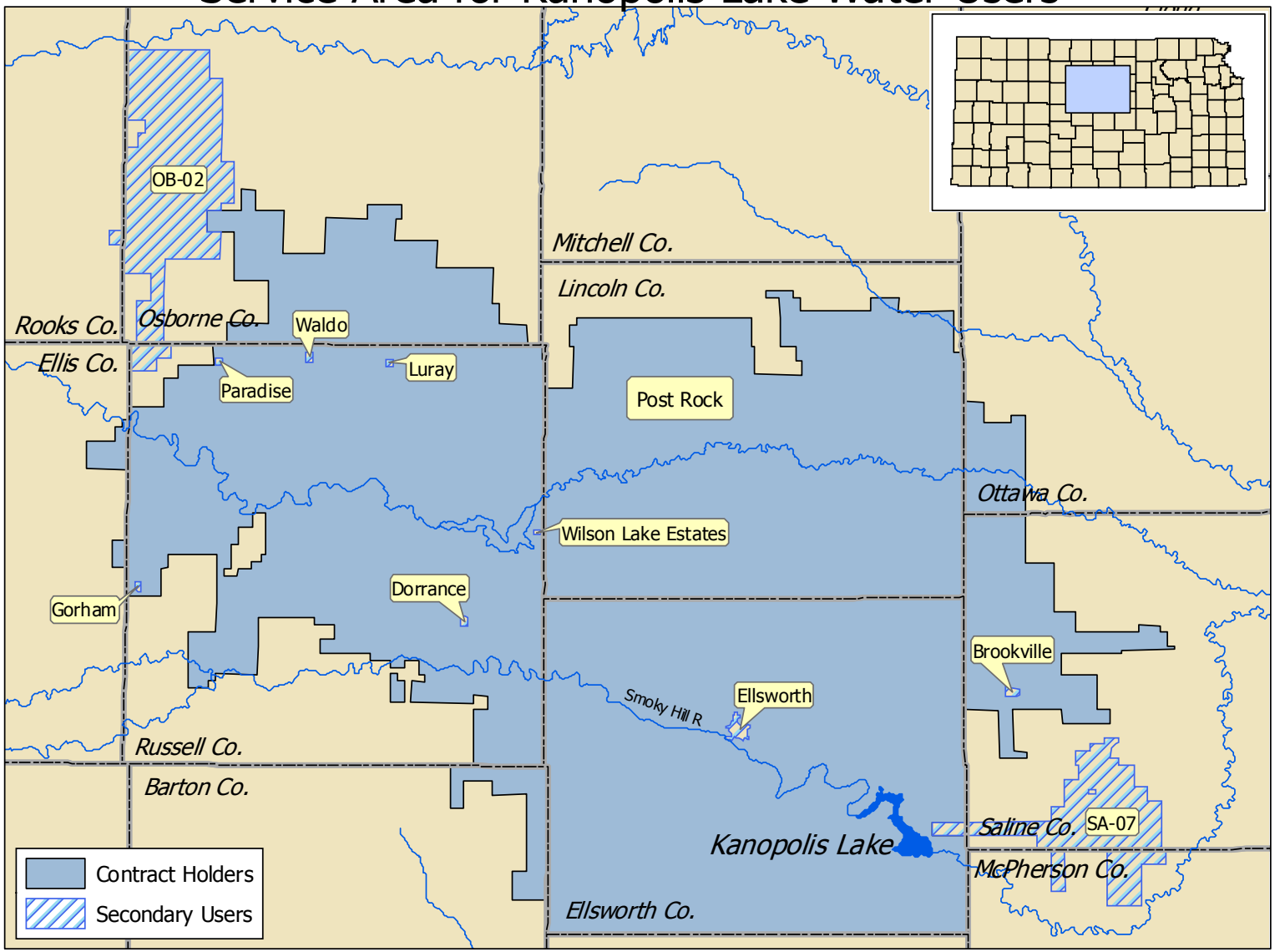
TABLE 8

KANOPOLIS RESERVOIR						
App. No.	**Applicant**	**Date Filed**	**Application Expires**	**Quantity Requested MGY**	**Contract Number**	**Quantity Contracted MGY**
121	Ellsworth RWD #1 (Post Rock)	9/12/1989			01-2	400.000
167	PWWSD #15 (Hays & Russell)	6/17/2002	6/17/2012	2,555.000		
	SUBTOTAL			2,555.000		400.000

Quantity Available	4,701.000
Less Quantity Under Contract	(400.000)
Uncommitted	4,301.000
Less Quantity in Applications	(2,555.000)
BALANCE	1,746.000

MGY: Million Gallons per Year

Service Area for Kanopolis Lake Water Users



Marion Lake
Cottonwood River, Kansas

Federal Authorization: Flood Control Act approved May 17, 1950, (House Document HD 442, 80th Congress, 2nd Session) and Water Supply Act of 1958 (Title III, P.L. 85-500), as amended.

Construction and Filling: The project is complete and was placed in full flood control operational status on February 28, 1968.

Assurances: The cities of Marion and Hillsboro, Kansas, adopted resolutions of assurance for 1 mgd each for their future water supply needs on March 8, 1965, and July 6, 1965, respectively. On March 13, 1967, the Kansas Water Resources Board furnished a resolution of assurance for future water supply which may be in excess of Hillsboro's and Marion's needs.

Water Supply Contracts (DACW56-76-C-0133 and DACW56-96-WS-0002): The first agreement with the Corps of Engineers for 38,300 acre-feet of water supply storage space in Marion Lake was signed by the Kansas Water Resources Board on March 12, 1976, and signed by the Secretary of the Army on December 24, 1976. Based on a 1982 sediment survey conducted by the Tulsa Corps of Engineers, the estimated storage space remaining after 50 years of sediment deposition is now 32,230 acre-feet.

The second contract for 12,500 acre-feet of water supply storage space was signed under the provisions of the 1985 MOU with the Corps. It was signed by the Kansas Water Office and the Kansas Water Authority on April 11, 1997, and signed by the Corps of Engineers on June 26, 1996.

Lake Storage:

Feature	Elevation (msl)	Usable Storage* (Ac-Ft.)	2% Chance Drought Yield (mgd)
Flood Control	1350.5 – 1358.5	61,210	
Conservation Storage	1320.0 – 1350.5	69,770	
Water Supply		44,730	4.3
Water Quality		25,040	Not calculated
Total		130,980	

*Storage remaining after 50 years of sedimentation, based on 1982 Tulsa Corps sediment survey.

Water Supply Costs:

Item	Immediate Use	MOU Storage
Water Supply Storage, Acre-Feet		12,500
Water Marketing	31,930	
Water Assurance	300	
First Costs	$1,576,327	$2,187,785
Repayment Interest Rate	3.046%	3.046%
Annual Repayment		
Water Marketing	$59,504	
Water Assurance	$1,362	
Interest-Free Period	March 1968 to February 1978	Same
Future Use Increments	None	

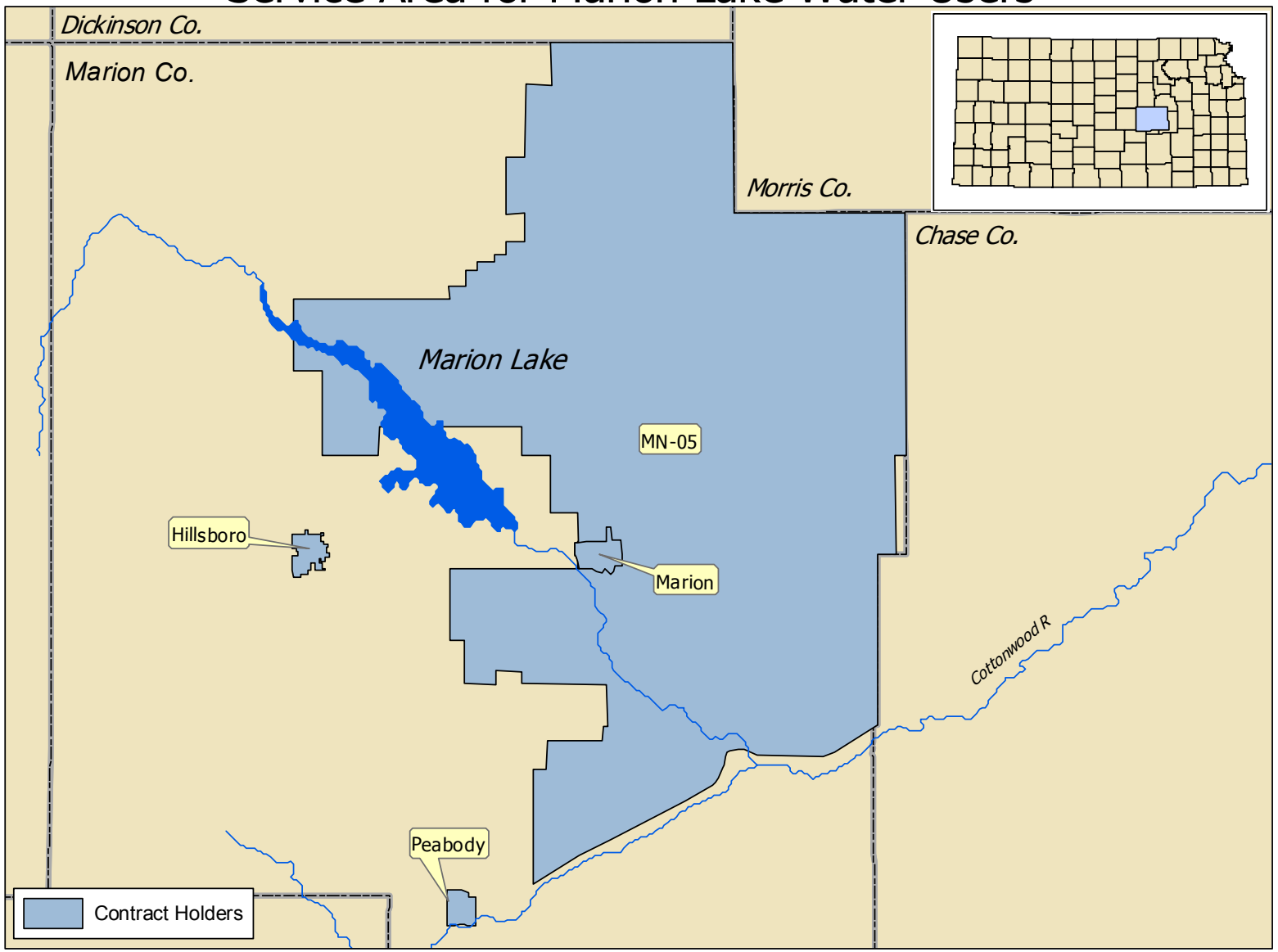
TABLE 9

MARION RESERVOIR						
App. No.	**Applicant**	**Date Filed**	**Application Expires**	**Quantity Requested MGY**	**Contract Number**	**Quantity Contracted MGY**
16	Hillsboro, City of	6/12/1974			80-1	300.000
23	Marion, City of	7/22/1974			81-4	238.000
149	Marion RWD #5	12/16/1998			99-2	85.000
150	Peabody, City of	12/16/1998			99-1	60.000
164	Jost Farms (Surplus)	1/7/2002			02-1	13.034
165	Jost Farms (Surplus)	1/7/2002			02-2	36.000
	SUBTOTAL			0.000		732.034

Quantity Available	1,533.000
Less Quantity Under Contract	(732.034)
Uncommitted	800.966
Less Quantity in Applications	0.000
BALANCE	800.966

MGY: Million Gallons per Year

Service Area for Marion Lake Water Users



Melvern Lake
Marais des Cygnes River, Kansas

Federal Authorization: Flood Control Act of June 28, 1938, (P.L. 75-761) modified by the Flood Control Act of September 3, 1954.

Construction and Filling: Project construction began in federal FY 1967. Closure of the gates for deliberate impoundment of water in Melvern Reservoir was accomplished on August 1, 1972, and the reservoir was filled for the first time on April 4, 1975.

Assurances: No assurances were provided to the federal government at the time of construction of Melvern Lake. Contracting for storage was accomplished through the 1985 Memorandum of Understanding (MOU) with the Corps of Engineers. Under the MOU, the Corps agreed to reallocate conservation storage space from water quality purposes to water supply. The reallocated water supply pool was sold to the State at original construction costs and interest rate with a ten-year interest-free period.

Water Supply Contract (DACW41-95-L-0003): On November 4, 1994, the Kansas Water Authority and Kansas Water Office, on behalf of the State, signed a contract for 50,000 acre-feet of storage space in Melvern Lake. On January 25, 1995, the Acting Assistant Secretary of the Army (Civil Works) approved the contract.

Lake Storage:

Feature	Elevation (msl)	Usable Storage* (Ac-Ft.)	2% Chance Drought Yield (mgd)
Flood Control	1036.0 – 1057.0	206,000	
Conservation Storage	Below 1036.0	145,000	
Water Supply		50,000	7.2
Water Quality		40,000	Not calculated
Other Uses		55,000	N/A
Total		351,000	

*Estimated storage remaining in the year 2035.

Water Supply Costs:

Item	MOU Purchase	Water Marketing
Water Supply Storage, Acre-Feet	28,148	14,352
Water Assurance	7,500	
First Costs	$3,974,977	$2,047,113
Water Assurance	$1,109,744	
Paid Up Front	($843,405)	
Project Interest Rate	3.225%	3.225%
Annual Repayment		$68,237
Water Assurance	$29,593	
Interest-Free Period	August 1972 to August 1982	Same

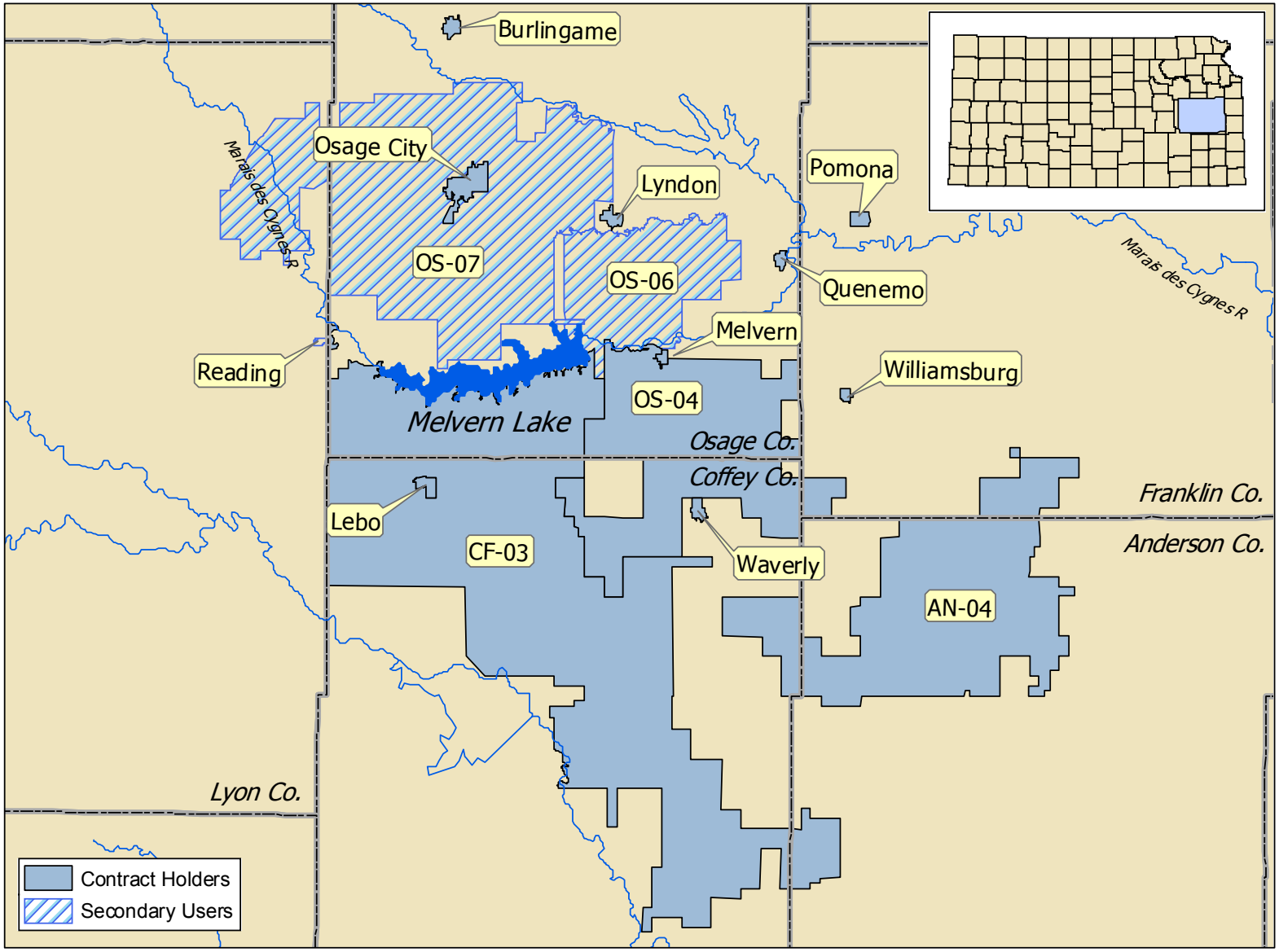
TABLE 10

MELVERN RESERVOIR						
App. No.	**Applicant**	**Date Filed**	**Application Expires**	**Quantity Requested MGY**	**Contract Number**	**Quantity Contracted MGY**
120	Osage City, City of	8/21/1989			93-3	100.000
	Osage RWD #7					
	Osage RWD #6					
	Reading					
126	PWWSD #12	12/23/1991			93-1	547.430
	Lebo, City of					
	Waverly, City of					
	Williamsburg, City of					
	Quenemo, City of					
	Pomona, City of					
	Melvern, City of					
	Lyndon, City of					
	Coffey RWD #3					
	Anderson RWD #4					
	Osage RWD #4					
127	Burlingame, City of	11/4/1991			93-2	65.000
	SUBTOTAL			0.000		712.430

Quantity Available	754.000
Less Quantity Under Contract	(712.430)
Uncommitted	41.570
Less Quantity in Applications	0.000
BALANCE	41.570

MGY: Million Gallons per Year

Service Area for Melvern Lake Water Users



Milford Lake
Republican River, Kansas

Federal Authorization: Flood Control Act approved September 3, 1954, (P.L. 83-780) and Water Supply Act of 1958 (Title III, P.L. 85-500), as amended.

Construction and Filling: Construction was initiated in July 1961. Closure of the dam occurred August 24, 1964. The multipurpose operation began January 16, 1967 with the multipurpose pool initially filled on July 14, 1967.

Assurances: By letter dated April 1, 1959, the Governor of the State of Kansas requested an allocation of 300,000 acre-feet of storage space for water supply. In 1961, the Kansas Legislature adopted House Concurrent Resolution No. 5 which recognized the nonfederal obligation for the inclusion of this storage space in Milford Lake.

Water Supply Contract (DACW41-74-C0081): On March 22, 1974, the Kansas Water Resources Board, acting on behalf of the State of Kansas, signed an agreement for 300,000 acre-feet of water supply storage space in Milford Lake. The contract was approved by the Secretary of the Army on September 4, 1974. Supplemental Agreement No. 1 to the contract was approved by the Water Resources Board on March 13, 1980, and by the Secretary of the Army on June 10, 1980.

Lake Storage:

Feature	Elevation (msl)	Usable Storage* (Ac-Ft.)	2% Chance Drought Yield (mgd)
Flood Control	1144.4 – 1176.7	700,000	
Water Supply	Below 1144.4	300,000	111.00**
Total		1,000,000	

*Storage remaining after 100 years of sedimentation.
**Yield recalculated in 1996.

Water Supply Costs:

Item	Immediate Use	Future Use
Water Supply Storage, Acre-Feet		
Water Marketing	46,650	198,350
Water Assurance	55,000	
First Costs		
Water Marketing	$2,029,587	$8,624,735
Water Assurance	$3,340,079	
Repayment Interest Rate	2.632%	2.632%
Annual Repayment		
Water Marketing	Paid in full	
Water Assurance	$153,101	
Present Value (payment deferred)		$12,736,145
Interest-Free Period	February 1967 to January 1977	Same
Future Use Increments		Ten (10), two (2) used

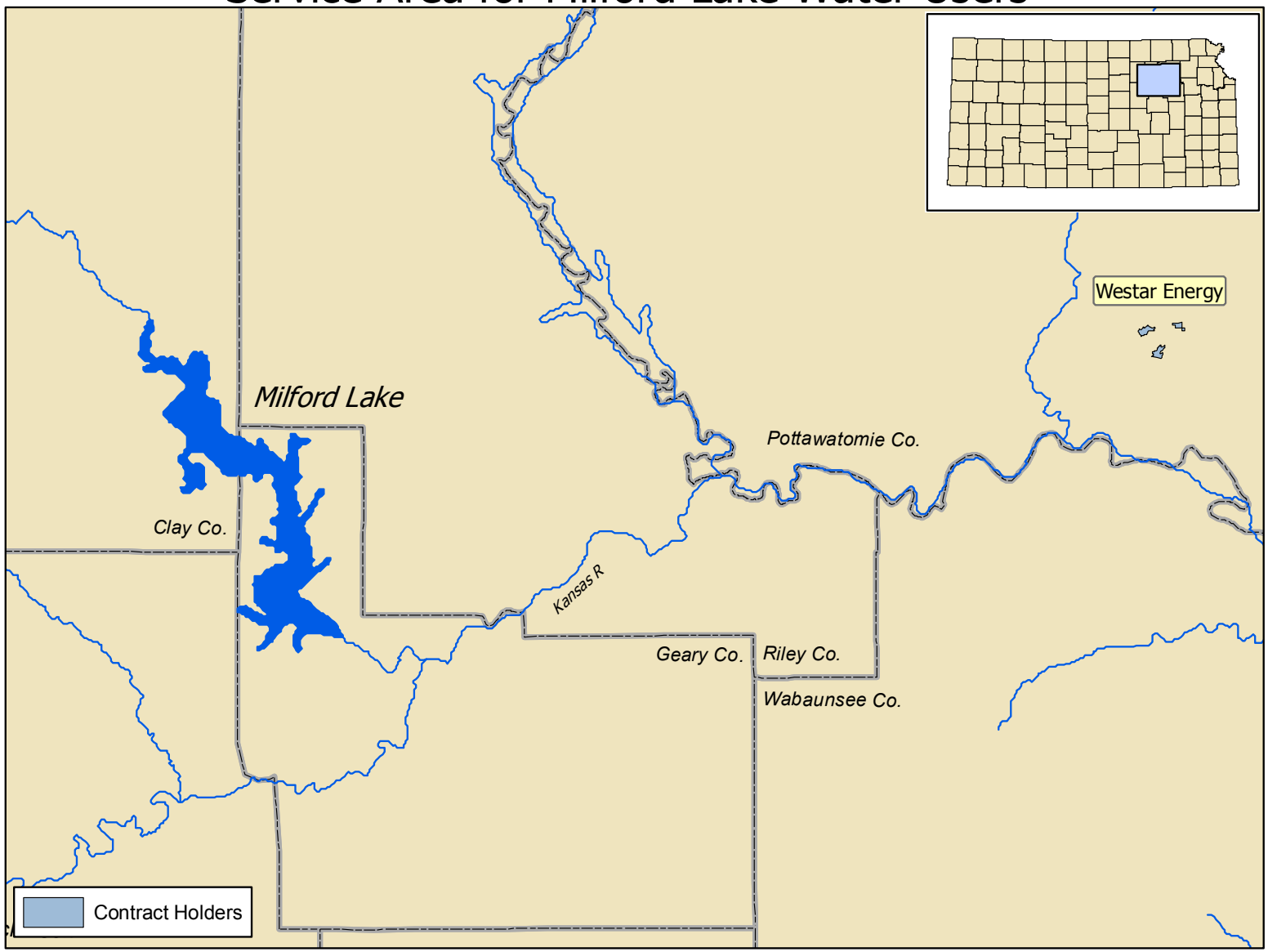
TABLE 11

MILFORD RESERVOIR						
App. No.	**Applicant**	**Date Filed**	**Application Expires**	**Quantity Requested MGY**	**Contract Number**	**Quantity Contracted MGY**
18	KP&L	6/19/1974			80-2	7,300.000
132	Salina, City of	12/23/1992	12/23/2002	3,910.212		
133	Equus Beds GMD #2	5/3/1983	5/3/2003	6,517.020		
	SUBTOTAL			10,427.232		7,300.000

Quantity Available	40,515.000
Less Quantity Under Contract	(7,300.000)
Less Quantity Under Assurance Contract	(8,591.118)
Subtotal	24,623.882
Less Set-Aside Quantity for Assurance District	(9,451.779)
Uncommitted	15,172.103
Less Quantity in Applications	(10,427.232)
BALANCE	4,744.871

MGY: Million Gallons per Year

Service Area for Milford Lake Water Users



Perry Lake
Delaware River, Kansas

Federal Authorization: Flood Control Act approved September 3, 1954, (P.L. 83-700) and Water Supply Act of 1958 (Title III, P.L. 85-500), as amended.

Construction and Filling: Construction was initiated in March 1964. Closure of the dam occurred August 2, 1966. Multipurpose operations began January 15, 1969. The multipurpose pool was initially filled April 28, 1971.

Assurances: On April 16, 1959, the State of Kansas, through the Kansas Water Resources Board, requested that water supply storage be incorporated in Perry Lake. In 1961, the Kansas Legislature adopted House Concurrent Resolution No. 5 which recognized the nonfederal obligation for the inclusion of 150,000 acre-feet of storage for water supply.

Water Supply Contract (DACW41-77-0003): On December 10, 1976, the Kansas Water Resources Board, acting on behalf of the State, signed an agreement for 150,000 acre-feet of water supply storage space in Perry Lake. The Secretary of the Army approved the agreement on October 28, 1977.

Lake Storage:

Feature	Elevation (msl)	Usable Storage* (Ac-Ft.)	2% Chance Drought Yield (mgd)
Flood Control	891.5 – 920.6	480,000	
Water Supply	Below 891.5	150,000	74.6**
Total		630,000	

*Storage remaining after 100 years of sedimentation.
**Yield recalculated in 1998.

Water Supply Costs:

Item	Immediate Use	Future Use
Water Supply Storage, Acre-Feet		
Water Marketing		125,000
Water Assurance	25,000	
First Costs		
Water Marketing		$7,673,311
Water Assurance	$1,535,031	
Repayment Interest Rate	3.046%	3.046%
Annual Repayment		
Water Marketing		
Water Assurance	$143,085	
Present Value (payment deferred)		$12,401,695
Interest-Free Period	April 1969 to March 1979	Same
Future Use Increments		Ten (10), one (1) used

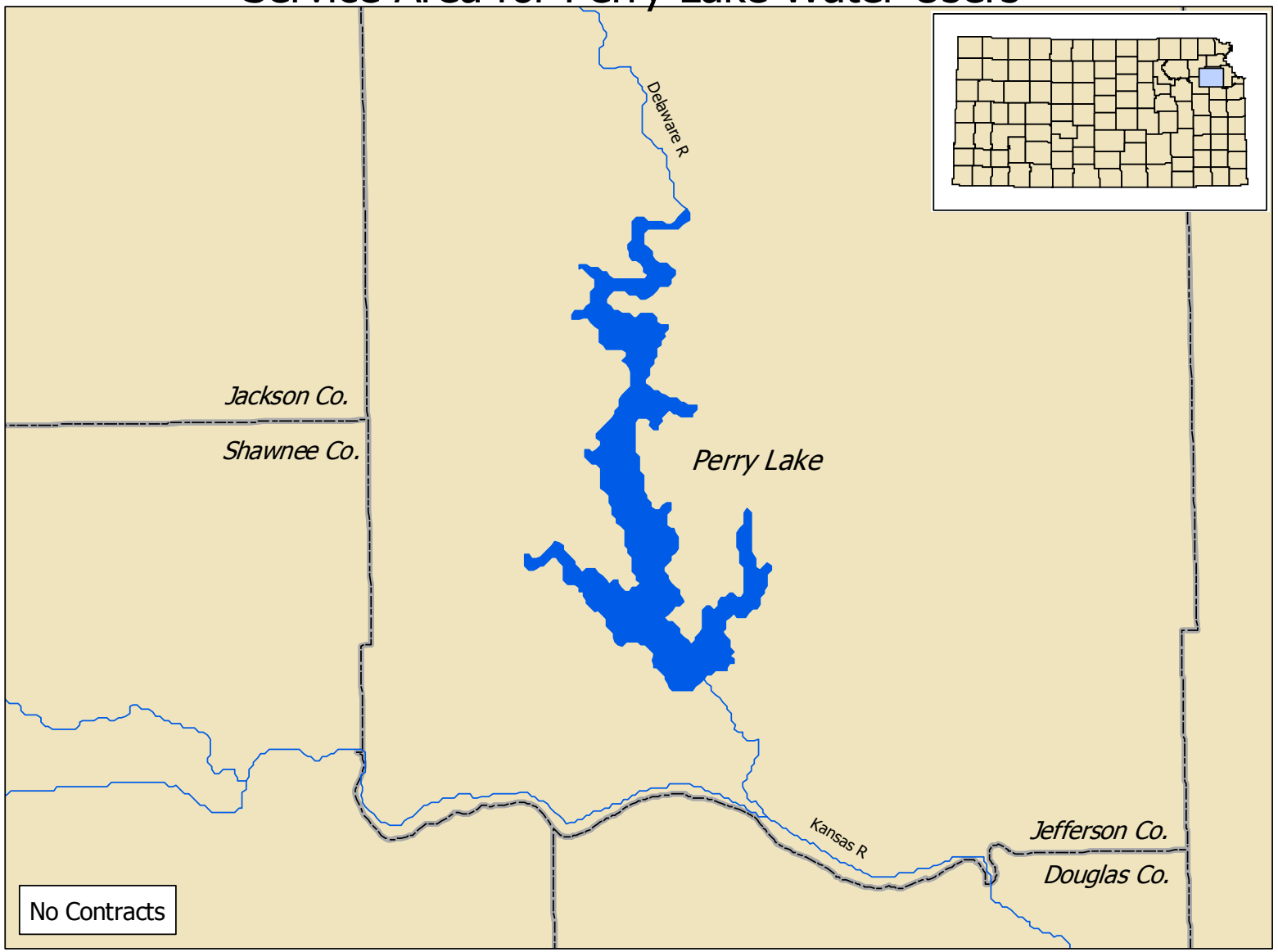
TABLE 12

PERRY RESERVOIR						
App. No.	**Applicant**	**Date Filed**	**Application Expires**	**Quantity Requested MGY**	**Contract Number**	**Quantity Contracted MGY**
134	Jefferson RWD #9	9/22/1994	9/22/2004	2.320		
	SUBTOTAL			2.320		0.000

Quantity Available	22,241.000
Less Quantity Under Contract	0.000
Uncommitted	22,241.000
Less Quantity in Applications	(2.320)
Subtotal	22,238.680
Less Quantity Under Assurance Contract	(7,738.000)
BALANCE	14,500.680

MGY: Million Gallons per Year

Service Area for Perry Lake Water Users



Pomona Lake
One Hundred Ten Mile Creek, Kansas

Federal Authorization: Flood Control Act of June 28, 1938, (P.L. 75-761), as modified by the Flood Control Act of September 3, 1954.

Construction and Filling: Construction began in June of 1959, and the project was placed in operation in October of 1963.

Assurances: No assurances were provided to the federal government at the time of construction of Pomona Lake. Contracting for storage was accomplished through the 1985 Memorandum of Understanding (MOU) with the Corps of Engineers. Under the MOU, the Corps agreed to reallocate conservation storage space from water quality purposes to water supply. The reallocated water supply pool was sold to the State at original construction costs and interest rate with a ten-year interest-free period.

Water Supply Contract (DACW41-95-L-0005 and EPPF41-96-L-0001): On April 3, 1995, the Kansas Water Authority and Kansas Water Office, on behalf of the State, signed the first contract for 14,324 acre-feet of storage space in Pomona Lake. On June 12, 1995, the Acting Assistant Secretary of the Army (Civil Works) approved the contract. On October 26, 1995, the Kansas Water Authority and Kansas Water Office, on behalf of the State, signed the second contract for 18,176 acre-feet of storage space in Pomona Lake. On March 18, 1996, the Assistant Secretary of the Army (Civil Works) approved the second contract.

Lake Storage:

Feature	Elevation (msl)	Usable Storage* (Ac-Ft.)	2% Chance Drought Yield (mgd)
Flood Control	974.0 – 1003.0	174,000	
Conservation Storage	Below 974.0	44,000	
Water Supply		32,500	7.4
Water Supply**		500	Same
Water Quality		11,000	Not calculated
Total		218,000	

*Estimated storage remaining in the year 2035.
**Under contract between the Corps and local water districts.

Water Supply Costs: Water supply storage space in Pomona Lake was purchased under the provisions of the 1985 Memorandum of Understanding (MOU) between the State of Kansas and the Corps of Engineers. Storage was purchased in two (2) increments with each increment paid for in one lump sum as required by the MOU.

Item	MOU Purchase
Water Supply Storage, Acre-Feet	25,000
Water Assurance Program	7,500
First Costs	$2,957,488
Water Assurance Program	$836,380
Paid Up Front	($635,649)
Project Interest Rate	2.699%
Repayment	
Water Assurance Program	$22,303
Interest-Free Period	October 1963 to September 1973

Tuttle Creek Lake
Big Blue River, Kansas

Federal Authorization: Flood Control Act of June 28, 1938, as modified by the Flood Control Act of August 18, 1941, and the Flood Control Act of December 22, 1944.

Construction and Filling: Construction began in July of 1959 and the project was placed in operation in October of 1963.

Assurances: No assurances were provided to the federal government at the time of construction of Tuttle Creek Lake. Contracting for storage was accomplished through the 1985 Memorandum of Understanding (MOU) with the Corps of Engineers. Under the MOU, the Corps agreed to reallocate conservation storage space from water quality purposes to water supply. The reallocated water supply pool was sold to the State at original construction costs and interest rate with a ten-year interest-free period.

Water Supply Contracts (DACW41-90-C-0042, DACW41-94-L-0002, and EPPF41-96-L-0002): The 50,000 acre-feet of water supply storage space made available for purchase by the State under the 1985 Memorandum of Understanding (MOU) with the Corps was purchased in three (3) increments. The first increment was purchased to serve the Kansas River Water Assurance District Number 1. Bonds were issued in the amount of $1.9 million on behalf of the Assurance District to repay the costs to the State for purchase of 27,500 acre-feet of storage space. The State paid the Corps with the bond proceeds in one lump sum for the water supply under a contract approved and signed by the Kansas Water Office and the Kansas Water Authority on May 19, 1990. The contract was signed by the Assistant Secretary of the Army on May 8, 1991.

The second contract for 8,650 acre-feet of water supply storage was approved and signed by the Kansas Water Office and Kansas Water Authority on July 14, 1994. The contract was approved and signed by the Acting Assistant Secretary of the Army on September 24, 1994. This portion of the storage space was purchased with a portion of the $13.6 million appropriated by the Kansas Legislature during the 1994 Legislative Session. This portion remains under State control for future use.

The third contract for 13,850 acre-feet of storage was approved by the Kansas Water Office and the Kansas Water Authority on June 19, 1996. The Assistant Secretary of the Army signed this contract on June 28, 1996. This contract quantity was purchased by the State on behalf of the Kansas River Water Assurance District Number 1. The costs associated with this purchase are being paid for by the Assurance District.

Lake Storage:

Feature	Elevation (msl)	Usable Storage* (Ac-Ft.)	2% Chance Drought Yield (mgd)
Flood Control	1075.0 – 1136.0	1,879,000	
Conservation Storage	1020.0 – 1136.0	112,000	
Water Supply Assurance		27,500	
Water Supply		8,650	
Water Supply Assurance		13,850	
Water Quality/Navigation		72,000	
Total		2,001,000	

*Estimated storage remaining in the year 2035.

Water Supply Costs:

Item	MOU Immediate Use	MOU Future Use
Water Supply Storage, Acre-Feet		
Assurance District	27,500	
State Owned – Uncommitted		8,650
Assurance District	13,850	
First Costs		
Assurance District	$1,904,525	
State Owned		$650,211
Assurance District	$1,090,378	
Project Interest Rate	2.553%	2.553%
Interest-Free Period	March 1962 to March 1972	Same

STATUS OF THE WATER ASSURANCE PROGRAM

Background

The purpose of the Water Assurance Program is to allow coordinated operation of state-owned or controlled water supply storage space in federal lakes to satisfy downstream municipal and industrial water rights during drought conditions. Water right holders are therefore assured to receive water during times of low flow, while the state operates the lakes in a river basin as a system for increased efficiency in water delivery.

The Kansas Water Assurance Program is the first of its kind in the nation. It is a major accomplishment of the State Water Planning Process. The program was developed to meet the needs of municipal and industrial water supply users whose needs could not be economically and institutionally met by the existing Water Marketing Program.

During periods of drought, natural stream flow on streams may be significantly reduced. Municipal and industrial water users along a stream who hold appropriation rights to the natural flow may find their ability to use the surface water is severely limited at a time when their demand for water is at its highest. Many of these users are located below federal lakes.

Prior to 1986, water in storage from upstream lakes was available to these users only under terms of the State Water Marketing Program. In order to participate in the Water Marketing Program, municipal and industrial water users who withdrew their water from streams below large federal lakes were required to sign a long-term (up to 40 years) contract with the state agreeing to:

- repay the state for the costs of providing the water;
- receive their water only from one lake, even though multiple lakes may feed the stream where the user withdraws water;
- pay for at least 50 percent of the contracted water each year whether or not the user withdraws any water from storage; and
- pay for water lost in transit from the dam to the purchaser's intake.

It was evident the Marketing Program might not meet the needs of many municipal and industrial water users who only need supplemental water from storage during times of low flow. In 1986, the Legislature enacted the Water Assurance Program Act (K.S.A. 82a-1330 *et seq*.). The Act gives the Kansas Water Office authority to enter into contracts with the federal government for storage space to be used for water assurance. The Act sets out procedures for organization of an assurance district and contracting procedures between the assurance district and the Kansas Water Office.

In 1986, the state controlled water supply storage space in nine of the major flood control lakes in the four eastern drainage basins through the Water Marketing Program. In order to manage stream flow in the entire reaches of the Kansas, Marais des Cygnes, Verdigris, and Neosho drainage basins, the state needed to control storage in additional lakes.

1985 MOU with the Department of the Army, U.S. Corps of Engineers

Under a 1985 Memorandum of Understanding (MOU) with the Department of the Army, the state had the first purchase option for additional storage in the following lakes at original construction costs and interest rates: Tuttle Creek, Pomona, Melvern, John Redmond, Marion, Council Grove, Elk City, Toronto, and Fall River.

Four conditions had to be met before this storage space could be added to the Water Marketing Program or Water Assurance Program at the MOU's favorable costs.

1. An assurance district must form in the basin;
2. Water quality releases must be protected from unlawful diversion;
3. A water user must negotiate a contract with the state prior to the state's purchase of the storage; and
4. The state must make full payment to the federal government (including accumulated interest) for the storage at the time of purchase (no long-term repayment).

The MOU expired in June of 1996. Purchases made after June 30, 1996, would be at updated construction and interest costs.

Contracts with the Federal Government

As the ten-year anniversary of the MOU and the June 30, 1996, deadline for the completion of contracts for water supply storage space approached, the last pieces of the financing puzzle were in place. By July 1, 1996, contracts between the Kansas Water Office and the U.S. Department of the Army were finalized for all of the storage which had been made available under the MOU. The successful completion of the ten-year project is due in large part to the dedication, commitment, determination, and cooperation of organizations and individuals such as the U.S. Department of the Army, the Governor's Office, the Kansas Legislature, the Kansas Engineering Society, local assurance district members, the State Pooled Money Investment Board, the Kansas Development Finance Authority, the Kansas Water Authority, the Kansas Congressional Delegation, and others. As a result of these efforts, Kansas today has access to an additional 173,000 acre-feet of water supply storage space to help meet the needs of its citizens into the foreseeable future.

Table 13 shows the storage acquired under the MOU.

TABLE 13

Storage Acquisition					
		Funds Used to Purchase Storage Space			
Lake	Acre-Feet Purchased	$13.5 Million Appropriation	Assurance District Cash/Bonds	State Water Plan Fund/PMIB Loan	Grand Total Costs
Council Grove	8,000	$0.00	$0.00	$1,287,468	$1,287,468
Elk City	10,000	$1,150,580	$0.00	$0.00	$1,150,580
John Redmond	10,000	$291,370	$0.00	$541,115	$832,485
Marion	12,500	$2,187,785	$0.00	$0.00	$2,187,785
Melvern	50,000	$6,288,429	$843,405	$0.00	$7,131,834
Pomona	32,500	$2,957,488	$635,649	$0.00	$3,593,137
Tuttle Creek	50,000	$650,211	$2,851,177	$143,726	$3,645,114
TOTAL	173,000	$13,525,876	$4,330,231	$1,972,309	$19,828,403

Also the assurance districts have utilized reserve capacity available under the Water Marketing Program. The following table depicts the water supply storage space which has been shifted from the Water Marketing Program to the Assurance Program.

TABLE 14

Marketing Reserve Capacity Used by Assurance District		
Council Grove	6,200 acre-feet	Assurance District No. 3
Marion	300 acre-feet	Assurance District No. 3
Milford	55,000 acre-feet	Assurance District No. 1
Perry	25,000 acre-feet	Assurance District No. 1

Water Assurance Districts in Kansas

Kansas River Water Assurance District No. 1

The Kansas River Water Assurance District Number 1 became operational in 1991. The district includes municipal and industrial water right holders along the Kansas River from Junction City in the west to the Kansas-Missouri border in the east. Members of the district include:

Junction City
Manhattan
Westar Energy
(Jeffrey Energy Center)
Topeka
Hills Pet Nutrition, Inc.
UCB Films, Inc.
Westar Energy (Lecompton)
Lawrence
Sunflower Ordinance Plant
Bonner Springs
Olathe
Water One, Johnson County
Proctor & Gamble
Colgate Palmolive
Kansas City Board of Public Utilities

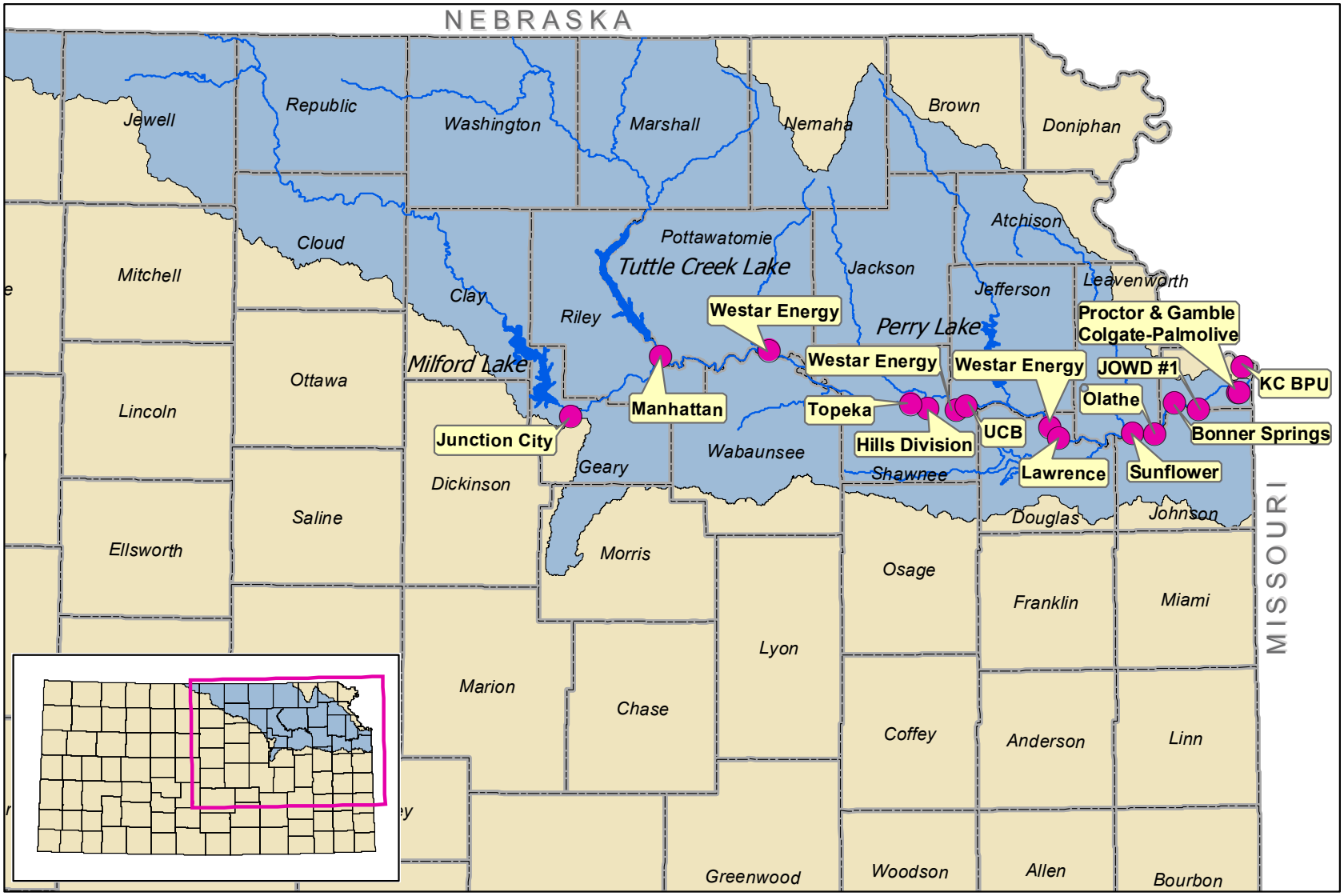
Members receive water supply service through releases from storage in Milford, Tuttle Creek, and Perry lakes. The district is paying the state for costs associated with the storage space as follows:

Tuttle Creek	27,500 acre-feet	$1,904,525 paid with bond proceeds
	13,850 acre-feet	$ 946,652 cash payment plus
		$ 143,726 PMIB loan with interest
Milford	55,000 acre-feet	$2,794,618 in 50 annual installments
		$ 545,461 in 10 annual installments
Perry	25,000 acre-feet	$ 591,785 in 50 annual installments
		$1,205,704 in 10 annual installments

In addition to these costs, the District makes annual payments for operation, maintenance, and repairs associated with the storage space dedicated to their use and an annual cost for administration and enforcement.

The following map shows the Kansas Basin, the lakes under the Kansas River Assurance Program, and the location of major municipal and industrial members of the District.

Kansas River Water Assurance District No. 1



Marais des Cygnes River Water Assurance District No. 2

The Marais des Cygnes Assurance District was formed in 1990, and a contract and operations agreement were signed in December of 1995. The district includes municipal and industrial water right holders along the Marais des Cygnes River from the City of Melvern to the Kansas City Power and Light La Cygne facility near the Kansas-Missouri border. Members of the district include:

Melvern
Ottawa
Franklin County Rural Water District No. 6
Osawatomie
Paola
La Cygne
Kansas City Power and Light

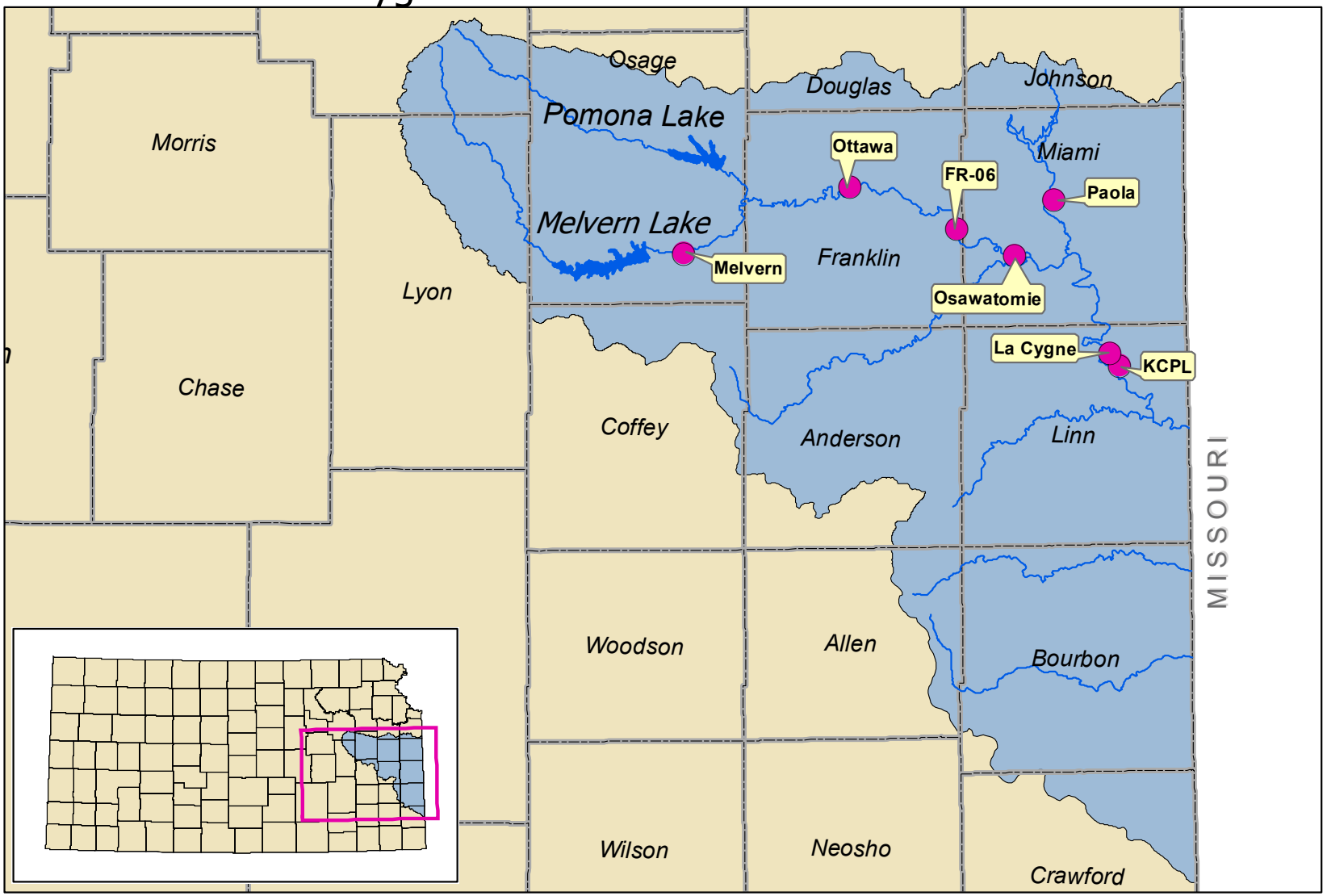
Members receive water supply service through releases from storage in Melvern, Pomona, and Hillsdale lakes. The District is paying the state for costs associated with the storage space as follows:

Melvern	7,500 AF	$813,812 in cash
		$295,932 in 10 annual installments
	200 AF (1998)	$ 29,593 in 10 annual installments
Pomona	7,500 AF	$613,345 in cash
		$223,035 in 10 annual installments
	200 AF (1998)	$ 22,303 in 10 annual installments

In addition to these costs, the District makes annual payments for operation, maintenance, and repairs associated with the storage space dedicated to their use, and an annual cost for administration and enforcement.

The following map shows the lakes included in the Marais des Cygnes River Water Assurance District and location of District members.

Marais des Cygnes River Water Assurance District No. 2



Cottonwood and Neosho River Basins Water Assurance District No. 3

The Cottonwood and Neosho River Basins Water Assurance District Number 3 was formed on August 31, 1993. The contract and operations agreement with this District were signed on August 28, 1996. There are 20 municipal and industrial members of this District with an additional five public water suppliers comprising Public Wholesale Water Supply District Number 5:

Ash Grove Cement Company
Burlington
Chanute
Chetopa
Cottonwood Falls
Council Grove
Crawford Co. RWD No. 6
Emporia
Erie
Humboldt
Iola
Kansas Army Ammunition Plant
Leroy
Monarch Cement Company
Oswego
Parsons
Public Wholesale Water Supply District No. 5
- Allen Co. RWD No. 8
- Colony
- Moran
- Neosho/Allen Co. RWD No. 2
- Walnut

Saint Paul
Westar Energy
Woodson Co. RWD No. 1

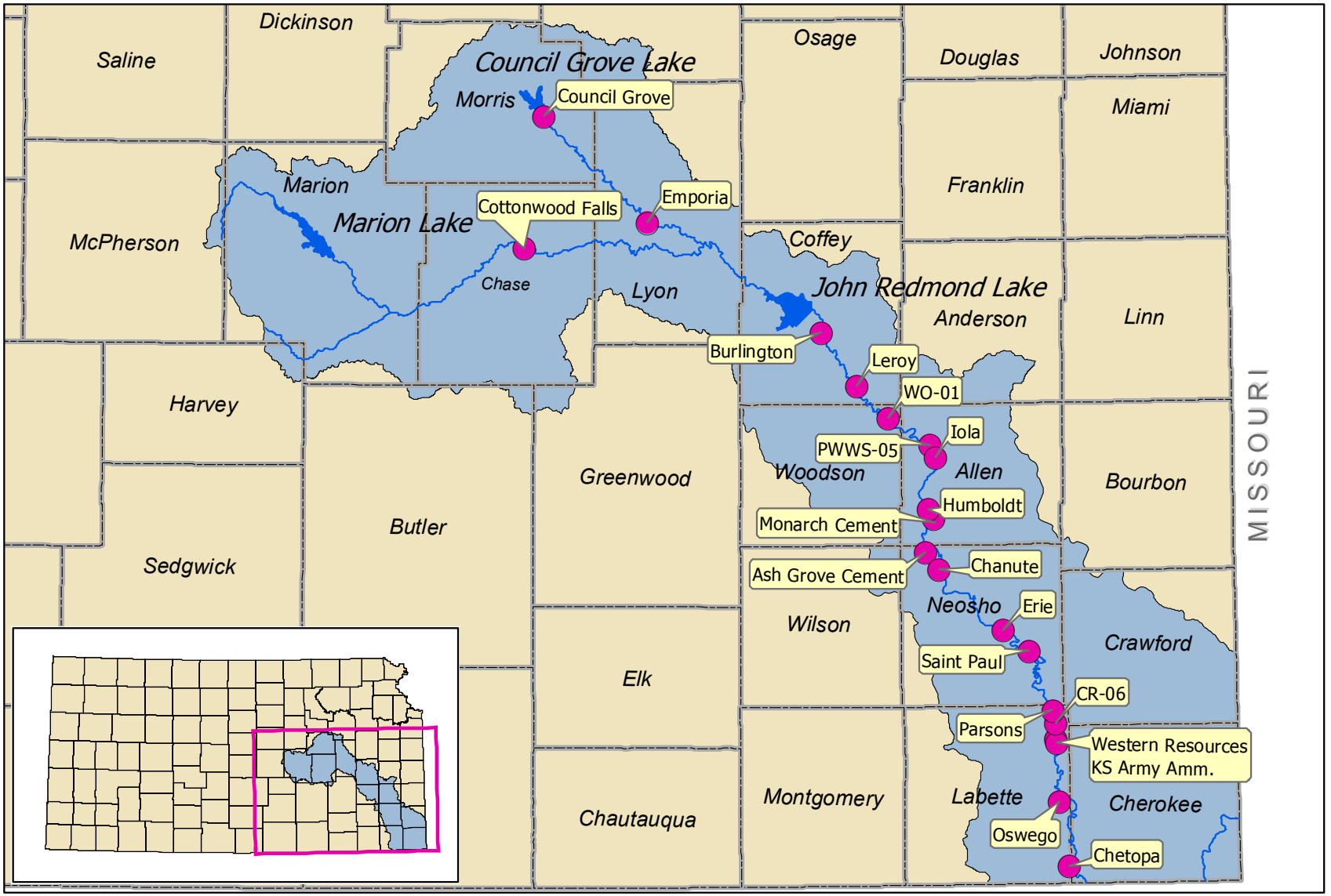
Members receive water supply service through releases from storage in Marion, Council Grove, and John Redmond lakes. The district is paying the state for costs associated with the storage space as follows:

Council Grove	6,200 AF	$288,568 in 10 annual installments $264,454 in 29 annual installments
John Redmond	3,500 AF	$291,370 in 10 annual installments
Marion	300 AF	$ 8,926 in 10 annual installments $ 9,339 in 31 annual installments

In addition to these costs, the District makes annual payments for operation, maintenance, and repairs associated with the storage space dedicated to their use, and an annual cost for administration and enforcement.

The following map shows the lakes included in the Cottonwood and Neosho River Basins Assurance District and location of District members.

Cottonwood and Neosho River Water Assurance District No. 3



STATUS OF THE MULTIPURPOSE SMALL LAKES PROGRAM

Background

The Multipurpose Small Lake Program provides a mechanism to develop proposed flood control lakes into multipurpose lakes that have flood control benefits, as well as the much-needed small town water supply source. And, if the costs are reasonable, they can be designed with recreation features for boating and fishing. The Multipurpose Small Lakes Program is also flexible enough to allow existing single purpose lakes to be renovated to include multiple benefits.

The State of Kansas, through its Water Marketing and Water Assurance programs, owns storage space in thirteen federal lakes from which water is sold under contract. For medium and large users located in close proximity to the lakes or the streams below the lakes, these programs provide an excellent, long-term dependable source of water for many municipal and industrial purposes. But for many small towns and rural water districts, the program may not be appropriate. Many communities could not afford to finance the costs of a long pipeline and other hardware involved in moving water from the lake or river to where it could be treated and distributed. What these smaller towns needed was an affordable water supply closer to their customers.

In cooperation with the State Conservation Commission, which administers the Watershed Dam Construction Program, the Kansas Water Office developed the Multipurpose Small Lakes Program (MPSL) in 1985 (K.S.A. 82a-1601). Through this program, several sites had been identified for flood control dams. It was determined that these lakes could also be used to provide water supply for small towns and rural water districts at an affordable price. Objectives of the program are:

- to reduce flood damages;
- to develop dependable water supply sources near the communities that need them;
- to initiate a process that, over time, matches water supply needs with development;
- to enable the development of projects that are cost and resource efficient, and that can be operated and maintained at the local level; and
- to ensure that adequate measures are installed to protect the lake from pollution and siltation.

One of the guiding principles behind the Multipurpose Small Lakes Program was that the State would pay for the costs including water supply storage in the lake over and above that needed immediately by a local sponsor if it was determined by the Kansas Water Office that the water supply would be needed in the area within the next 20 years. The Kansas Water Office would then obtain necessary water rights for the added water supply storage space. Through a contract with the Kansas Water Office, future users of that water would repay the State's costs. The water right would be transferred to the user upon repayment of those costs.

Water Supply Costs and Revenue

Expenditures and Sources of Funding

The first Multipurpose Small Lakes Projects were built prior to the existence of the State Water Plan Fund. The State General Fund provided some funding, but after 1987, the Water Marketing Program funded the remainder of the projects. The State General Fund provided $10,000 in 1987 for a portion of the public water supply storage space in Centralia Lake, its only funding for public water supply. To date, the State has invested $3,257,752 in public water supply storage space in six of the eleven multipurpose small lakes that have public water supply storage allocated.

In 1988, the Legislature funded Multipurpose Small Lakes Projects using revenues from the State Water Marketing Program, Conservation Storage Water Supply Fund. As noted earlier, $2,105,674 in revenue from water users under the Water Marketing Program was appropriated to finance multipurpose small lake projects. The Conservation Storage Water Supply Fund was statutorily designated to be used for the development or renovation of the large federal lakes used in the Water Marketing Program. During fiscal years 1988, 1989, and 1990, Development Fund revenue was used to finance flood control, recreation, land treatment, and public water supply costs associated with multipurpose small lakes. An Attorney General's Opinion (No. 89-32) found that these were inappropriate uses of the Water Marketing revenue. In addition, only a portion of these expenditures can be reimbursed by ultimate users – those costs for the public water supply storage space. The cost of this space accounts for $687,192 of the total expenditure. This leaves $1,418,482 in expenditures which cannot be recouped from users.

Since 1991, multipurpose small lakes have been funded from the State Water Plan Fund. In 2001, the Legislature amended the Multipurpose Small Lakes Act to allow the state to provide up to 100% of the engineering and construction costs of public water supply storage in new construction projects and up to 50% of the engineering and constructions costs of public water supply in renovation projects if the Kansas Water Office determines that renovation is the most cost effective alternative for such storage. The legislation changed the criteria for state funding eligibility to include any two of the three requirements – flood control, recreation, and public water supply. Flood control storage is no longer mandatory.

Table 15 depicts the financial history of the program to date.

TABLE 15

STATE PARTICIPATION IN FUNDING OF MULTIPURPOSE SMALL LAKES

Multipurpose Small Lakes	Water Supply	Flood Control	Recreation	Land Treatment	Total Amount Funded	Source	Fiscal Year	Total Cost of Structure
Banner Creek	$0	$0	$0	$0	$0			$4,398,012
Bone Creek		$903,402	$996,598	$0	$1,900,000	State Water Plan Fund	1991	
	$500,000				$500,000	State Water Plan Fund	1992	
	$500,000				$500,000	State Water Plan Fund	1993	
Total					$2,900,000			$5,841,465
Cedar Creek	$0	$566,020	$0	$245,000	$811,020	State Water Plan Fund	1999	$2,355,000
Centralia	$108,192	$0	$0	$240,000	$10,000	State General Fund	1987	
					$98,192	Water Marketing	1988	
					$240,000	Water Marketing	1989	
Total					$348,192			$2,308,200
Jetmore	$589,000	$582,000	$130,250	$0	$1,301,250	Water Marketing	1990	$2,020,000
Little Sugar Creek[1]	$1,266,135	$879,260	$0	$190,400	$2,335,795	Amounts Requested	1996	$4,316,615
Mill Creek	$203,405	$256,891	$0	$0	$460,296	State Water Plan Fund	1993	$979,405
Pony Creek	$815,425	$571,420	$0	$95,220	$1,482,065	State Water Plan Fund	1992	$1,871,480
Wellington	$0	$745,000	$50,000	$122,482	$917,482	Water Marketing	1989	$3,460,000
Xenia	$541,720	$334,943	$0	$57,000	$933,663	State Water Plan Fund		$2,016,000
Yates Center	$0		$100,000		$100,000	State General Fund	1987	
		$255,959	$138,440	$130,160	$524,559	State General Fund	1988	
Total					$624,559			$1,027,672
GRAND TOTAL	$4,523,877	$5,094,895	$1,415,288	$1,080,262	$12,114,322			$30,593,849

[1]Little Sugar Creek has not been constructed at this time because of the lack of sponsorship in the past.

It should be noted that the State's financial investment in public water supply storage space in multipurpose small lakes projects is considered a long-term investment. It may be up to 20 years before a local user needs the public water supply in these projects. Also, some projects listed are not yet completed. Therefore, the storage is not currently available for use.

Program Revenue

The first Multipurpose Small Lake project to result in return of State funds for the construction of the public water supply portion is the Pony Creek Project near Sabetha. The City of Sabetha signed a contract with the Kansas Water Office and paid $663,756 in CY 1995. The City now controls 81% of the water rights for public water supply in the project.

In 1992, the Kansas Water Office had appropriated $396,969 for the construction of the water supply storage space in Banner Creek Lake near Holton. By 1997, the local sponsors had developed financial resources sufficient to fund the entire construction costs associated with the public water supply thereby releasing the appropriated amount back to the program. This allowed them to acquire 100% of the public water supply storage space in Banner Creek Lake.

Table 16 depicts the water supply storage and ownership in each multipurpose small lake in the State of Kansas.

TABLE 16

MULTIPURPOSE SMALL LAKES SUMMARY

Multi-Purpose Small Lakes	Year Submitted	Year Completed	Design Life (Years)	Amount of Total Storage (AF)	Amount of PWS Storage (AF)	Amount of PWS Storage Owned by Sponsors (AF)	Percent Storage Owned by KWO	Reservoir Yield* (MGD)
Banner Creek	1987	1996	50	7,560	2,250	2,250	0.00%	1.5
Bone Creek	1989	1996	100	17,210	8,922	4,755	46.80%	2.95
Cedar Creek	1993	2001		6,570	4,000	4,000	0.00%	1.80
Centralia	1988	1989	100	7,459	824	0	100.00%	0.75
Jetmore	1988	1991	50	5,900	585	0	100.00%	0.31
Little Sugar Creek	1993	Not Constructed	100	11,060	8,400	5,460	35.00%	1.70
Mill Creek	1990	1994	100	986	293	147	50.00%	0.26
Pony Creek	1989	1993	50	2,630	728	661	9.15%	0.65
Wellington	1985	1997	50	6,500	5,300	5,300	0.00%	6.00
Xenia Lake	1992	1997	100	1,959	1,352	162	88.00%	0.52
Yates Center	1985	1990	100	2,911	2,485	2,485	0.00%	0.60

* Projected yield after the sediment allocations have been subtracted.

AF: acre-feet

MGD: million gallons per day

Moratorium on New Projects

In 1997, the Kansas Water Authority placed a moratorium on new multipurpose small lake project starts and requested a review of the policies and future direction of the program. To this date, the moratorium has not been lifted. This moratorium was based on problems that had been occurring since 1985 regarding the purpose of State participation in the water supply portion of these structures. Local sponsors had viewed the program as either a "grant" program or a "construction loan" program. This misconception was partially due to the wording of the rules and regulations governing the water supply portion of the projects. The Kansas Water Office reviewed the program and made the following recommendations:

1. Seek statutory authority to promulgate revised rules and regulations relating to the administration of that portion of the program dealing with future use water supply to ensure that it is clear that this is not a grant or construction loan program;

2. Establish an in-house process for review and certification of the need for the State to finance add-on future use public water supplies to proposed watershed projects;

3. Include targeting of priority areas for construction of multipurpose small lakes in its development of regional strategies, identifying areas where water supply shortages may occur due to a lack of adequate sources of water;

4. And consider whether the Multipurpose Small Lakes Program is adequate, with its constraints as to the requirement for the inclusion of flood control benefits, to meet the additional water supply needs of a particular region.

Recommendation 2 has been completed, and recommendation 3 is implemented in a case by case basis as requests for planning assistance for regional strategy development is submitted. Legislation was introduced during the 2000 Legislative Session to implement recommendations 1 and 4; however, this legislation did not pass. These two recommendations need to be resolved before the moratorium on new Multipurpose Small Lakes project starts can be lifted.

Banner Creek Reservoir
(Site 36)
Jackson County, Kansas

Banner Creek Lake is located one mile west and one mile south of Holton in Jackson County, Kansas, on Banner Creek, a tributary to Elk Creek. The reservoir's primary purpose is to provide a public water supply for the City of Holton and Jackson County with the secondary purpose of flood and erosion control. The City of Holton has two sources of water, Prairie Lake located three miles northeast of the city and the Keller wells located seven miles north of Holton. These sources, as well as the treatment facilities, are inadequate to allow for industrial and economic growth.

The City of Holton and Jackson County Rural Water District No. 3 were joint sponsors in the Elk Creek Watershed Project. A letter of interest was submitted on April 21, 1986, followed by a letter of intent signed on May 17, 1988. The Holton City Planning Board sent a letter of support for the project in 1987. In 1990, the governing body of the City of Holton committed the city to the anticipated use of the water supply to be impounded in Banner Creek Reservoir.

Banner Creek Reservoir was completed in 1996 for a total cost of $4,398,012. Although the papers had been filed and requests made for the funding of $396,969 (81 percent of the water supply portion) from the Multipurpose Small Lakes Program, no state funding was ever used for the public water supply portion of the reservoir. Local funding came from a one-cent countywide sales tax for a period of five years. This was voted upon at a general election and passed; however, through an oversight, the county already had a one-cent countywide sales tax. As a result, the sponsors of the project and other requested the legislature to provide an exception to the limitation for Jackson County for five years. A bill was introduced and approved by the Kansas Legislature during the 1989 legislative session. The reservoir has approximately 9,088 acres or 14.18 square miles of drainage area and a total surface area of 680 acres. The storage capacity yields 1.5 million gallons per day.

The City of Holton never utilized the funding provided by the Multipurpose Small Lakes Program; therefore, the city, who is now a member of Public Wholesale Water Supply District No. 18, has control of 100 percent of the public water supply portion of the reservoir. The District constructed a new treatment facility and began providing water from Banner Creek Reservoir to its members in 2002.

Bone Creek Lake
Crawford County, Kansas

Bone Creek Lake is located in the northeast part of Crawford County on Bone Creek in the Marmaton River drainage basin. The primary purpose is to provide public water supply followed by flood control. A variety of problems in the area, such as drought vulnerability, the need for technical assistance, and water quality, prompted several entities in Cherokee and Crawford counties to put together a public wholesale water supply district.

After the formation of Public Wholesale Water Supply District No. 11, the sponsor of the project, a letter of interest was signed in May 1988, followed by a letter of intent in August 1989. The members of the District are the cities of Arcadia, Arma, Cherokee, Columbus, Girard,

Mulberry, Weir, and West Mineral and several rural water districts including Chicopee Rural Water District, Crawford County Rural Water District no. 2, and Crawford County Rural Water District No. 6.

Bone Creek Lake was completed in 1996 for a total cost of $5,841,465. Over a three year period, $2,900,000 was funded through the Multipurpose Small Lakes Program. The lake has a drainage area of approximately 12.5 square miles and a surface area of 540 acres. The storage capacity yields 2.95 million gallons per day.

The District filed an application to appropriate 53.2 percent of the available municipal water supply concurrently with the Kansas Water Office. At the present time, the Kansas Water Office controls 46.8 percent of the storage or 1.38 million gallons per day.

Cedar Creek Reservoir
Bourbon County, Kansas

Cedar Creek Reservoir is located three miles west of Fort Scott in Bourbon County, Kansas. Its primary purpose is to provide public water supply with flood control as a secondary purpose. From the beginning of the development of this project, the Kansas Water Office thought the lake would provide a solid anchor for water supply development within the Bourbon County region. However, there was concern over the lack of sponsorship including the reluctance of the City of Fort Scott to commit to the project.

Marmaton Watershed Joint District No. 102 and Bourbon County Rural Water District Consolidated No. 2 eventually became co-sponsors in the project. The watershed district submitted the first letter of interest on May 20, 1993.

Cedar Creek Reservoir was completed in 2001 for a total cost of $2,355,000. Of that amount, $811,020 was funded through the Multipurpose Small Lakes Program; however, no money was committed for public water supply. The surface area of the lake is approximately 200 acres with a storage capacity yielding 1.8 million gallons per day.

With the willingness of Bourbon County Rural Water District Consolidated No. 2 to pay for all costs of the public water supply portion of the project, the Kansas Water Office was not interested in purchasing future use storage in Cedar Creek Reservoir. The district controls 100 percent of the public water supply storage.

Centralia Lake
(Site 50)
Nemaha County, Kansas

Centralia Lake is located in the Upper Black Vermillion Watershed Joint District No. 37 in the southwest portion of Nemaha County. Its primary purpose is to provide flood control. As a recreational facility, it replaces the Nemaha County Fishing Lake which was abandoned in 1984. The public water supply storage space provides future water needs for the area that was to be developed within twenty years. Water quality problems in the basin were a major factor in recommending that water supply be added on to the project as an alternate source. In 1988, the general plan was modified to include agricultural water management as a project purpose which required the enlargement of the dam.

On October 8, 1984, representatives from the City of Centralia and Nemaha County Rural Water District No. 3 signed Resolution 84-6 giving their support for the lake. In 1985, the City of Centralia requested financial assistance for a portion of the construction and engineering costs for water supply and land treatment cost-share funds to be used in the area draining into the lake. This request made it one of the first projects to receive funding through the Multipurpose Small Lakes Program.

Centralia Lake was completed in 1990 for a total cost of $2,308,200; $348,192 of that amount was funded through the Multipurpose Small Lakes Program. The lake has approximately 8,200 acres or 12.65 square miles of drainage area and a surface area of approximately 450 acres.

As of this date, there has been no repayment for the water supply storage space by a local sponsor; therefore, the Kansas Water Office owns 100 percent of the water supply storage space in the lake.

Jetmore Lake
(Site 4-16)
Hodgeman County, Kansas

Jetmore Lake, the fourth Multipurpose Small Lake project, is located on Spring Creek, a right bank tributary to Buckner Creek. The primary purpose is to provide flood control with the secondary purpose being public water supply. The City of Jetmore's water supply was provided by three wells; however, the city had a water quality problem with high iron and manganese content. To get the project underway, the city purchased 800 acres.

The City of Jetmore and Pawnee Watershed Joint District No. 81 are the co-sponsors of the project. The District submitted a letter of interest on February 9, 1988, with support from the Upper Arkansas Basin Advisory Committee. The City of Jetmore followed up with a letter of commitment signed by the city council on August 24, 1988.

Jetmore Lake was completed in 1991 for a total cost of $2,020,000. Of that amount, $1,301,250 was funded by the Multipurpose Small Lakes Program. The lake has approximately 21,216 acres or 33.15 square miles of drainage area with a surface area of 114 acres.

As of this date, there has been no repayment for the public water supply storage space by a local sponsor; therefore, the Kansas Water Office controls 100 percent of the water supply storage space in the lake.

Mill Creek Lake
(Site 53)
Wabaunsee County, Kansas

Mill Creek Lake is located in Mill Creek Watershed District No. 85, two miles southwest of Alma in the rugged Flint Hills on an unnamed tributary to Mill Creek. Its primary purpose is to provide flood control, and the secondary purpose is to provide a water supply for the City of Alma. The city's primary source of water was a reservoir that was built in 1966 and was supplemented with several wells in the Mill Creek alluvium and water rights in the creek itself. The city lake became an unreliable source due to seepage and leaks in the dam. In 1981, the city began inquiring about more water rights from Mill Creek.

Mill Creek Watershed Joint District No. 85 and the City of Alma became co-sponsors in the project submitting the first letter of interest on May 3, 1990. On August 16, 1990, the mayor and city council signed a letter of commitment for water supply in the project. During the approval process, concerns were expressed by several state agencies regarding the loss of 30 acres of woodlands on the project site and the size of the structure.

Mill Creek Lake was completed in 1994 for a total cost of $979,405; $460,296 of that amount was funded through the Multipurpose Small Lakes Program. The lake has approximately 2,300 acres or 3.64 square miles of drainage area and a total surface area of 81.84 acres. The storage capacity yields 0.262 million gallons per day.

The City of Alma paid for 50 percent of the public water supply capacity using funding from a bond election; therefore, the Kansas Water Office still controls 50 percent of the public water supply.

North Fork Little Sugar Creek Lake
Linn County, Kansas

A letter of interest was submitted to the State Conservation Commission on February 25, 1993, by the Marais des Cygnes Basin Public Wholesale Water Supply District to determine if the North Fork Little Sugar Creek Project was eligible for state financial assistance. The selected site is six miles west of Mound City in Linn County, Kansas with a drainage area of approximately 13.1 square miles or about 8,384 acres. The surface of the lake at normal pool level is 310 surface acres.

The original plan included water supply storage to yield 2.5 million gallons per day; however, the applicant was only willing to commit to sufficient storage capacity to yield 1.1 million gallons per day. Based on the Kansas Water Office's analysis of projected water use demand and population of the area, it was determined that the future needs of the local sponsor could be met very adequately by a lake with storage capacity yielding 1.7 million gallons per day.

The local sponsor of the project is Public Wholesale Water Supply District No. 13 which currently includes the cities of Blue Mound, Fulton, Greeley, Parker, and Mound City and Anderson County Rural Water District No. 6, Bourbon County Rural Water District No. 2C, Linn County Rural Water District No. 1, and Linn County Rural Water District No. 2. The area to be served by these entities includes parts of six Kansas counties and two counties in Missouri.

The total cost to build this project is $4,316,615 with the Multipurpose Small Lakes Program providing $2,335,795. As of this date, the project has not been built; however, it is scheduled to go to bids in the spring of 2003.

Pony Creek Lake
(Site No. 3)
Brown and Nemaha Counties, Kansas

The Pony Creek Lake is located three and one-half miles north and one-half mile east of the City of Sabetha on Pony Creek within the legal boundaries of the Pony Creek Watershed Joint District No. 78 in Brown County, Kansas. Its primary purpose is floodwater detention and sediment storage while public water supply for the City of Sabetha is the secondary purpose. The city's water supply was from the Sabetha City Lake supplemented by emergency wells. The

city lake was inadequate during times of drought and also had water quality problems such as offensive tastes and odors due to siltation, eutrophication, and the algae content of the lake.

The City of Sabetha and Pony Creek Watershed Joint District No. 78 became co-sponsors of the project by signing an agreement on June 17, 1991. Prior to this agreement, the Watershed District had submitted a letter of interest on May 8, 1989, and a letter of intent on May 25, 1989 which was revised on June 15, 1990.

Pony Creek Lake was completed in 1993 for a total cost of $1,871,480. Of that amount $1,482,065 was funded through the Multipurpose Small Lakes Program when the City of Sabetha accepted the option for possible funding in a letter dated May 30, 1990. The lake has approximately 4,166 acres or 6.51 square miles of drainage area and a total surface area of 171 acres. The storage capacity yields 0.65 million gallons per day.

Local funding by the City of Sabetha was a one-half cent city sales tax voted in by the county voters on April 2, 1991. After the construction was completed, the City of Sabetha and the Kansas Water Office negotiated the first contract for reimbursement of state costs for water supply under the Multipurpose Small Lakes Program. The state's costs were $663,756 for 81.4 percent of the public water supply storage space. In 1994, the Kansas Water Office received a payment of $663,756 plus the city had paid over run costs that credited them with 9.45 percent of the remaining storage space. The Kansas Water Office now controls 9.15 percent of the public water supply storage space in Pony Creek Lake.

Wellington Multipurpose Lake
Sumner County, Kansas

Wellington Multipurpose Lake is located in Sumner County six miles west and three miles south of the City of Wellington on gently rolling prairie used predominantly for dryland farming. The dam is on Prairie Creek approximately two-thirds of a mile below the original dam structure. Many questioned the general plan; they thought the "boat channel" which was to be cut into the original dam would allow siltation from the "old lake" to accumulate in the "new lake." The proponents of the design said the design would not allow a large amount of siltation to move from the original lake; in fact, it would retard siltation in the new portion of the lake.

The City of Wellington was the local sponsor in the project. The mayor signed Resolution No. 2664 on October 22, 1985, authorizing the director of engineering and utilities to submit a letter of interest which was done on October 24, 1985. During the approval process, it was determined that the project may adversely affect significant wetland areas requiring a 404 Permit by the Corps of Engineers and a 401 Water Quality Certification from the Kansas Department of Health and Environment.

Wellington Lake was completed in 1997 after corrections were made to the dam because of seepage. The total cost of the project was $3,460,000 with $917,482 funded by the Multipurpose Small Lakes Program. The lake has approximately 11,400 acres or 17.8 square miles of drainage area. The total surface area of the lake increased from 380 to about 670 acres. The storage capacity yields 6.00 million gallons per day.

The City of Wellington paid for all of the water supply capacity with city utility revenue and bonds; therefore, the Kansas Water Office has no financial interest in Wellington Multipurpose Lake.

Xenia Lake
Bourbon County, Kansas

Xenia Lake is located in northwest Bourbon County within the drainage area of an unnamed tributary of Limestone Creek. The primary purpose is to provide a municipal water supply with flood retardation being the secondary purpose. This project had many critics who thought there was a cheaper way of obtaining water for the small population it would serve. Also during construction, it was noted that four archeological sites had been damaged or destroyed.

Bourbon County Rural Water District No. 4 is the local sponsor of the project submitting a letter of intent on July 29, 1992.

Xenia Lake was completed in 1997 for a total cost of $2,016,000; $933,663 of that amount or 46 percent was funded through the Multipurpose Small Lakes Program. One-third of the total cost of the lake was associated with the public water supply storage. The lake has approximately 78 acres of drainage area, the smallest multipurpose lake in terms of drainage and service area. The storage capacity yields 0.52 million gallons per day.

Bourbon County Rural Water District No. 4 purchased 150 acre-feet or twelve percent of the public water supply storage in Xenia Lake. The Kansas Water Office controls 82 percent of the municipal water supply storage.

Yates Center Reservoir
(Wrampe Site)
Woodson County, Kansas

Yates Center Reservoir is located on an unnamed tributary in the upper drainage area of Big Sandy Creek in the Verdigris River Basin approximately four miles southwest of the City of Yates Center. This area is along the extreme eastern edge of the Flint Hills. The City of Yates Center had a reservoir which was their sole source of public water supply. It was 75 years old and heavily silted, an unreliable source. There was also salt water contamination in the lake due to oil production activities in the drainage area above the city reservoir. The primary purpose of the project is public water supply, and the secondary purpose is flood prevention.

The City of Yates Center is the sole sponsor of the project. On August 12, 1985, the city submitted a letter of interest followed by a letter of intent dated October 25, 1985. The mayor signed a letter of commitment for the city on January 1, 1986.

Yates Center Reservoir was completed in 1990 at a total cost of $1,027,672. Of that amount, $624,559 was funded by the Multipurpose Small Lakes Program. The lake has approximately 2,840 acres of drainage area that is mainly pasture land and a surface area of 211 acres. The public water supply capacity yields 0.60 million gallons per day.

None of the funding included the public water supply portion of the reservoir; the city funded the entire amount and has control of the public water supply storage space.

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