

MEMO



DATE: May 23, 2016
TO: Water Marketing Capital Development Plan File
FROM: Tracy Streeter, Director
RE: Setting of Calendar Year 2017 Variable Rate

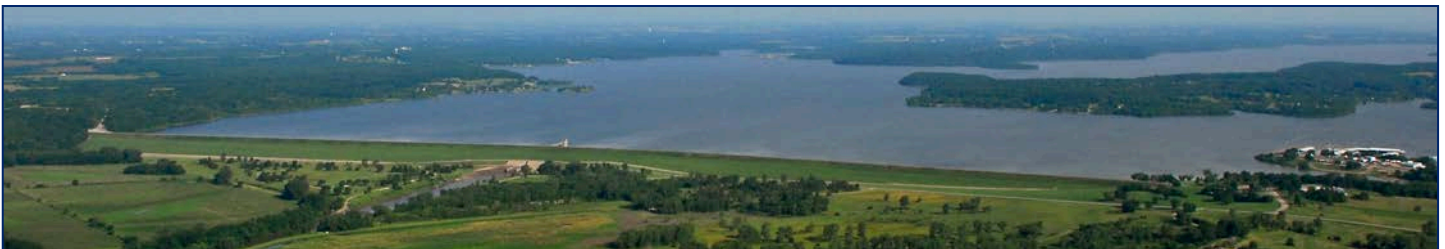
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At the May 19, 2016 meeting of the Kansas Water Authority (KWA), it was recommended that the 2014 *Water Marketing Capital Development and Storage Maintenance Plan* be used to set the rate for Calendar Year (CY) 2017, using the previously adopted flattened rate increase. The financial spreadsheets were updated with new operation and maintenance estimates to assure sufficient revenue will be collected.

Based upon this action, the KWA set the CY 2017 rate to \$0.38/1000 gallons.



**Water Marketing Program
2014
Capital Development
&
Storage Maintenance Plan**



**Approved by the Kansas Water Authority
May 21, 2014**

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EXECUTIVE SUMMARY

The Water Marketing Program operates on a cash basis, with a variable rate set each year that is adequate to meet the expected expenses. Currently, seventy five percent of water paid for under the Water Marketing Program is by customers with contracts that predate the 1983 establishment of the current variable rate structure, such that their rate is capped at \$0.10; revenue collected from those contracts makes up over half of the Program total revenue.

The variable rate under which the remaining 25% of water paid for is set using the factors shown in the text box below. The fifth component, “an amount necessary to meet the needs of the *Water Marketing Program Capital Development and Storage Maintenance Plan* as approved by the Kansas Water Authority”, is the most significant factor to ensure sufficient revenue is available to meet the needs of the Program.

The *Water Marketing Program Capital Development and Storage Maintenance Plan* also provides for the long-term planning of future Program needs, including acquisition of all the water supply storage under federal contracts, potential new storage development and protection and restoration of the storage owned by the State.

This Plan continues the schedule approved by the Kansas Water Authority in June 2006 for calling future use storage into service in Clinton and Hillsdale lakes. It also incorporates the plan to bond the final increment payments for Clinton and Hillsdale, and for the first time, Big Hill. The Plan assumes Milford and Perry reservoirs storage will be dedicated to the Kansas River Water Assurance District in the future and will not impact the Marketing Program. The 2014 Capital Development and Storage Maintenance Plan also continues the funding initiated in the current year for dredging John Redmond Reservoir.

The Water Marketing rate for calendar year 2015 is \$0.372.

K.S.A. 82a-1308a sets forth the procedure for the annual establishment of the rate to be charged for water under the Water Marketing Program. The annual rate is based upon computation of five components described in the law, as follows:

1. An amount necessary to repay the amortized capital costs associated with the state’s conservation water supply capacity. (capital cost component)
2. An amount as interest on money advanced from the State General Fund for the Water Marketing Program to initially acquire storage space. (interest component)
3. Administration and enforcement expenses. (A&E component)
4. Operation, maintenance, and repair costs. (O&M component)
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. (depreciation reserve component)

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.

INTRODUCTION

The Water Marketing Program provides water supply to industrial and municipal customers through long-term contracts. These contracts are for water delivered from storage space owned by the state in the federal reservoirs developed by the U.S. Army Corps of Engineers. Kansas has contracts with the Corps for purchase of water supply storage in thirteen (13) reservoirs; eleven of those have storage currently committed to, and being paid for by, the customers of the Water Marketing Program.

The purpose of the Water Marketing rate as established in 1983, and continuing today, is to insure that the revenue into the Program is adequate to meet the expected expenses of the Program. Those expenses include annual payments for principal and interest on storage under federal contract, operation and maintenance cost for that storage and the state's administration and enforcement cost associated with operating the Program.

The *Capital Development and Storage Maintenance Plan* was established as a way to look at the total needs of the Program and to determine the appropriate level of the Depreciation Reserve component of the variable rate under the Water Marketing Program. (See text box, previous page). This rate component was redefined in legislation passed in 2005. This change was made to ensure the Program would have an adequate cash flow in the face of increased expenses and the expectation of the need to call additional storage into service, particularly at Clinton and Hillsdale reservoirs.

WATER MARKETING PROGRAM EXPENSES (Table 1)

Table 1 summarizes the expenses of the Water Marketing Program which include principal and interest payments and operation and maintenance costs which are paid to the Corps of Engineers annually. The administration and enforcement costs to the Program are those incurred by the Kansas Water Office (KWO) and the Division of Water Resources, Department of Agriculture.

Principal and Interest to Corps

The Water Marketing Program is obligated to fully pay the capital costs of the water supply storage assigned to the Program. The contracts with the federal government typically give the state 50 years to pay the cost associated with the purchase of all of the contracted storage. Amortization schedules are included in each contract.

In five reservoirs, (Big Hill, Clinton, Hillsdale, Milford and Perry) the state has been able to delay payment until storage space is needed and the storage is called into service. An immediate payment is made on the principal and interest; the operation and maintenance costs would be incurred in the following year. This storage that is not in service is referred to as future use storage.

The rate is set using the total principal and interest costs owed to the Corps in 2015 from the amortization schedules for the storage that is currently in service. The 2015 Principal and Interest continues the increase from 2014 due to calling an increment of storage space into service in Hillsdale; the increases in 2020 are due to calling increments of storage space into service in both Clinton and Hillsdale reservoirs (See Appendix A). Principal and interest costs by reservoir are shown in Table 6.

Operation and Maintenance

The Water Marketing Program pays the annual operation, maintenance and repair costs incurred by the Corps of Engineers for that portion of the storage space assigned to the Program. These costs vary from year to year and from reservoir to reservoir.

The rate for 2015 is based on work the Corps completed in 2013 for which the state will be billed in CY 2015 (FY 2016). The Corps provided the estimated cost used in determining the 2015 rate. In past years, actual billings have been very close to the estimates.

Table 1 also includes an estimated increase in the operation and maintenance costs which the Program will incur in the future as the proposed quantities of storage are called into service in Clinton and Hillsdale reservoirs. The O&M on the increment of Hillsdale called into service in 2014 will be incorporated into the CY 2017 rate.

Operation and maintenance costs by reservoir are shown in Table 7.

Administration and Enforcement

The Water Marketing Program pays for administration and enforcement costs to the state to operate and administer the Program. Costs have increased in the last few years due to salaries and wages for employees being shifted from the State General Fund to the Water Marketing Fund as well as an increase in KWO operating expenses. Annual expenses are shown in Table 1.

WATER MARKETING PROGRAM REVENUE

Revenue for the Program comes from water sales, reimbursement for administration expenses from the Water Assurance Program and occasional use of funds from specific use accounts.

Projected Annual Water Marketing Program Water Use (Table 2)

Projected annual revenue is dependent upon the quantity of water projected to be billed to water marketing customers into the future. The estimated billable quantities are based on water paid for historically by each customer, including increases in water paid for due to graduated use schedule increases, projected into the future using a linear equation.

In projecting future years, the increase in the variable rate quantities and the decrease in capped rate quantities are based on the assumption that when the term of the capped rate contracts end, the contracts will be renewed as variable rate contracts with the same quantity as the capped contracts. The exception to this is the Westar contract at Milford for Jeffrey Energy Center which expires in 2022. This plan projects this contract not being renewed and all use being backed up by the Water Assurance Program storage.

Revenue from Capped Contract Water Sales (Table 3)

Initial Water Marketing Program legislation (1974) established a maximum rate for a contract at \$0.10 per 1,000 gallons. All contracts prior to March 17, 1983 are capped at the \$0.10 per 1,000 gallon rate. Projected (2014 - 2023) annual revenue from the capped contracts is based on the estimated billable quantity in Table 2 multiplied by the \$0.10/1,000 gallon rate. Between 2018 and 2023 this revenue line decreases as the capped contracts expire.

Revenue from Administration and Enforcement (Table 3)

The Water Marketing Fund pays the expenses associated with administration (salary and operations) of the Assurance Program, as well as the Marketing Program. The Water Marketing Program is reimbursed for administration and enforcement costs incurred by the Water Assurance Program, which is included as “Assurance A&E Reimbursement” in Table 3.

DEFICIT IN PROGRAM FUNDING NEEDS: MODIFICATIONS OF BASIC EXPENSES AND REVENUE

The difference between the projected Program expenses (Table 1) and the anticipated revenue (Table 3) is the unmet revenue need of the Program shown as “Deficit in Program Funding Needs” in Table 3. Modifications of that deficit are discussed and shown in Table 4.

Specific Use Accounts (Table 4)

Conservation Storage Fund Deposits

The State Conservation Storage Water Supply Fund was established as a savings fund for acquisition, development or maintenance of state owned public water supply storage. This Fund is currently being utilized to collect for the calls into service in Hillsdale and Clinton. The incremental increase in principal and interest payment for the increased storage is due at the time of the call into service. A significant amount of the fund will be used in 2014 to pay for the call on Hillsdale.

Collections for deposit into this Fund need to continue in 2015 to have an adequate balance for the initial payments for the next increments of Clinton and Hillsdale to be called into service in 2020. (See Call in Schedule, Appendix A).

Operation and Maintenance Set-Aside Account

In 1991, an Operation and Maintenance (O & M) Set-Aside Account within the Water Marketing Fund was established. It enables the Program to pay for any unusually high O & M expenses without causing abnormally high spikes in the rate. Up to 1 cent per 1,000 gallons of revenue from purchasers may be credited to this account if there is any remaining revenue after expenses are met. This Plan does not contain a deposit into, or expenditure from, the O&M Set-Aside Account.

Operational Reserve

The Water Marketing Program operates on a cash basis. Each calendar year, major revenues are received in January and February and major expenditures occur in September and October. The monthly cash flow is an important operational consideration. An operational reserve accommodates the uncertainty of projecting water sales revenue. In previous Plans, the KWA approved the goal of developing and maintaining an operational reserve of \$500,000, an approximate 25% operating reserve. The goal was met due to a combination of favorable revenues in 2012 and deposits from the variable rate from CY 2013 and 2014. Even with the expenditure from the reserve in CY 2014 for the plan to dredge John Redmond reservoir, (shown as operation expenditure – Reservoir Restoration) there will be no collection is necessary in 2015 to maintain the operational reserve.

Variable Rate (Table 5)

This table shows the net unfunded Program expenses after adjustments shown in Table 4. This is the amount of revenue would be collected from the variable rate customers to meet Program expenses. Dividing the net unfunded expenses by the billable quantity of water for variable rate customers shown in Table 2, results in the variable rate shown in Table 5.

The Authority has sought to flatten out variations in the rate to be able to lend financial stability to both customers and the Program. A stepped increase in the variable rate was adopted by the KWA in conjunction with discussions on reservoir restoration. The adopted “flattened rate” results in the CY 2015 rate remaining at \$0.372/1000 gallons.

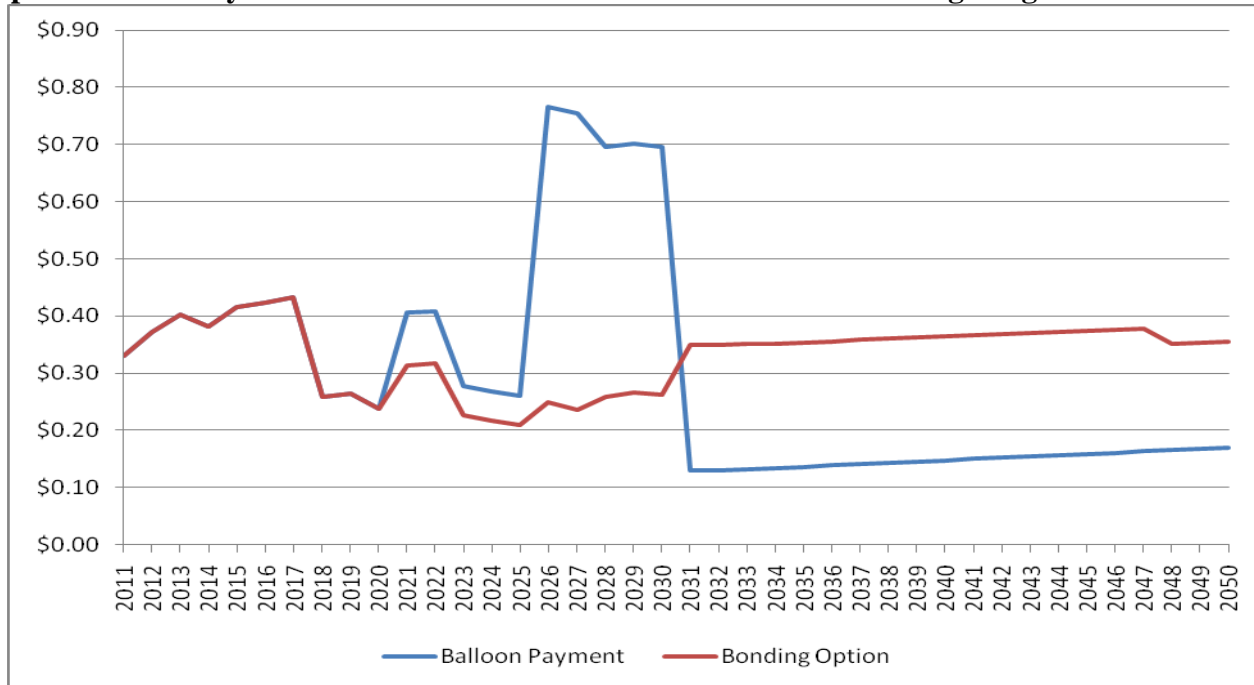
FUTURE PROGRAM ISSUES

Issuance of Revenue Bonds

This Plan establishes a schedule of calls into service at Clinton and Hillsdale reservoirs. The principal and interest payments associated with those calls are included in Table 1. The schedule leaves a significant increment, hence a significant ending payment of \$51,258,528 for Hillsdale Reservoir (2031) and \$7,870,437 for Clinton Reservoir (2027). If revenue for that final call was collected beginning in 2020, a significant temporary spike in the rate would occur. In lieu of this increase, a revenue bond would be issued when the final increment is called into service. A 20 year payoff would lessen the impact of those final increment calls and allow payoff during a time that more customers are paying the variable rate. Figure 1 illustrates the difference in the rate with and without bonding).

Figure 1

Impact of Final Payments for Clinton and Hillsdale on Water Marketing Program Variable Rate



Perry and Milford Reservoirs Future Use Storage - Unfunded Liability

As discussed above, the *Water Marketing Program Capital Development & Storage Maintenance Plan* includes a schedule to call all of the remaining future use storage in Clinton, Hillsdale and Big Hill reservoirs into service by the end of their respective contract terms. Perry and Milford reservoirs provide important support to the Kansas River system; as such, it is anticipated that all future use storage would be acquired and dedicated to the use of the Kansas River Water Assurance District.

Kanopolis Reservoir

In 2002, the state of Kansas purchased 46 percent of the conservation pool in Kanopolis Reservoir for water supply purposes, which was estimated to contain 12,500 ac-ft. State owned storage in Kanopolis is currently entirely committed to, and paid for by, the Marketing Program.

In 2012, the legislature approved the development of a Lower Smoky Hill River Access District that would allow purchase of storage to be used to meet needs of downstream water right holders. This district is in the process of forming. If a portion of the Marketing storage is sold to the access district, a proportional amount of the principal and interest and operation and maintenance costs would become the responsibility of the access district, thereby lessening the amount needed from the Marketing Fund.

Reservoir Restoration and Protection

Sediment deposition reduces the water supply yield from a reservoir. A Reservoir Roadmap to implement securing, restoring and protecting reservoir storage was presented to the 2010 Legislature. The report identifies a projected financial need of almost \$4 billion over the next 40 years.

This 2014 Plan continues the KWA recommended expenditure from the Water Marketing Fund for reservoir restoration at John Redmond (See Table 4). The 2014 Legislature has approved a 20 million dollar plan to dredge John Redmond. This will be bonded and the Water Marketing Program will support 25% of the funding.

APPENDIX A
Schedule of Calls into Service

This *Water Marketing Program Capital Development and Storage Maintenance Plan* contains the schedule adopted by the Kansas Water Authority in 2006 to call additional storage into service in Hillsdale and Clinton reservoirs. This schedule is based on the projected needs of contract holders, as well as cost considerations.

Schedule of Calls into Service Based in Clinton and Hillsdale

Calendar Year	CLINTON RESERVOIR			HILLSDALE RESERVOIR		
	AF Increment	Total AF in Service	% in Service	AF Increment	Total AF in Service	% in Service
2010		53,520	60.00		13,250	25.00
2014				3,533	16,783	31.67
2020	8,900	62,420	70.00	3,533	20,316	38.33
2025				3,534	23,850	45.00
2027	26,780	89,200	100.00			
2030				29,150	53,000	100.00

This schedule leaves significant calls until the end of the contract period for both reservoirs, leaving a significant balloon payment in 2027 for Clinton and 2030 for Hillsdale.

	2014	2015	2016	2020	2025	2027	2030	2031	2050
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Table 1. Projected Expenses

Principal and Interest to Corps	\$1,703,982	\$1,703,982	\$1,703,982	\$2,462,700	\$3,053,245	\$2,993,741	\$4,693,010	\$6,519,938	\$4,016,193
Operation & Maintenance to Corps	\$940,466	\$903,302	\$994,183	\$1,081,572	\$1,210,775	\$1,247,725	\$1,395,276	\$1,414,927	\$2,184,774
Administration & Enforcement	\$536,823	\$552,810	\$581,413	\$695,824	\$838,837	\$896,043	\$981,851	\$1,010,453	\$1,553,904
Total Projected Expenses	\$3,181,271	\$3,160,094	\$3,279,577	\$4,240,096	\$5,102,858	\$5,137,509	\$7,070,136	\$8,945,318	\$7,754,872

Table 2. Projected Water Use

Capped Contracts Billable Quantity (1000 GPY)	16,509,851	16,535,822	16,561,525	9,323,476	0	0	0	0	0
Variable Contracts Billable Quantity (1000 GPY)	4,077,189	4,680,429	5,284,130	14,114,979	16,945,079	16,993,053	17,036,577	17,059,438	17,349,084
Total Billable Quantity (1000 GPY)	20,587,041	21,216,251	21,845,656	23,438,455	16,945,079	16,993,053	17,036,577	17,059,438	17,349,084

Table 3. Revenue

Capped Contract Revenue	\$1,650,985	\$1,653,582	\$1,656,153	\$932,348	\$0	\$0	\$0	\$0	\$0
Assurance A&E Reimbursement	\$84,457	\$87,835	\$91,349	\$106,865	\$130,018	\$140,627	\$158,186	\$164,514	\$346,606
Sub-Total Revenue	\$1,735,442	\$1,741,417	\$1,747,501	\$1,039,213	\$130,018	\$140,627	\$158,186	\$164,514	\$346,606
Deficit in Program Funding Needs	\$1,445,828	\$1,418,676	\$1,532,076	\$3,200,884	\$4,972,840	\$4,996,882	\$6,911,950	\$8,780,804	\$7,408,266

Table 4. Specific Use Accounts

Conservation Storage Fund Deposits (Clinton)	\$40,277	\$40,277	\$40,277	\$40,277	\$1,059,963	\$1,059,963	\$0	\$0	\$0
Conservation Storage Fund Deposits (Hillsdale)	\$70,527	\$79,463	\$79,463	\$79,463	\$186,514	\$9,813,853	\$0	\$0	\$0
Total Conservation Storage Fund Deposits	\$110,804	\$119,740	\$119,740	\$119,740	\$1,246,477	\$10,873,816	\$9,813,853	\$0	\$0
Conservation Storage Fund Expenditures	\$282,107	\$0	\$0	\$758,719	\$932,570	\$7,419,743	\$49,069,263	\$0	\$0
Conservation Development Fund Balance	\$46,884	\$166,624	\$286,365	\$6,607	\$5,306,423	\$19,634,312	\$6,607	\$6,607	\$6,607
O&M Set-Aside Account Deposits	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
O&M Set-Aside Account Expenditures	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
O&M Set-Aside Account Balance	\$248,030	\$248,030	\$248,030	\$248,030	\$248,030	\$248,030	\$248,030	\$248,030	\$248,030
Operational Deposits	\$270,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Operational Expenditures (Reservoir Restoration)	\$0	\$66,815	\$371,100	\$460,354	\$460,354	\$460,354	\$0	\$0	\$0
Operational Reserve	\$1,309,215	\$1,242,400	\$871,300	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000

Table 5. Variable Rate

Net Unfunded Program Expenses	\$1,544,525	\$1,538,417	\$1,651,816	\$3,022,259	\$4,687,138	\$5,457,236	\$6,911,950	\$8,780,804	\$7,408,266
Variable Rate	\$0.379	\$0.329	\$0.313	\$0.215	\$0.277	\$0.322	\$0.406	\$0.515	\$0.428
Flattened Rate Increase	0.372	0.372	0.380	0.380	0.400	0.420	0.420	0.440	0.450
Revenue Generated		\$201,258	\$354,037	\$523,380	\$2,084,245	\$1,665,319	\$238,512	\$0	\$381,680

Table 6. Principal and Interest Payments by Reservoir

Reservoir	2014	2015	2016	2020	2025	2027	2030	2031	Payoff Yr
Big Hill	\$119,390	\$119,390	\$119,390	\$119,390	\$119,390	\$119,390	\$0	\$0	2029
Clinton	\$168,754	\$168,754	\$168,754	\$450,694	\$450,694	\$7,870,437	\$0	\$0	2027
Council Grove	\$38,936	\$38,936	\$38,936	\$38,936	\$0	\$0	\$0	\$0	2024
Elk City	\$77,272	\$77,272	\$77,272	\$77,272	\$0	\$0	\$0	\$0	2029
Hillsdale	\$779,916	\$779,916	\$779,916	\$1,256,695	\$2,189,265	\$2,189,265	\$2,189,265	\$4,016,193	2030*
John Redmond	\$157,580	\$157,580	\$157,580	\$157,580	\$0	\$0	\$0	\$0	2023
Kanopolis	\$234,392	\$234,392	\$234,392	\$234,392	\$234,392	\$234,392	\$234,392	\$234,392	2031
Marion	\$59,504	\$59,504	\$59,504	\$59,504	\$59,504	\$0	\$0	\$0	2026
Melvern	\$68,237	\$68,237	\$68,237	\$68,237	\$0	\$0	\$0	\$0	2026
Total Annual Payment	\$1,703,982	\$1,703,982	\$1,703,982	\$2,462,656	\$3,053,245	\$10,423,701	\$51,492,920	\$234,392	

Table 7. Operation and Maintenance Payments by Reservoir

Reservoir	2014	2015	2016	2020	2025	2027	2030	2031	2050
Big Hill	\$93,565	\$86,280	\$89,887	\$93,162	\$101,216	\$104,438	\$109,271	\$309,745	\$395,244
Clinton	\$65,803	\$121,676	\$121,026	\$141,873	\$181,270	\$187,592	\$281,625	\$286,143	\$371,967
Council Grove	\$172,847	\$156,572	\$164,929	\$168,005	\$182,272	\$187,979	\$196,539	\$199,392	\$253,605
Elk City	\$24,477	\$17,894	\$19,210	\$17,926	\$18,929	\$19,329	\$19,931	\$20,131	\$23,939
Hillsdale	\$33,737	\$59,646	\$56,615	\$82,771	\$103,141	\$122,465	\$124,540	\$125,231	\$307,488
John Redmond	\$314,662	\$330,797	\$328,164	\$359,459	\$386,938	\$397,930	\$414,418	\$419,914	\$524,338
Kanopolis	\$30,540	\$43,256	\$40,121	\$64,792	\$79,859	\$85,886	\$94,926	\$97,940	\$155,195
Marion	\$127,652	\$84,795	\$85,856	\$88,280	\$97,731	\$101,512	\$107,182	\$109,072	\$144,986
Melvern	\$42,005	\$42,782	\$42,735	\$46,803	\$50,830	\$52,441	\$54,857	\$55,663	\$70,966
Milford	\$31,007	\$43,308	\$43,147	\$50,140	\$55,304	\$57,369	\$60,467	\$61,500	\$81,123
Pomona	\$4,161	\$2,469	\$2,492	\$2,583	\$2,697	\$2,743	\$2,812	\$2,834	\$3,268
Total Annual Payment	\$940,466	\$989,475	\$994,183	\$1,115,794	\$1,260,187	\$1,319,684	\$1,466,568	\$1,687,565	\$2,332,119