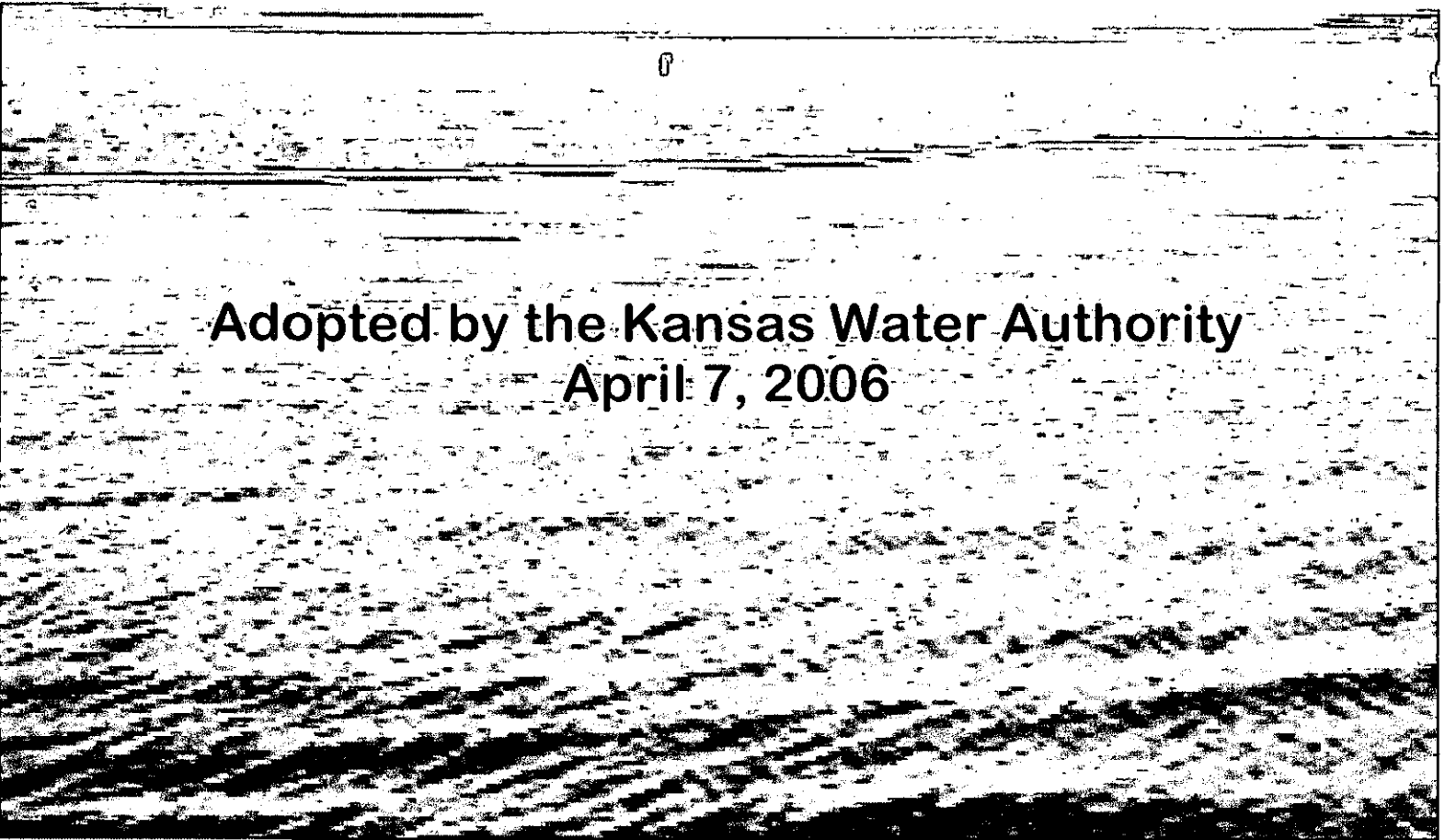


Water Marketing Program Capital Development & Storage Maintenance Plan



**Adopted by the Kansas Water Authority
April 7, 2006**

Executive Summary

During a policy review conducted in 2004, the state identified the need to develop a long-range plan outlining the financial strategy for payment of the state's cost for water supply storage as well as funding of potential restoration activities. The resulting *Water Marketing Program Capital Development and Storage Maintenance Plan* will be reviewed by the Kansas Water Authority and revised at least every five years.

The tables in this plan were developed using the following assumptions:

1. The Water Marketing Program regulations will be modified prior to setting the 2008 rate. The proposed regulations assume the variable rate is applied to all marketing contracts and therefore uses the total billable quantity of water in its computations.
2. The projected billable quantity of water is based on historic billable quantities. The projections do not account for significant increases in billable quantities which could occur if new contract(s) are negotiated,
3. The Water Marketing Program will be responsible for acquiring future use storage. Some future use storage could be obtained by Water Assurance Districts.

This plan recommends the total variable rate for 2007 be \$0.20000. This rate includes a Conservation Storage Development rate component of \$0.05954. The plan also recommends using \$380,000 from the Operations and Maintenance Set-Aside fund to help offset unusually high operations and maintenance costs in 2007. This rate will generate sufficient revenue to call into service a portion of the future use storage in Hillsdale Lake. Additional storage in Hillsdale Lake is needed to meet the needs of existing contracts.

Introduction

Kansas has contracts with the U.S. Army Corps of Engineers for purchase of water supply storage in thirteen (13) reservoirs of which approximately half of the contracted storage has not been called into service. The contracts require the state to purchase all the contracted storage within 50 years of when the first quantity of water was called into service or renegotiate for the storage. Additional revenue is needed to allow the state to call the remaining water supply into service during the terms of the existing contracts. Anticipated funding will also be needed for the installation of restoration and protection measures to protect and/or restore storage within the reservoirs and to prolong their useful lives.

Water Marketing Program Expenses

There are several federal reservoirs in which the state is making annual principal and interest payments for public water supply storage, or the storage space was paid for in a one-time lump-sum payment. The annual principal and interest payments are being made from Water Marketing Program revenues as shown in Table 1a. At the end of the contract term, the loans will be retired, and the state will have a permanent right to the use of the contracted water supply storage space in each reservoir.

Under agreements with the Federal government, the state made a policy decision in 1986 to defer payments on future use storage in Big Hill, Clinton, Hillsdale, Milford, and Perry lakes. The marketing storage currently in service at Big Hill and Milford Lakes are sufficient to meet existing contract obligations. There are no marketing contracts associated with Perry Lake. However, future use storage in Clinton is needed to meet the program's contract obligations as the entire water supply storage has been fully committed to customers. At Hillsdale Lake, part of the future use storage is needed to meet current contract obligations and expected growth in the area indicates all the future use storage will likely be committed in the long term.

This Capitol Development and Storage Maintenance Plan includes a proposal to call the additional storage in Clinton and Hillsdale reservoirs into service to meet usage demands of the Water Marketing contracts and pay for the storage from revenues from the Water Marketing Program. The proposed plan is to call the remaining storage in Clinton reservoir into service in two increments of 17,850 acre-feet (AF), one in 2014 and one in 2021. For Hillsdale reservoir, the proposed plan is to call the remaining storage into service in five increments; two increments of 10,100 AF in 2008 and 2012, two increments of 8,500 AF in 2016 and 2020, and one increment of 8,300 AF in 2024. The resulting changes in annual payments as the additional storage is called into service are reflected in Table 1a.

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 cause 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 may be set aside in this account to offset unusual operation and maintenance charges if there is any remaining revenue after expenses are met. Annual operation and maintenance payments made by the Water Marketing Program are shown in Table 1b.

The Water Marketing Program also pay for administration and enforcement costs which are the actual costs to the state to operate and administer the programs. Table 1b shows the actual and estimated annual administration and enforcement costs for 2005 – 2040.

Water Marketing Rate

Kansas Statutes Annotated 82a-1308a sets forth the procedure for the annual establishment of the rate to be charged for water under the Water Marketing Program.

The law requires the Director of the Kansas Water Office to fix the annual rate based upon computation of five components described in the law, and they are as follows:

1. An amount necessary to repay the amortized capital costs associated with the state's conservation water supply capacity.
2. An amount as interest on money advanced from the State General Fund for the Water Marketing Program to initially acquire storage space.
3. Administration and enforcement expenses.
4. Operation, maintenance, and repair costs.
5. An amount necessary to meet the needs of the program as shown in the Water Marketing Program Capital Development and Storage Maintenance Plan approved by the Kansas Water Authority.

K.S.A. 82a-1315b(b) provides for the Kansas Water Authority to approve the rate by July 15th of each year. The rate established becomes effective January 1 of the following year.

In 2005, legislation was signed into law that made three changes in the statutes regarding the manner by which the Water Marketing Program rate is calculated. First, the component for operation, maintenance, and repair costs will now be based on estimated costs for the upcoming year instead of previous year costs. There were years when the Water Marketing Program was not collecting enough O&M revenue to make the current year's O&M payment to the Corps; therefore, no money was paid back to the State General Fund or put into the conservation storage development fund account in those years. Second, the Water Marketing Program is now able to directly make payments for administration and enforcement costs, instead of repaying the State General Fund, thereby allowing the program to directly contract for services or purchase supplies needed to operate the program. Third, after 2006, the conservation storage development rate component will no longer be constant at \$0.025, but is to be an amount which is equal to the amount necessary to meet the needs of the Water Marketing Program Capital Development and Storage Maintenance Plan as approved by the Kansas Water Authority.

The 2006 rate for the Water Marketing Program using the statutorily revised formula is \$0.12289 per 1,000 gallons. Projected annual rates for 2007-2032 are shown in Table 2. To be consistent with the 2005 statute changes, modifications to the Water Marketing Program regulations are needed. A review of all the regulations has begun. It is anticipated modified regulations will be in place prior to July 2007 when the rate for 2008 will be set.

Revenue and Billable Water Quantity

Initial Water Marketing Program legislation established a maximum rate for a contract at \$0.10 per 1,000 gallons. As additional storage was obtained by the program, it became apparent that this maximum rate may be insufficient. In the mid-1980's the maximum rate was removed and the five rate components discussed above were established. An Attorney General's opinion stated those contracts which included a maximum rate (or cap) of \$0.10 per 1,000 gallons, could not be charged more than \$0.10 per 1,000 gallons regardless of the rate established under K.S.A. 1308a. The capped contracts generate approximately 85% of the revenue, while those contracts subject to the variable rate generate only 15% of the revenue.

Revenue is based on contracted quantities, which may not be equal to the water actually used each calendar year. All contracts require payment for half of the contracted quantity at the beginning of the year. If the amount of water used exceeds half of the contracted quantity, revenue is collected for the actual water used. Additionally, some contracts require payment for water diverted under a water right, if the contract holder's water right was obtained after the Kansas Water Office's water reservation right associated with the water marketing reservoir. Thus, the quantity of water that generates revenue for the Water Marketing Program is not the same as the water used through the Water Marketing Program. Billable water quantities for both capped and variable rate contracts are shown in Table 3.

Actual (2005) and projected (2006-2040) annual revenue from the Water Marketing Program are shown in Tables 3 and 4.

As seen in Table 4, the Water Marketing Program's revenues decreased from 2003 to 2004. Customers with capped contracts bought 167.2 million fewer gallons of water, accounting for a decrease in revenue of \$16,700. Variable rate contract holders bought 91.2 million more gallons of water, but the revenue received was \$54,000 less due to a decrease in the variable rate from 15 cents (\$0.15075) per 1,000 gallons in 2003 compared to 12 cents (\$0.12337) in 2004. Revenue received in 2005 exceeded the 2004 revenue, but remained below the 2003 revenue primarily because the variable rate was set at 11 cents (\$0.11667) in 2005.

Unfunded Liability

The future use storage in Big Hill, Milford and Perry has not been called into service because no anticipated marketing customer has been identified. During this time, the Water Marketing Program is not paying the Corps of Engineers capital cost or operation and maintenance nor is the storage committed to a user of the Water Marketing Program. This storage was identified in an independent program review as an unfunded liability to the Water Marketing Program. Interest continues to accrue against the capital cost prior to calling it into service.

The State has a conservation storage development fund which is within and part of the Water Marketing Program. It is proposed to establish an escrow account within the development fund, which will accrue interest at a higher rate than the interest associated with the Corps of Engineers contracts, to pay the capital cost of the storage at a future time. This would result in less money being expended by the Water Marketing Program for the capital cost and the avoidance of operation and maintenance costs until such time as the storage is needed to serve a customer. The amount necessary to set aside in the interest-bearing account annually for each reservoir is shown in Table 5.

In 2005, the Kansas Water Office recommended any remaining balance in the State Water Plan Fund be allowed to be transferred to an escrow account for this unfunded liability. The legislature did not approve of this recommendation.

It is possible the Kansas River Water Assurance District No. 1 may purchase part of the future use storage in Milford and Perry Lakes. Although not currently used for Water Assurance District purposes, future use storage in Hillsdale Lake may also be purchased

by the Marais des Cygne River Water Assurance District No. 2. However, because of the relative high costs associated with Hillsdale Lake, the Assurance District chose not to purchase storage in Hillsdale Lake when the District was formed. Any purchases by an Assurance District would reduce the amount of future use storage the Water Marketing Program would be responsible for.

This Water Marketing Program Capital Development and Storage Maintenance Plan projects the annual cost for variable contracts for each of the three lakes in Table 5. However, this plan recommends no revenue be collected in 2007 for the program's unfunded liability.

Reservoir Restoration and Protection

All lakes, natural or artificial, experience a life cycle in which the nutrient level of their water increases and sediment accumulates on the lake bed. This leads to an increased frequency of algal blooms which, in turn can cause taste and odor problems in drinking water and also limits recreational use of the reservoir. Ultimately, sediment deposition may severely reduce the water supply yield from a reservoir.

The State of Kansas is participating in a study at El Dorado Lake which will investigate costs and effectiveness of dredging and material disposal at a federal reservoir scale. Construction of sediment traps above the reservoir is also being investigated. Research at Oologah Lake in Oklahoma is looking at better integration of watershed and in-reservoir models to improve reservoir management for water quality and other factors. Most of the Oologah Lake watershed (Verdigris River) lies in Kansas.

The Kansas Water Office has developed a priority ranking system to select a reservoir at which to conduct a small lake restoration demonstration project. The purpose of this pilot study will be to investigate the cost, benefits, logistics, and other factors involved in dredging or otherwise renovating one or more small public lakes that provide local public water supply, recreational benefits, and intrinsic economic development value. The pilot study will also include a contaminant analysis and the potential effects of disposal of dredged material.

Ultimately, the Kansas Water Office will review results from the Oologah Lake and El Dorado Lake studies to assist in the development of a reservoir restoration plan at a federal reservoir in Kansas that is part of the Water Marketing Program. Upon completion of the background studies and identification of an appropriate marketing reservoir, additional funds will be set aside in the Capital Development and Storage Maintenance Plan to finance the restoration effort.

Comparison of Revenue and Expenses

Table 6 and Table 7 compare the total projected revenue generated by the Water Marketing Program to the total projected expenses (capital costs, operation and maintenance costs, and administration and enforcement costs). The information for 2005–2007 is the same in both Tables. Table 6 projects the difference between revenue and expenses if all contracts were subject to the variable rate after 2007. Table 7 projects the difference between revenue and expenses based on existing contract provisions.

Beginning in 2007, total revenue generated will be less than the expenses of the program. For 2008 through 2024, this is because additional storage is called into service at Hillsdale and Clinton lakes while most of the contracts remain capped at a rate of \$0.10 per 1,000 gallons. In 2007, the operation and maintenance cost of \$1,394,544 is over double the cost in prior years.

Table 6 and 7 show the projected rate component needed to make up the deficit between program revenue and expenses. If all contracts were variable, little to no additional revenue would be needed to meet expenses as shown in Table 6. However, Table 7 represents existing contract provisions and shows what will be required of variable rate contract holders to meet program expenses, including the payment of future use storage in Clinton and Hillsdale lakes.

Options Discussed to Date

Debt relief for Hillsdale Lake would significantly modify the projected numbers in this plan. In January, the State presented seven high priority water issues to our congressional delegation. Debt relief for Hillsdale Lake was one of the high priority items.

The Kansas Water Authority Public Water Supply Committee discussed two options to generate additional revenue which would allow the burden of calling the future use storage into service to be shared by both capped and variable rate contract holders. One option was that starting in 2008, the difference between the capped rate and the variable rate would be computed for each contract. The accumulated amount would be required to be paid at the time the customer renegotiates a new contract. However, this option would not provide money when needed, but at a later time (perhaps as late as 2018 – 2024). In addition, customers may choose not to renew an existing contract because of such a fee. Therefore, the uncertainty in this option makes it undesirable.

The other option was to assess an annual fee to all contract holders to cover the costs associated with the future use storage. The Attorney General's office has advised such a fee would need to be authorized in statute, and the fee must not be based on the contracted amount of water.

Based on the significant increase in the variable rate projected by Table 7, it is recognized action needs to be taken to minimize the variable rate. However, delaying the payment of future use storage will likely increase the overall cost to the Water Marketing Program. Therefore, exploration of additional options and obtaining input from existing Water Marketing customers will take place in the upcoming months. It is anticipated several options may need to be used in combination. If legislative action is required, such options must be identified by the end of the calendar year. Therefore, it will be necessary to update this Capital Development and Storage Maintenance Plan prior to setting the 2008 rate.

Conservation Storage Development Rate Component

The 2007 conservation storage development rate component utilizes money from the Operations and Maintenance Set-Aside fund to partially offset those high expenses in

2007. It also collects money to allow a significant amount of future use storage to be called into service in 2008 for the purpose of meeting existing customer needs.

The Operations and Maintenance Set-Aside fund currently has \$384,029.83 which can be used to offset the unusually high cost for 2007. Utilizing \$380,000 of the O & M set-aside reduces the deficit from \$465,639 to \$85,639.

To be prepared to call an increment of storage into service at Hillsdale Lake in 2008, \$570,598 must be available to pay for the first increment. As of February 2006, the Conservation Storage Development fund has \$442,523.68. If the balance of this fund is used for the first increment, \$128,075 needs to be generated in 2007. This will add \$0.06985 to the conservation storage development rate component.

This plan recommends a variable rate equal to twice the rate of a capped contract for 2007. Therefore, the conservation storage development rate component will be held at \$0.05954 in 2007 so the total variable rate will not exceed \$0.2000 per 1,000 gallons. Table 7 shows the amount the program needs to collect annually to call into service the future use storage in Clinton and Hillsdale reservoirs.

It should be noted the recommended conservation storage development rate component does not collect any money to be used toward the unfunded liability shown in Table 5. The component also does not collect money to be applied towards the state general fund debt or the operation and maintenance set-aside account.

The recommended Conservation Storage Development rate component for 2007 is to be an amount which maintains a total variable rate for 2007 of up to \$0.20000. As provided by this plan the Conservation Storage Development rate component is \$0.05954.