

**CITY OF  
MULVANE**

**ANNUAL REPORT**

**2011  
YEAR END REPORT**

**CITY OF MULVANE  
ADMINISTRATION DEPARTMENT**

Kent Hixson, City Administrator  
Patty Gerwick, City Clerk  
Sharon Phipps, Accts. Payable Clerk/City Treasurer  
Cathy Walker, Budget/Accounting Clerk  
Ray Fleming, Building & Zoning Administrator  
Debbie Parker, Utility Billing Clerk  
Julie McCullough, Receptionist/Webmaster  
Debbie Plew, Court Clerk  
Jeri Anderson, Senior Citizens Director

2011 ANNUAL REPORT  
Administration Department

**Goal of the Department**

The goal for the Administration Department is to provide our customers (citizens, vendors and other department personnel) with the best possible service in the most efficient and timely manner.

**Status of the Department**

The Administration staff worked approximately 18,096 hours in 2011. Overtime hours worked in 2011 were 36.75 hours of which 27.75 hours were for Municipal Court. Sick leave used in 2011 was down compared to 2010. A total of 247.25 hours was used as compared to 608.75 hours in 2010. The nine employees in our department have a combined total of 166 years of experience. We have one employee with 30 and one with 28 years of service, two with 23 years of service, one with 17, one with 16, one with 14, one with 10 and one with 5 years of service.

The Senior Center continues to grow by leaps and bounds. The number of participants continues to increase for all facets of the Center. We currently are classified as a Senior Center Level 1 for funding purposes through Sedgwick County. This means we receive \$18,000 annually from Sedgwick County. Jeri has worked hard and has now meet all the requirements for a Senior Center Level 2 which would increase our funding to \$35,000 annually from Sedgwick County. Unfortunately, this funding is based on availability of funds. All paperwork has been submitted so if funding becomes available we are on the list for approval. Jeri continues to work closely with the Mulvane Recreation Commission to offer field trips for the Seniors to participate in.

Human Resources continues to be very active. We hired 11 new employees in 2011, 6 full-time and 5 part-time. In addition, we hired 44 employees for the pool season. I prepared a total of 142 W-2's to distribute for 2011. With the implementation of the Health Care Reform Act and other changes due to legislation, there continues to be more requirements for the handling of employee paperwork concerning privacy issues and employee benefits. These requirements affect all new employees as well as the exit paperwork for the 55 employees that left in 2011.

In March 2011 I attended my annual City Clerk's Conference in Wichita. This allows me to keep my Master Municipal Clerk Certification current.

We purchased new computers late in 2010 and all the computers were installed in January 2011. Credit Card usage continues to increase. Offering that option to pay bills and take care of other city business has be well received by our customers.

The Administration staff has compiled the following statistical reports to reflect the duties and responsibilities of each individual in the department. I hope this will be helpful reference material for you when visiting with the citizens.

Thank you for your continued support.  
Patty Gerwick  
City Clerk

# FINANCIAL ANALYSIS REPORT

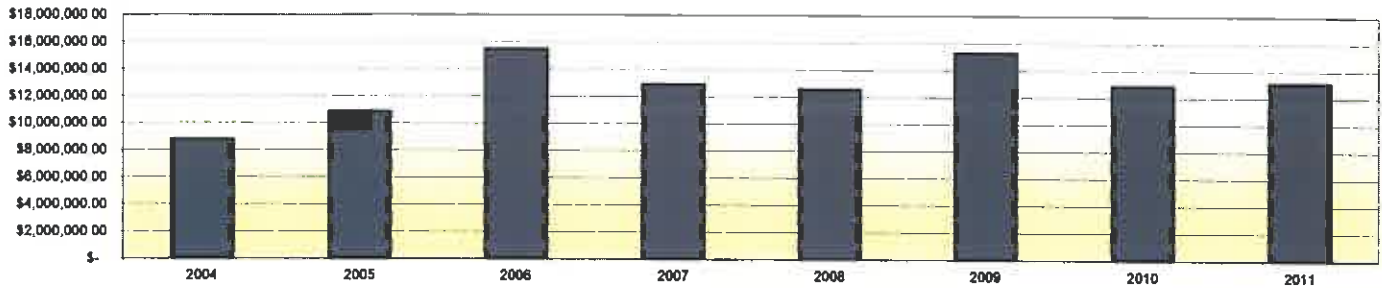
12/31/11

Prepared by Cathy Walker

## REVENUES

	2003	2004	2005	2006	2007	2008	2009	2010	2011
January	\$ 1,415,529.99	\$ 1,395,191.27	\$ 1,577,964.28	\$ 1,844,539.53	\$ 2,005,954.09	\$ 2,024,173.04	\$ 2,024,173.04	\$ 1,930,365.77	\$ 1,886,528.84
February	\$ 556,508.62	\$ 859,755.67	\$ 567,181.25	\$ 728,150.02	\$ 782,521.68	\$ 598,312.27	\$ 697,016.53	\$ 693,068.34	\$ 1,100,318.04
March	\$ 496,717.46	\$ 569,197.52	\$ 543,260.82	\$ 805,619.54	\$ 842,835.71	\$ 872,268.29	\$ 877,866.37	\$ 981,922.52	\$ 873,388.00
April	\$ 464,543.86	\$ 469,124.00	\$ 510,432.63	\$ 715,181.86	\$ 713,966.81	\$ 710,931.24	\$ 3,806,167.02	\$ 761,557.59	\$ 784,105.51
May	\$ 670,148.98	\$ 674,170.05	\$ 606,913.99	\$ 1,229,620.01	\$ 987,807.88	\$ 679,683.00	\$ 740,008.06	\$ 715,219.45	\$ 732,112.37
June	\$ 447,928.60	\$ 1,206,047.25	\$ 1,624,029.27	\$ 1,660,426.11	\$ 1,656,084.24	\$ 1,674,495.38	\$ 1,685,795.10	\$ 1,779,688.15	\$ 1,709,241.06
July	\$ 1,185,378.98	\$ 621,195.93	\$ 805,555.88	\$ 1,214,755.46	\$ 884,163.58	\$ 1,017,425.36	\$ 1,006,374.77	\$ 987,676.62	\$ 1,361,080.19
August	\$ 911,065.99	\$ 669,667.48	\$ 918,710.07	\$ 3,789,445.72	\$ 956,395.63	\$ 1,085,133.61	\$ 834,421.02	\$ 1,054,873.61	\$ 1,091,967.78
September	\$ 773,455.10	\$ 535,607.50	\$ 1,153,986.50	\$ 1,170,281.66	\$ 1,250,216.54	\$ 1,039,257.99	\$ 1,426,257.30	\$ 1,134,616.29	\$ 1,180,211.07
October	\$ 651,887.13	\$ 687,000.62	\$ 839,803.55	\$ 837,710.12	\$ 773,747.66	\$ 1,518,544.38	\$ 744,506.38	\$ 1,179,213.18	\$ 874,231.05
November	\$ 446,932.32	\$ 470,016.60	\$ 591,057.99	\$ 659,792.66	\$ 711,793.74	\$ 597,213.26	\$ 649,909.63	\$ 697,878.23	\$ 701,930.97
December	\$ 828,883.96	\$ 651,626.49	\$ 1,126,678.80	\$ 891,683.31	\$ 1,374,154.23	\$ 784,652.36	\$ 836,066.49	\$ 993,313.69	\$ 869,720.01
	\$ 8,848,780.99	\$ 8,808,600.38	\$ 10,865,576.03	\$ 15,547,206.00	\$ 12,939,641.79	\$ 12,802,090.18	\$ 15,328,561.71	\$ 12,819,391.44	\$ 13,164,834.89

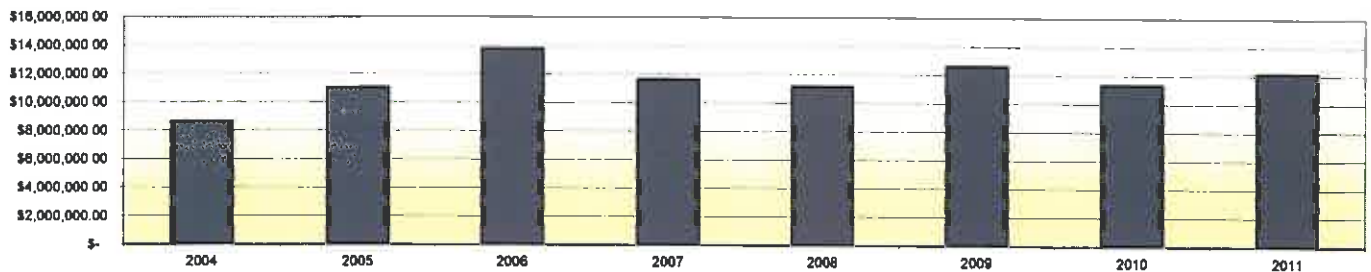
## YTD REVENUES



## EXPENSES

	2003	2004	2005	2006	2007	2008	2009	2010	2011
January	\$ 381,203.59	\$ 503,213.40	\$ 692,178.29	\$ 809,112.20	\$ 715,403.12	\$ 670,804.44	\$ 1,006,845.40	\$ 1,021,369.49	\$ 877,546.16
February	\$ 607,224.18	\$ 1,032,338.75	\$ 515,526.67	\$ 908,220.49	\$ 810,667.77	\$ 878,209.41	\$ 805,976.24	\$ 716,674.25	\$ 763,710.78
March	\$ 553,532.64	\$ 646,958.89	\$ 666,378.33	\$ 700,831.78	\$ 897,056.43	\$ 831,932.00	\$ 886,776.62	\$ 1,024,443.14	\$ 744,061.82
April	\$ 632,902.07	\$ 641,747.29	\$ 521,269.98	\$ 787,295.85	\$ 653,105.79	\$ 669,548.43	\$ 1,933,281.16	\$ 671,894.75	\$ 1,032,131.12
May	\$ 558,628.08	\$ 741,535.75	\$ 544,260.94	\$ 1,117,985.35	\$ 742,908.27	\$ 692,487.06	\$ 903,355.46	\$ 861,220.21	\$ 695,744.94
June	\$ 466,099.56	\$ 497,065.46	\$ 1,501,498.38	\$ 1,109,183.37	\$ 804,267.63	\$ 817,003.89	\$ 715,481.13	\$ 814,153.40	\$ 702,603.69
July	\$ 759,772.36	\$ 670,877.44	\$ 1,460,864.94	\$ 1,525,809.92	\$ 854,303.31	\$ 1,720,897.60	\$ 1,714,234.73	\$ 1,715,499.62	\$ 2,666,252.07
August	\$ 681,902.14	\$ 1,080,832.21	\$ 951,811.91	\$ 1,067,562.86	\$ 1,785,388.12	\$ 1,126,447.76	\$ 937,372.33	\$ 935,862.81	\$ 1,064,729.22
September	\$ 875,607.80	\$ 867,561.08	\$ 854,808.17	\$ 3,447,378.48	\$ 868,130.73	\$ 793,079.78	\$ 1,349,344.73	\$ 946,669.63	\$ 1,040,336.30
October	\$ 1,037,042.96	\$ 573,754.90	\$ 562,785.15	\$ 647,344.37	\$ 939,536.47	\$ 1,527,886.09	\$ 765,439.83	\$ 692,883.01	\$ 693,172.45
November	\$ 628,340.77	\$ 592,422.92	\$ 795,438.86	\$ 612,627.16	\$ 748,048.42	\$ 532,207.12	\$ 625,731.83	\$ 794,527.02	\$ 728,691.78
December	\$ 928,539.59	\$ 803,914.40	\$ 1,971,722.50	\$ 1,065,504.01	\$ 1,823,077.15	\$ 917,647.58	\$ 1,001,170.43	\$ 1,174,778.24	\$ 1,169,628.64
	\$ 8,110,796.74	\$ 8,652,222.29	\$ 11,038,644.12	\$ 13,798,855.84	\$ 11,841,893.21	\$ 11,178,261.18	\$ 12,645,008.89	\$ 11,369,975.57	\$ 12,180,619.97

## YTD EXPENSES

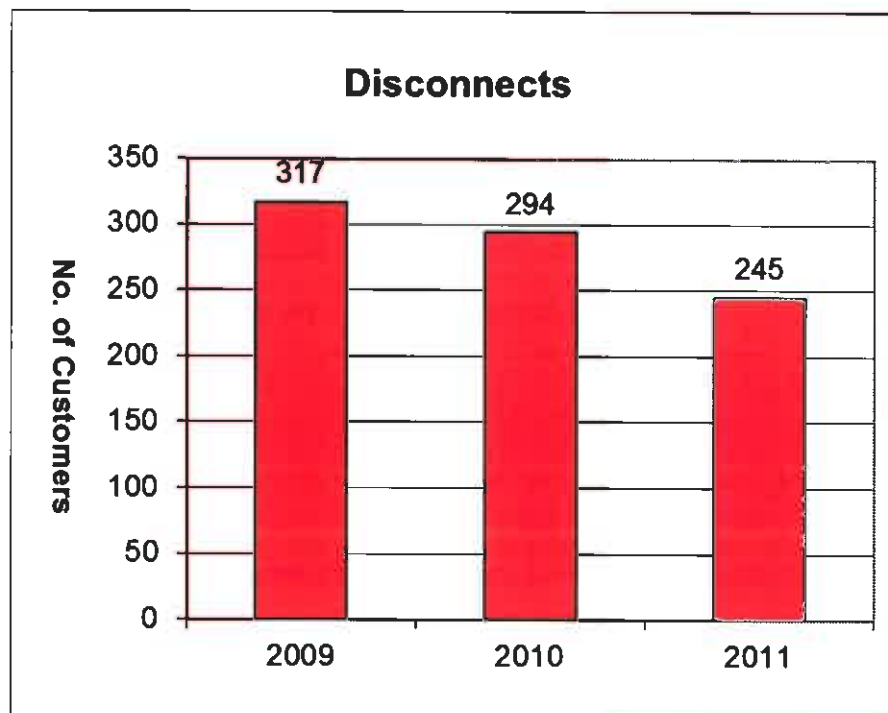


## **FUN FACTS FOR 2011**

### **DEBBIE PARKER/UTILITY BILLING**

- The amount of cash balanced to in the drive-thru window drawer was \$3,995,573.05. This is an increase of \$585,532.38 from last year. We began offering online payments to customers in August 2010.
- There were 39 high water usage letters mailed out in 2011. This is an increase of 5 from last year. If we notice a customer has excessive water usage, we will notify them by letter of a possible leak. We are not required to notify the customer, but do this as a courtesy for the customer so any problems can be corrected promptly.
- There were 83 miscellaneous utility letters mailed to customers regarding difficulty or inability to read the meter, etc. This is a decrease of 12 from last year. We will notify the customer one time. If the problem still exists the next month, the meter will be estimated. Estimations increase until the problem has been taken care of or a reading is obtained. We hope to educate the public on the importance of having safe access to the meters. This is important in case of an emergency situation such as a fire, as well as a safety issue with dogs. We have also begun letting the customer post their reading, call in, or e-mail the reading to us. This has worked very well. We double check these meters once a year for accuracy and to check for potential problems with the meter. We have also begun to send letters out making sure accounts are opened in the proper account holder's name.
- Annual interest paid to customers for their utility deposit on the December billing was \$790.13. This is an increase of \$47.24 from last year. The interest rate paid on deposits for 2011 was .50%. K.S.A. 12-822 requires a Kansas utility to pay interest on security deposits. The Kansas Corporation Commission establishes the rate on an annual basis.
- Utility write-offs in 2011 for the 2007 unpaid utility finals totaled \$4,988.56. This is a decrease of \$2,970.70 from the 2006 finals written off the year before. The State Setoff Program has helped in collecting our final bills, and has kept our amount of utility write-offs down. This write-off amount includes \$290.76 in bankruptcy.
- Eighteen (18) customers applied for their deposit refund in 2011 totaling \$3,005.09 (including interest). Customers may request their deposit back once they have paid their bill on time for 12 consecutive months. (This means payments would need to be received on or before the 5<sup>th</sup> due date.)
- We had 448 customers pay their final utility bill in full during 2011.

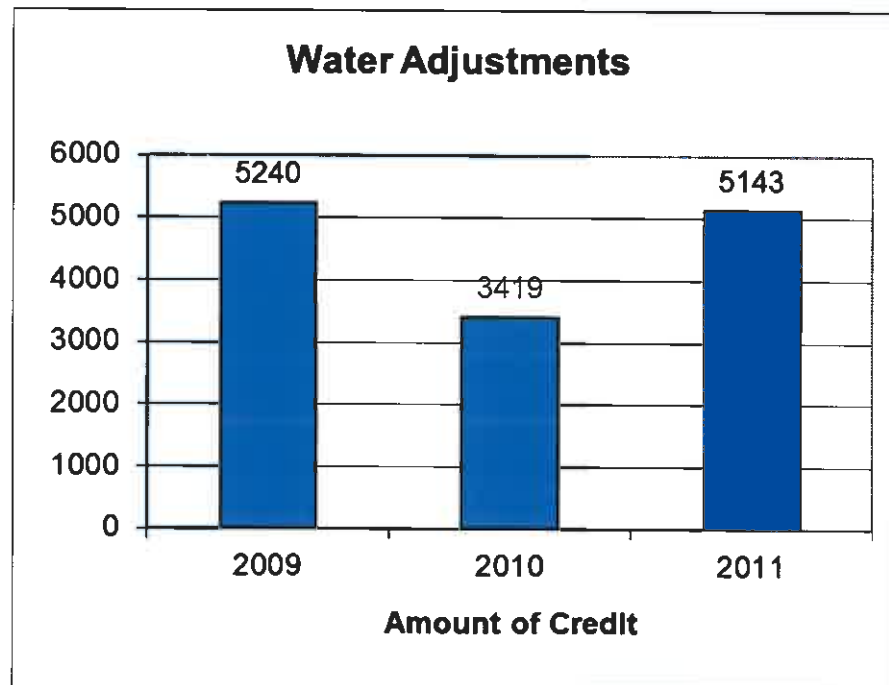
- We submitted 60 unpaid utility accounts to the State Setoff Program in 2011 in the amount of \$17,848.81. Total payments received totaled \$12,260.90 while commission paid was \$2,266.79. This made a net recovery of \$9,994.11. The net recovery increased by \$2,717.58 from last year. We have seen an increase in customers skipping out and leaving 3 or 4 months' worth of utilities unpaid.
- We had 245 customers disconnected in 2011 for non-payment of their utility bill. This is a decrease of 49 customers from last year. Sixty (60) of these customers were required to pay additional deposits totaling \$8,875.00. This is a decrease of 3 customers from last year. We discontinued payment arrangements in October 2010. We did have two disconnects a month (One on the 20<sup>th</sup> and one on the 2<sup>nd</sup> for the arrangements). We now only have one disconnect a month. Our additional deposit policy was changed from the highest utility bill in the previous 12 month period to the highest residential deposit currently being charged. We also have a cap of \$1,200.00 on residential deposits.



- In June of 2010 we began charging an administrative fee of \$30.00 plus tax, to the customer's account if they did not have their bill paid by 8:00 am on the day of cut-off. Total administrative fees charged in 2011 were \$14,513.70. This is an increase of \$3,292.26 from June of 2010.
- We currently have 325 ACH collection customers. This service is offered to our customers to automatically draft their checking or savings account for the utility payment. This is an increase of 8

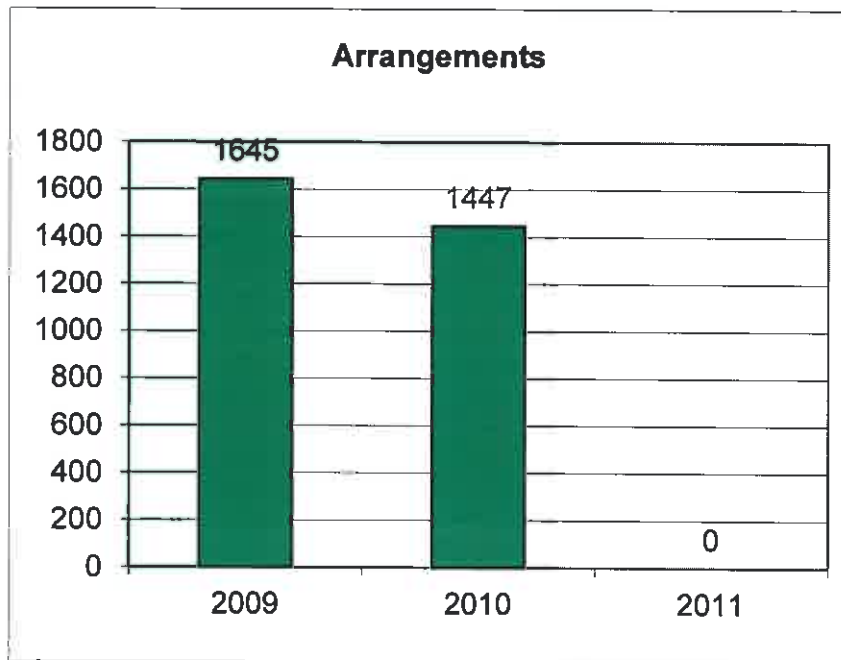
accounts from last year. I hope to promote this feature more. It has worked out very well for us, and is a big time saver. Customers can sign up for this at any time.

- We currently have 59 security lights for customers.
- Total turn-ons in 2011 were 549. This is an increase of 47 from last year. Building has decreased the past 4 years.
- Total read-outs in 2011 were 499. This is an increase of 15 from last year.
- We gave 33 customers water/sewer adjustments in 2011. Total credit given was \$5,142.97. This is a decrease of 2 customers and an increase of \$1,723.42 in credits from 2010. I would like to see more stringent criteria for water adjustments. Customers are coming in requesting an adjustment for minor increases in water usage due to leaking stools, etc. They may or may not have a receipt proving parts were purchased to repair the leak. I feel like this is not what the water adjustment is for. I believe it should be for the larger leaks that occur due to water lines breaking, etc. Customers should be able to notice when their stools are leaking and fix the problem promptly, and not wait until they have a large water bill and then apply for an adjustment.



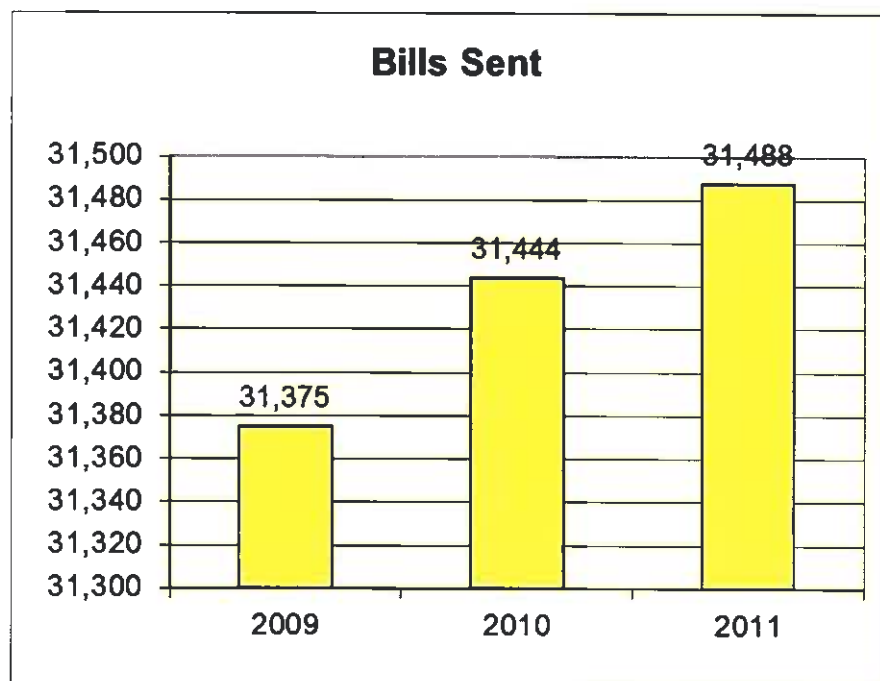
- We discontinued making arrangements effective October 1, 2010. We have really not seen an increase in disconnects on the 20<sup>th</sup> due to discontinuing the arrangements. Actually several of the arrangement customers have begun to pay their bill on time. Discontinuing the arrangements should also help with the amount of unpaid balances left by the customers when they skip out, since they

would have 10 less days of usage on their bills. We had 13 hearing requests submitted in 2011.



- Effective October 2010 we no longer accepted utility arrangements. We had a request to accept utility arrangements from Charity organizations. We made 37 good faith utility arrangements from charitable organizations in 2011.

- The total number of bills mailed in 2011 was 31,488. This is an increase of 44 bills from last year.





- The total consumptions, for service in 2011 are as follows:  
  
Water – 162,456,000 gallons – an increase of 1,851,000 gallons.  
Electric – 40,206,305 kw sold – an increase of 244,325 kw.  
Total billing - \$6,656,581.05 - an increase of \$330,084.03 from last year.  
We had a very hot and dry summer, and were on watering restrictions for part of the summer.
- We currently have 245 addresses with automatic turn-ons for landlords. We have had problems with landlords with automatic turn-ons, selling their property and not notifying us. When a bill is issued they advise the property is sold and do not pay the bill. All landlords were notified in 2007 advising if property is sold they must notify City Hall and cancel their automatic turn-on. This is a program we offer as a courtesy to our landlords. It will be discontinued if we continue to have problems. We have dropped some landlords and Mortgage Companies from the auto turn-on program due to non-payment of the utility bill. These customers are now required to put up a utility deposit before service is turned on.
- We currently have 15 electric meters red tagged due to medical hardship.
- We currently have 100 customers on level billing. Customers may sign up for this program any time provided they have a good payment history, and have lived at the same location for the previous 12 months.

# City of Mulvane

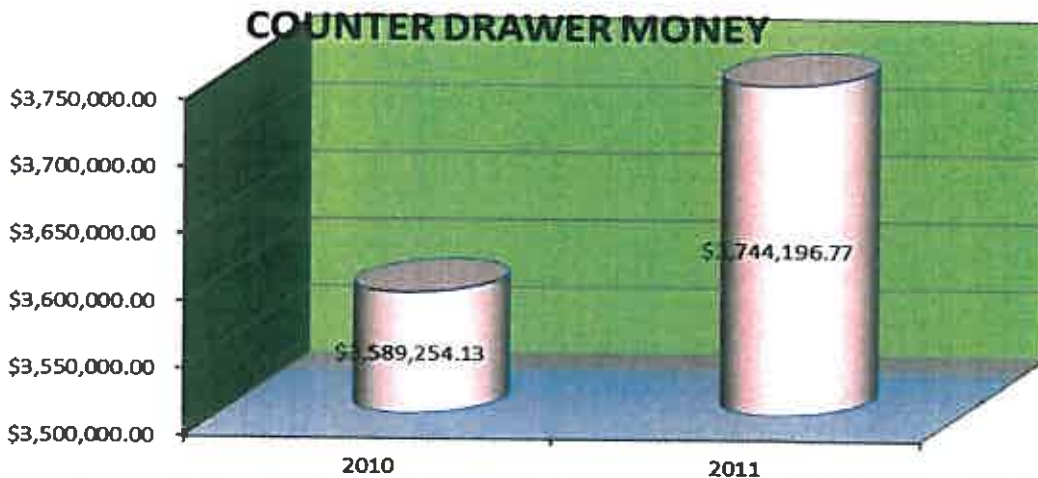
## Year End Report

Julie McCullough  
Customer Service

### 2011

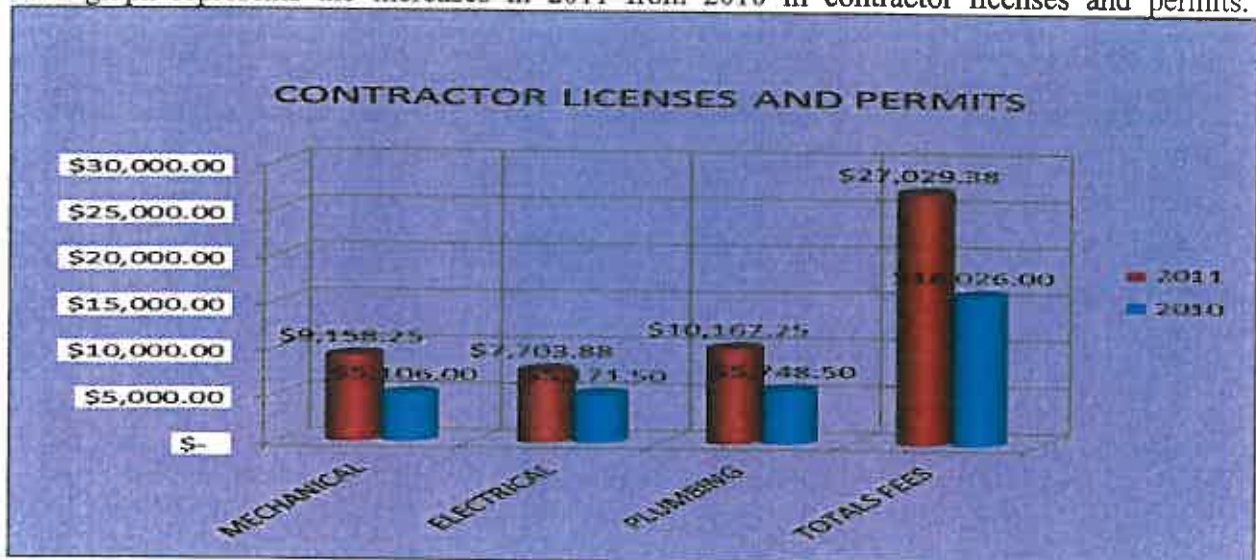
The year 2011 has come and gone!!! Mulvane became a fury of contractors, meetings and news worthy articles. The addition of the Kansas Star Casino became a reality in December of 2011. It was crazy and exciting as we witnessed our little "City of Mulvane," enter into a new dimension of big business.

There was an increase in revenue of \$154,942.64 in 2011 from 2010 brought in at the counter drawer.

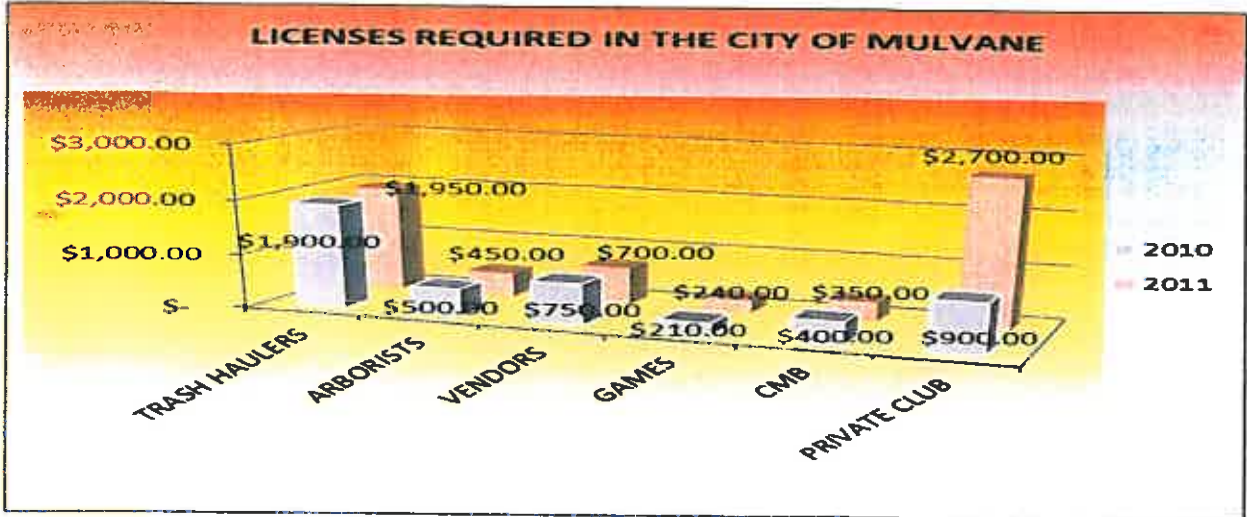


In 2011, there were a number of contractors licensing and pulling permits to perform work for the Kansas Star Casino. This continued to help the City of Mulvane during the year 2011 when building had slowed drastically.

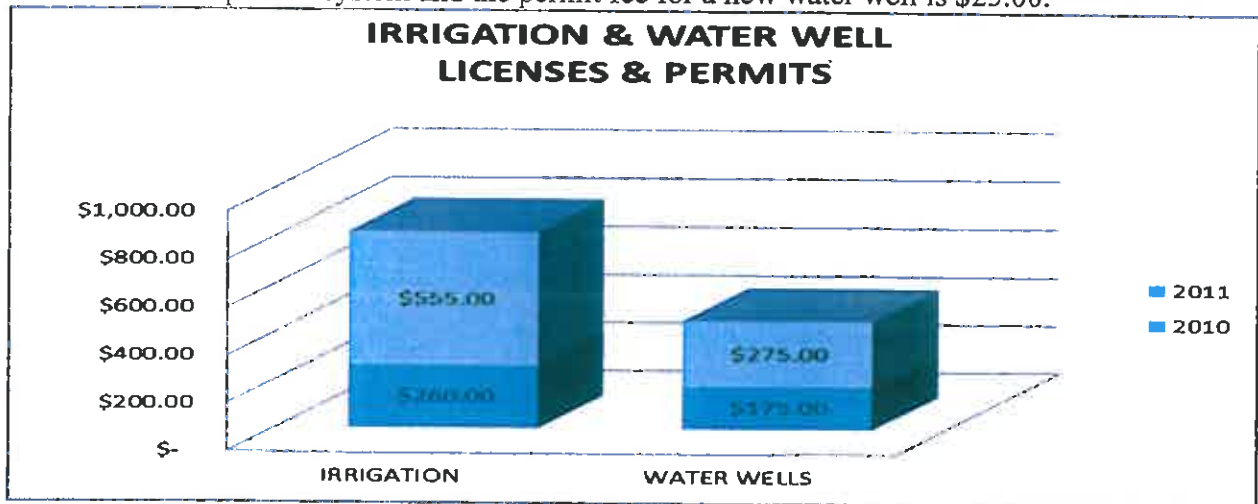
This graph represents the increases in 2011 from 2010 in contractor licenses and permits.



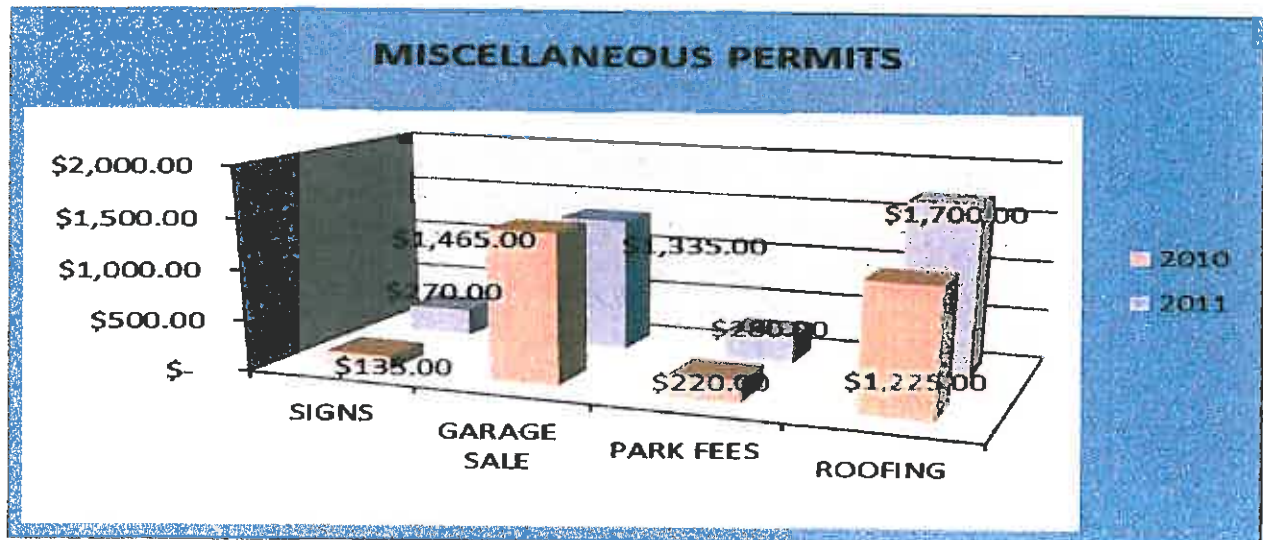
The graph below represents the various miscellaneous licenses required by ordinances in the City of Mulvane.



A Water Well Contractor and an Irrigation Contractor is responsible for having a license in the City of Mulvane. The license fee for both contractors is \$75.00. An Irrigation Permit is \$35.00 to install a new sprinkler system and the permit fee for a new water well is \$25.00.



The following graph represents the various permits the city collects and what the revenues were for 2010 and 2011.



# 2011 YEAR END REPORT

## LICENSES

	<u>2010</u>		<u>COLLECTED</u>	<u>2011</u>		<u>COLLECTED</u>
<b>Mechanical Licenses</b>	<b>99</b>			<b>110</b>		
Business Licenses:	25	\$	1,875.00	28	\$	2,100.00
Master Licenses:	38	\$	760.00	35	\$	700.00
Journeyman Licenses:	36	\$	720.00	47	\$	940.00
Permits Issued	42	\$	1,751.00	54	\$	5,418.25
<b>Total Money Collected</b>		\$	<b>5,106.00</b>		\$	<b>9,158.25</b>
 <b>Electrical Licenses</b>	 <b>80</b>			 <b>77</b>		
Business Licenses:	29	\$	2,175.00	33	\$	2,475.00
Master Licenses:	38	\$	760.00	36	\$	720.00
Journeyman Licenses:	13	\$	260.00	8	\$	160.00
Permits Issued	53	\$	1,976.50	60	\$	4,348.88
<b>Total Money Collected</b>		\$	<b>5,171.50</b>		\$	<b>7,703.88</b>
 <b>Plumbing &amp; Drain Layers Licenses</b>	 <b>77</b>			 <b>78</b>		
Business Licenses:	31	\$	2,325.00	32	\$	2,400.00
Master Licenses:	38	\$	760.00	35	\$	700.00
Journeyman Licenses:	8	\$	160.00	11	\$	220.00
Permits Issued	52	\$	2,503.50	75	\$	6,847.25
<b>Total Money Collected</b>		\$	<b>5,748.50</b>		\$	<b>10,167.25</b>
 <b>Building Contractors Licenses</b>	 <b>55</b>	\$	<b>5,900.00</b>	 <b>70</b>	\$	<b>6,200.00</b>
Class A & B	35	\$	3,500.00	35	\$	3,800.00
Class C & D	32	\$	2,400.00	32	\$	2,400.00
 <b>Irrigation Contractor Licenses</b>	 <b>3</b>	\$	<b>225.00</b>	 <b>6</b>	\$	<b>450.00</b>
Irrigation Permits	1	\$	35.00	3	\$	105.00
<b>Total Irrigation Licenses and Permits</b>	<b>4</b>	\$	<b>260.00</b>	<b>9</b>	\$	<b>555.00</b>
 <b>Water Well Contractor Licenses</b>	 <b>2</b>	\$	<b>150.00</b>	 <b>2</b>	\$	<b>150.00</b>
Water Well Permits	5	\$	25.00	5	\$	125.00
<b>Total Water Well Licenses and Permits</b>	<b>7</b>	\$	<b>175.00</b>	<b>7</b>	\$	<b>275.00</b>
 <b>Roofing Permits</b>	 <b>45</b>	\$	<b>1,225.00</b>	 <b>64</b>	\$	<b>1,700.00</b>
 <b>Trash Haulers Totals</b>		\$	<b>1,900.00</b>		\$	<b>1,950.00</b>
Companies Licenses	3	\$	1,500.00	3	\$	1,500.00
Trucks Licensed	8	\$	400.00	9	\$	450.00

	<u>2010</u>	<u>COLLECTED</u>	<u>2011</u>	<u>COLLECTED</u>
<b>Game Licenses</b>				
Coin Operated Machines	14	\$ 210.00	16	\$ 240.00
<b>Cereal Malt Beverage Licenses</b>	6	\$ 400.00	5	\$ 350.00
Consumed on Premises @ \$100.00 (Biennial)	1	\$ 100.00	1	\$ 200.00
Not consumed on Premises @ \$50.00 (Biennial)	4	\$ 200.00	4	\$ 150.00
Temp. Lic. For RD's Beer Garden - Old Settlers	1	\$ 100.00	0	\$ -
<b>Private Club Licenses</b>	3	\$ 900.00	3	\$ 2,700.00
Class "A" American Legion fees waived 2005-2006	1	\$ 300.00 FEE WAIVED	1	\$ 300.00 FEE WAIVED
Class "B" (Biennial)		\$ -		\$ -
Drinking Establishment (Biennial)	2	\$ 600.00	3	\$ 1,500.00
Farm Winery License (Biennial)		\$ -		\$ -
Retail Liquor Store (Biennial)	1	\$ 300.00	2	\$ 1,200.00
<b>Vendors Licenses</b>	12	\$ 750.00	19	\$ 700.00
Annual Licenses @ \$250.00 each issued	2	\$ 500.00	1	\$ 250.00
Daily Licenses @ \$25.00 each issued	10	\$ 250.00	18	\$ 450.00
<b>Arborists Licenses</b>	10	\$ 500.00	9	\$ 450.00
<b>Park Bandshell Fees</b>	37	\$ 220.00	37	\$ 280.00
<b>Garage Sale Permits</b>	293	\$ 1,465.00	267	\$ 1,335.00
<b>Dog Licenses</b>	248	\$ 1,240.00	252	\$ 1,260.00
<b>Sign Permits</b>	5	\$ 135.00	18	\$ 270.00
<b>TOTAL REVENUE FROM LICENSES AND PERMITS</b>		\$ 29,056.00		\$ 42,744.38
<b>TOTAL AMOUNT OF MONEY COLLECTED IN THE COUNTER DRAWER</b>		\$ 3,589,254.13		\$ 3,744,196.77

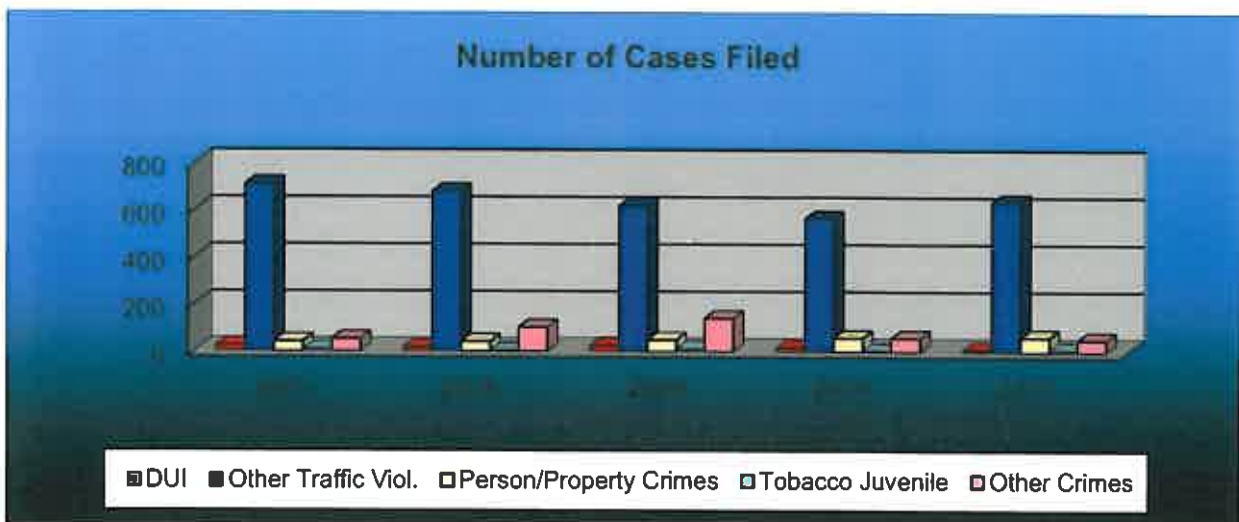
MULVANE MUNICIPAL COURT  
YEAR END REPORT  
2011

Municipal Judge: Duane Brown  
City Prosecutor: Larry Linn  
Court Clerk: Debbie Plew  
Probation Office: Cherie Nelson

The Mulvane Municipal Court held 35 sessions in 2011. Court was cancelled due to inclement weather on February 1, 2011. The 35 sessions consisted of actual court time of approximately 63.50 hours.

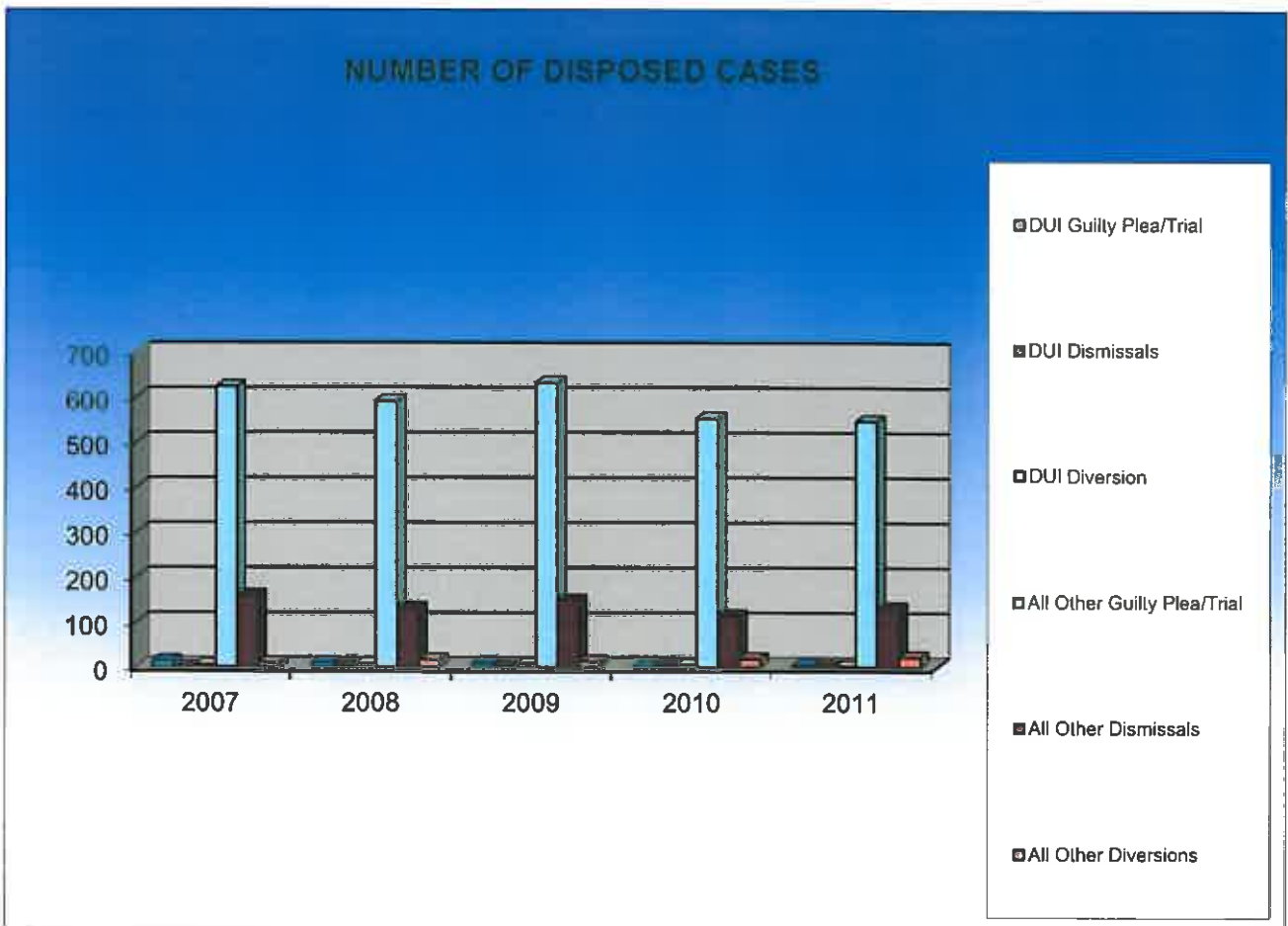
Below is an overview of the type and number of cases filed during the year and the number of cases disposed of during the year.

Number of Cases Filed	2007	2008	2009	2010	2011
Reckless Driving	1	0	2	1	1
Driving Under the Influence	24	17	25	16	9
Flee Police Officer	0	0	0	0	1
Other traffic violations, excluding parking	710	679	617	565	636
Crimes against persons	37	38	33	52	60
Crimes against property	4	3	16	6	1
Cigarette & tobacco infractions	8	3	11	2	8
Other Crimes	52	102	141	58	51
Total Number of Cases Filed During Year	836	842	845	700	767





Number of Cases Disposed of During the Year	2007	2008	2009	2010	2011
DUI, Guilty Plea	14	9	14	8	4
DUI, Bond Forfeitures	0	0	0	0	0
DUI, Dismissals	0	4	2	4	3
DUI, Trials (on pleas of not guilty)	0	1	1	1	1
DUI Diversion Agreements	5	8	8	6	2
Other Cases, Guilty Pleas	624	591	632	553	547
Other Cases, Bond Forfeitures	0	0	0	0	0
Other Cases, Dismissals	160	131	148	115	132
Other Cases, Trials (on pleas of not guilty)	6	1	1	9	1
Other Cases, Diversion	10	17	13	19	23
Total Cases Disposed of During the Year	819	762	819	717	713

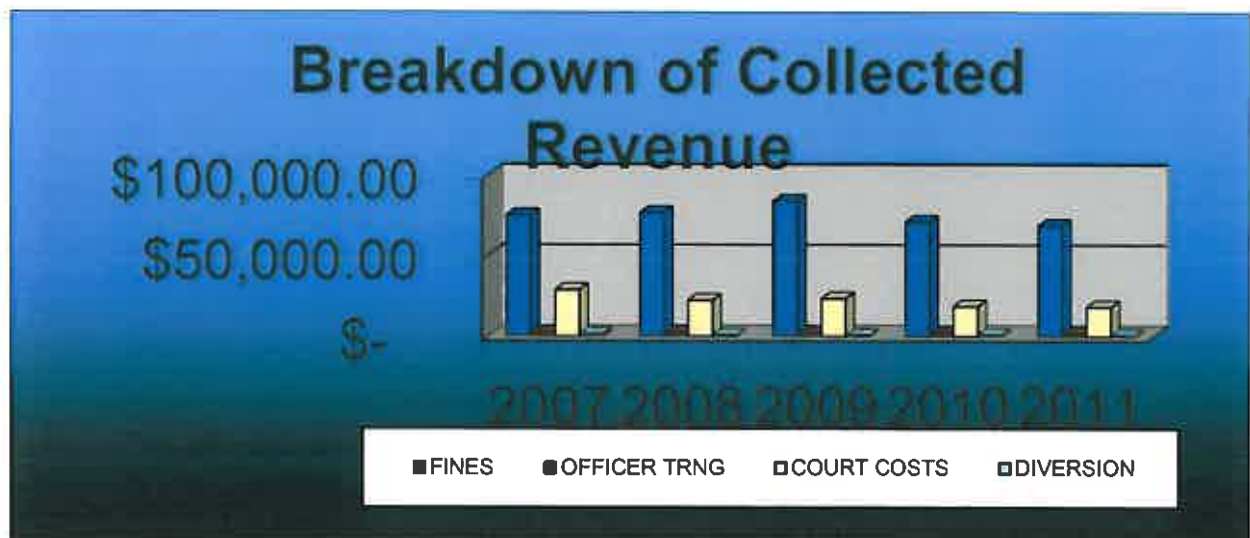


Defendants with minor traffic infractions, (such as speeding, disobey traffic control device) can meet with the Prosecutor on their court night about amending the charge to a non-moving violation. People choose to do this to keep the violations off their driving records. In 2011 the Prosecutor amended 70 minor traffic violations; the scheduled fine amount totaled \$4,580.00. After amending to a non-moving violation, total fines assessed were \$11,159.00. In 2010 the Prosecutor amended 65 minor traffic violations. The original fine amount assessed was \$3,805.00; after amendment assessed fines were \$9,565.00. Diversion is still offered for DUI, Battery and other misdemeanor criminal offenses.

In 2011, \$1,500.00 was paid for in court appointed attorney fees and \$1,994.00 was collected. In 2010 the City paid out \$2,850.00 and collected \$3,196.73.

In 2011 we collected for the State of Kansas and forwarded to them \$11,734.00 for Judicial Branch Education, Law Enforcement Training and Reinstatement fees. The distribution, along with a brief report, is made monthly. This is an unfunded mandated service we provide to the State of Kansas.

<b>Fund</b>	<b>Collected 2008</b>	<b>Collected 2009</b>	<b>Collected 2010</b>	<b>Collected 2011</b>
Court Fines	\$ 76,649.77	\$ 83,976.32	\$ 71,045.31	\$ 68,906.25
Court Costs	\$ 22,317.67	\$ 23,324.00	\$ 18,553.88	\$ 18,343.00
Officer Trng	\$ 2,007.00	\$ 2,147.00	\$ 1,650.00	\$ 1,596.00
Diversion	\$ 660.00	\$ 600.00	\$ 958.66	\$ 607.98
<b>Total</b>	<b>\$101,634.44</b>	<b>\$110,047.32</b>	<b>\$ 92,207.85</b>	<b>\$ 89,453.23</b>





We have continued to actively enforce the Kansas Crime Victims' Bill of Rights. The Court Clerk is the Victim Rights Coordinator. Through this program, we keep the victims informed about the progress of their cases and provide them with a wide range of services. The coordinator makes both written and oral contact with the victims. The court highly values the input of all victims.

The probation officer conducted 41 interviews in 2011; for either a pre-sentence investigation or diversion assessment. We paid the Probation officer \$4,050.00 for evaluations and pre sentence investigations in 2011, and collected \$4,250.00. In 2010, we paid out \$3,500.00 and collected \$2,630.00 for pre-sentence investigations and evaluations.

We have continued with our "pay or appear policy". This is for individuals who need some time to pay their fine and court costs. The individual is required to continue to appear in court on a regular basis until their fine and costs are paid in full. Unpaid cases that meet the criteria for the State's Setoff Program are placed on it for attempt at collection of those fees. The Court received \$2,120.49 from Setoff in 2011. In 2010, the court received \$3,783.29 from Setoff.

The Court paid \$595.00 in jail fees in 2011. In 2010, the Court paid \$3,599.79 in jail fees. The reduction in jail fees paid out reflects few arrests being made in 2011, and fewer defendants being sentenced to serve time in jail. The Judge tries to give defendants house arrest in lieu of jail. House arrest is paid by the defendant directly to the company monitoring House Arrest at no cost to the Court.

2011  
PLANNING, ZONING AND CONSTRUCTION ACTIVITY  
REPORT



The following report is a compilation of the information from 2011 of the Planning Commission, BZA and the construction activity, including permits for new construction and remodeling activity.

In 2011 the Planning commission met a total of 15 meetings.

**PLATS, LOT SPLITS, AND VACATIONS:**

In 2011 the Commission considered one plat and one Planned Unit Development Plan . Both of which were within the city limits.

**ANNEXATIONS:**

The City did not annex any land in 2011.

**ZONING AND SPECIAL USE CASES**

**Rezoning Applications:**

In 2011 the Planning Commission considered one zoning case. One was part of the Kansas Star Planned Unit Development .

**Special Use applications:**

The Commission considered two special use cases in 2011. One of them being the Lottery Gaming Facility and the second was the Forced Main Monitoring Station.

**Comprehensive Plan Amendment:**

In 2011 the Planning Commission completed the Mulvane West Area Plan which was adopted as an element of the Comprehensive Plan. The Commission felt it was critical to incorporate the area around the Turnpike exchange as soon as possible because of the potential of further development. The plan was actually began in April of 2010 and was completed the latter part of 2011.

In 2011 two committees were created, a Technical advisory and a Steering Committees with representatives from Mulvane, Derby, Haysville, Wichita, and Sedgwick County, to develop what is being called the Sedgwick County Quad Cities Joint Area Plan. It is a study similar to the one between Mulvane and Derby to determine future planning area boundaries for each City west of Mulvane, Between the river and Seneca and from 119<sup>th</sup> Street up to 79<sup>th</sup> Street South.

This Plan is expected to be completed by the end of 2012.

Also in 2011 other plans were initiated to study the US Highway 81 and K-53 corridors to determine what if anything needs to be done to improve traffic.

### **Site Plans:**

The Commission reviewed two site plans in 2011. One was the Kansas Star Casino Plan and the second was the Homestead multiple-family housing project.

### **BZA ACTIVITY:**

The Board of Zoning Appeals considered one Conditional use to allow advertising signs on property adjacent to the turnpike on property within the city limits.

One variance to reduce the front yard setback for a enclosed porch was also considered in 2011.

## **2011 CONSTRUCTION ACTIVITY**

*The following is a compilation of activity for permits compared to the years issued since 1990. Unless otherwise mentioned. All information isn't available before that year.*

### OVERALL CONSTRUCTION VALUATION AND PERMIT NUMBERS

As you know 2011 was a phenomenal year for construction for commercial permits and total valuation. The number of permits issued is up from 2010 number of 38 to 55. This is approximately a 30% increase from last year's numbers, but is down from the 20 year average of 72 permits. This consists of all construction activity, commercial residential, including additions, remodel and new construction.

The total construction value for 2011 was \$80,800,000.00. The highest valuation for any year since 1990 previous to 2011 was \$24,752,000.00. The average valuation per year since 1990 previous to last year was \$7.33 million dollars. This figure reflects an 72% decrease in valuation of the average per year valuation of \$7,330,000.00, This number is a yearly valuation data on permits issued since 1990.

As I have reported in the past years Mulvane has never had a huge amount of commercial development. 2011 proved to be a very different year than ever before.

### SINGLE FAMILY DWELLINGS VALUATION AND PERMIT NUMBERS

2011 wasn't as vigorous for single family residential development as the commercial was. In 2011, 7 permits were issued for single family dwellings. It is at least an increase from 2010 in which 5 permits were issued for single family dwellings. It is down about 75% from the average per year since 1990 of 32 dwellings. The average size of the single family dwellings stayed about the same which was 1,600 square feet as it was in 2010. The average valuation per dwelling was similar to the previous year as well which was \$171,000.00.

In 2011 a permit was issued for the Homestead project which is the 40 unit multiple family dwelling project on Rock Road Court. It is an Independent Living facility with several different configurations for tenants to choose from.

At this writing the community center and three of the dwelling units have been issued certificates of occupancies. It is planned for it to be complete by mid-year of 2012.

It was not expected for 2011 to be any different than the previous four years as far as development is concerned until December of 2010. That is when the Lottery gaming Facility site was chosen to be at the Mulvane location.

2011 was a year filled with continuous meetings for the planning Commission, council, and staff to consider all of the issues that had to be reviewed for the largest private development the City of Mulvane has ever had, and probably very few cities have ever had. The results of those decisions will hopefully encourage other development to spring up around the area of the Kansas Turnpike, K-53, and US Highway 81.

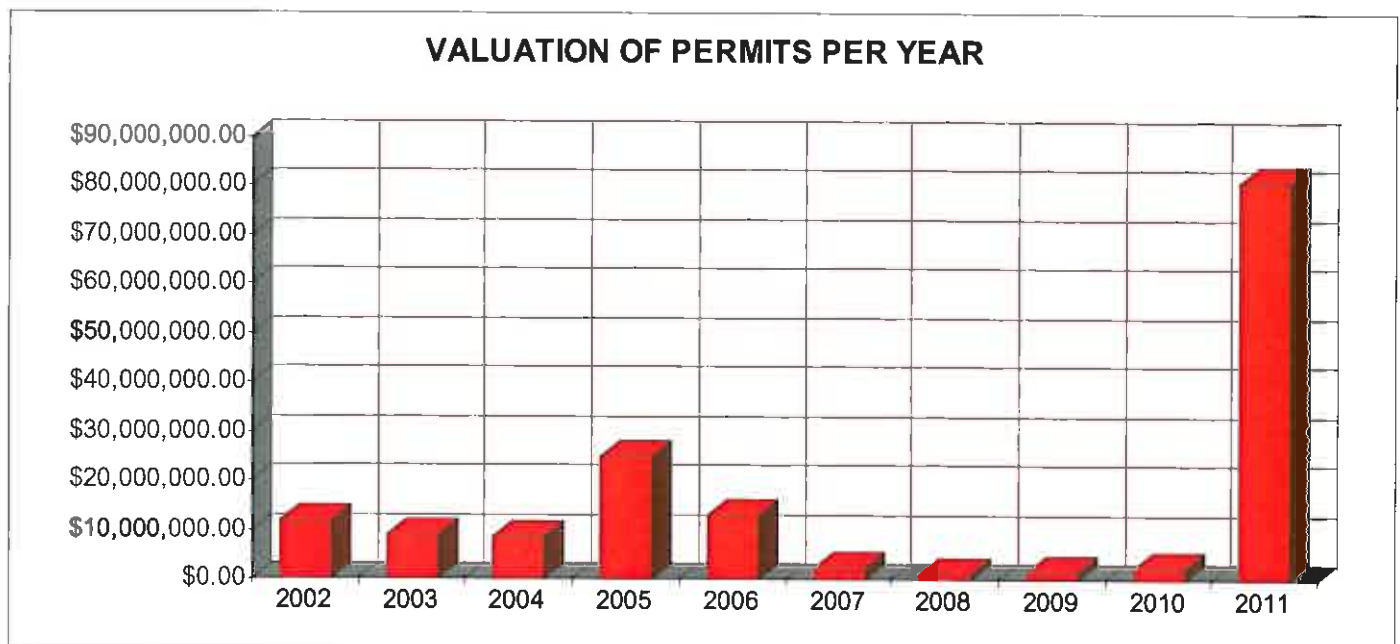
At the present time there are approximately 10 residential lots available in the city limits to build on that have all of the infrastructure installed and ready to build on. The lots that are available are to accommodate the moderate to larger size homes and not the smaller lower price range homes.

Looking ahead, 2012 will probably not be a very active year for single-family dwellings either. There are not any new subdivisions being proposed at the present time. It would take several months for a new development to be platted and infrastructure to be designed and installed. There are fewer than 50 lots platted in Cedar Brook Subdivision that do not have infrastructure. It is not known if the developer of that addition is going to open up more ground in 2012.

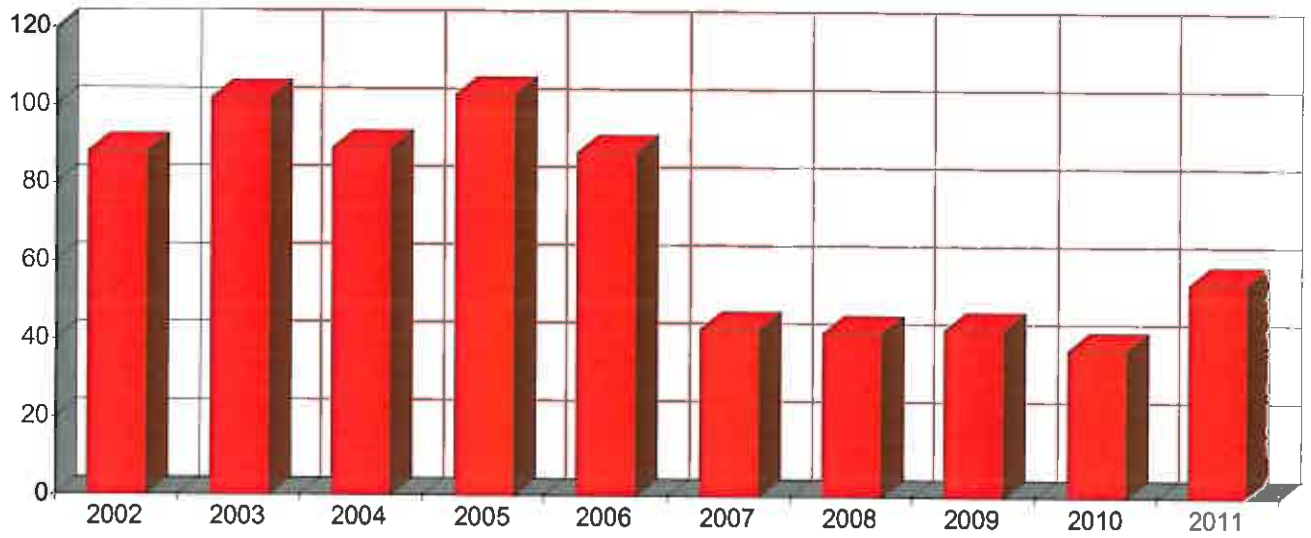
The phase 1A of the Kansas Star project which is the casino and hotel, is expected to be open by the end of 2012. Phase 1 B is expected to begin immediately after that. Permits may be issued in 2012 for that work depending upon what the timing is. It is possible to have another year with a large permit valuation if that does happen.

Submitted for your information

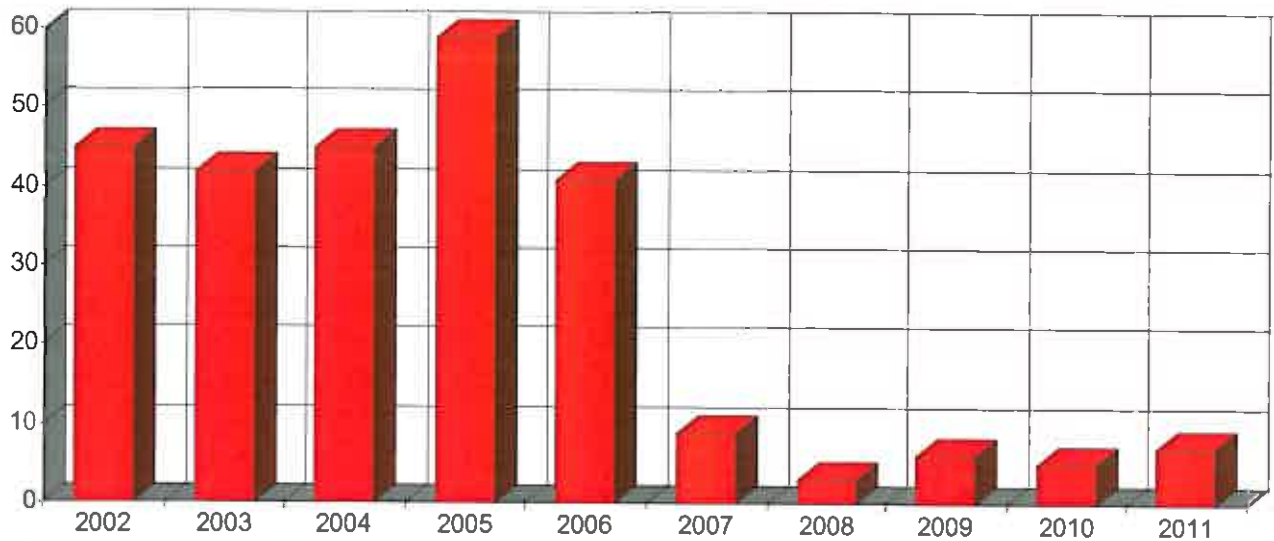
Raymond Fleming  
Building & Zoning Administrator



**BUILDING PERMITS PER YEAR**



**SINGLE FAMILY DWELLINGS PER YEAR**



## MULVANE SENIOR CITIZEN'S CENTER 2011 YEAR END REPORT

	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Meals Served	7016	9435	12551	13218	11900	11866
Blood Pressure	124	199	210	193	323	273
Pool	-	-	6	291	234	200
Flu Shots/Flu Information	15	12	47	60	23	22
Mental Illness/Alzheimer's	15	-	103	99	76	90
MRC Sponsored Breakfast	454	-	210	143	257	358
Coffee & Donuts	1403	1563	1551	1385	1861	1586
Bingo	128	244	316	278	114	120
Birthday Celebrations	89	341	416	347	361	425
Site Council	65	102	371	303	367	350
Computers	93	424	133	87	266	454
Dominoes	545	1542	2539	2375	1929	1455
Puzzles	295	442	239	222	285	213
Yoga	401	589	638	1096	1325	1120
Dietary Fiber/Carolyn Stansbury	58	79	73	36	26	30
Harris Footcare	26	-	63	191	267	197
High School Clean Up Day	22	-	26	40	50	32
<b>MRC &amp; Sr Center Sponsored Trips:</b>						
Tall Grass/Chase County	85	62	27	24	23	23
Forum Play	145	-	27	35	20	19
Seelye Mansion/Mr. K's Farmhouse	75	27	-	20	16	24
Card Playing		20	48	130	180	106
4th of July Celebrations		22	36	36	23	26
Sr. Center Celebration Fish Fry		43	31	29	62	93
Breakfast with Santa/Christmas Program		29	36	113	150	108
Christmas Party		43	31	41	33	34
Walking at MRC & Coffee				577	3536	4448
Grandparent's Breakfast				84	34	75
Bingo & Chili Feed				98	80	91
Zumba						545
<b>Total</b>	<b>11,054</b>	<b>15,218</b>	<b>19,728</b>	<b>21,551</b>	<b>23,821</b>	<b>24,383</b>



**Mulvane Swimming Pool  
2011 Season**

**New Member Statistics**

These graphs describe when a new season pass, punch pass or family pass member signs in and what day they tend to purchase the passes. Most passes are purchased Mondays and Wednesdays.

**Sign In Statistics**

These graphs show when our members sign in during time frames, days and monthly comparison. Our busiest time for attendance is at opening. Busiest days are on Tuesdays followed by Monday, Wednesday and Friday.

These graphs do not account for the people who purchase daily admission.

**End of Season Statistics**

Daily Resident purchases: 6161

Daily Non-Resident purchases: 1115

Daily Zumba: 66

Swim Lessons: 120

Comp Passes: 648

Private Lessons: 17

Pool Rentals: 42 hours

Punch Passes: 220

Season Passes: 105

Aqua Zumba Punch Pass: 1

Non-resident Season Pass: 2

Family Passes: 55

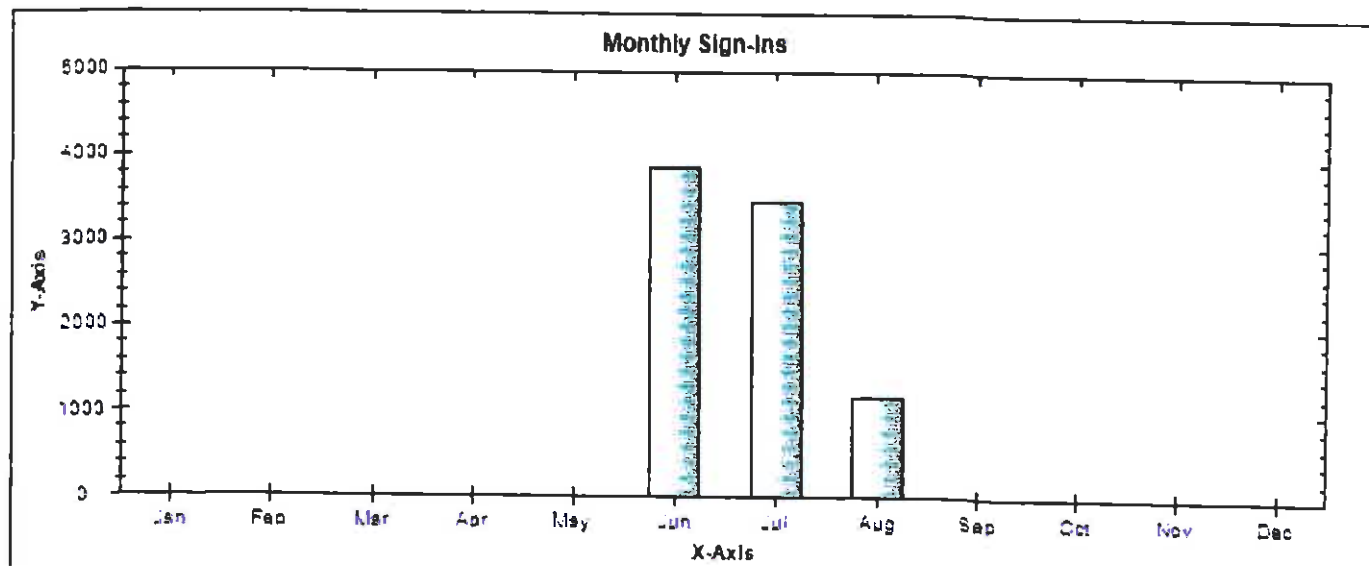
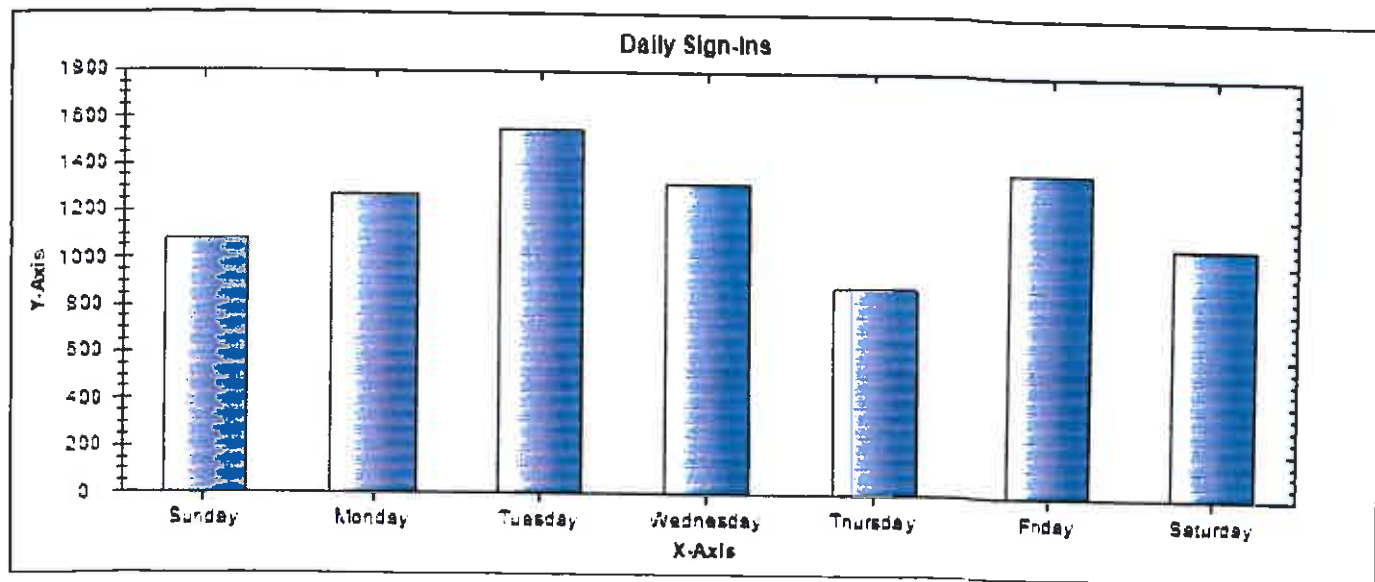
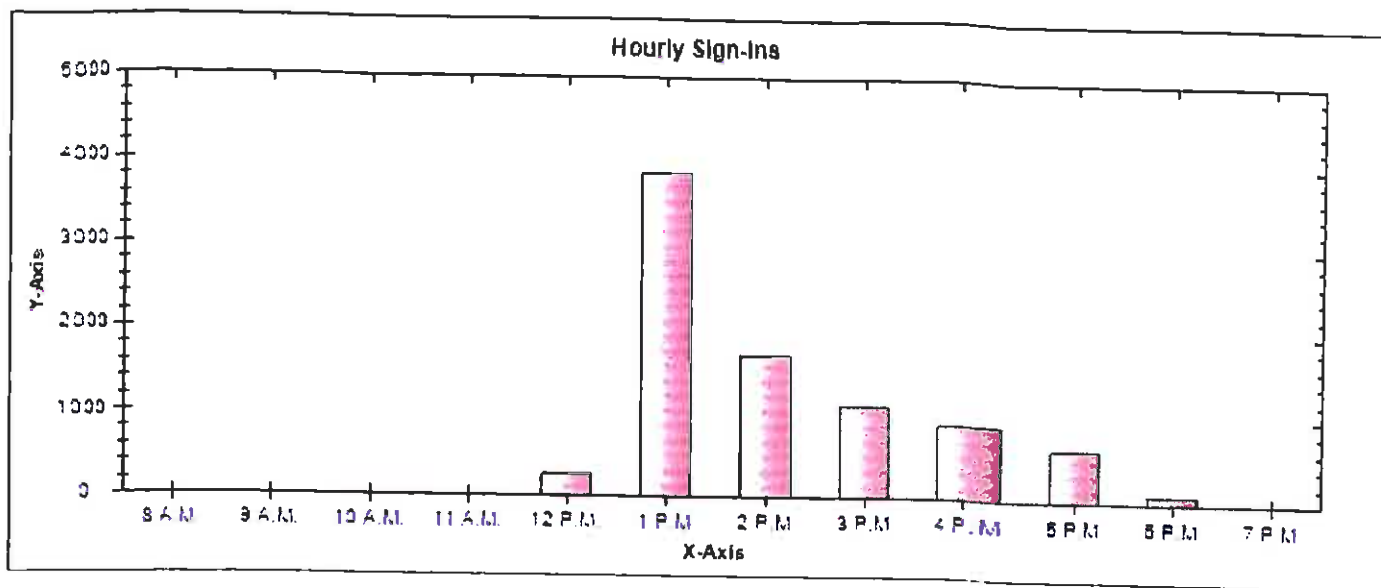
Free Thursday: 612

Non-Resident Thursday: 162

# Sign-In Statistics

03/25/2012

5/30/2011 - 8/15/2011

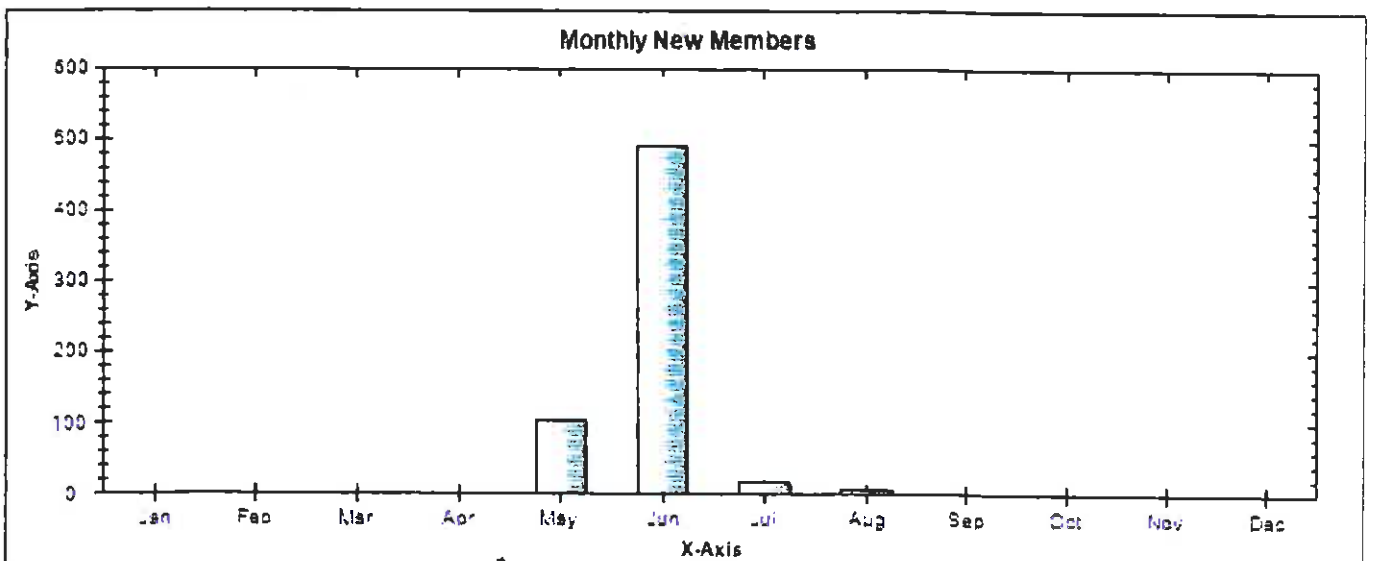
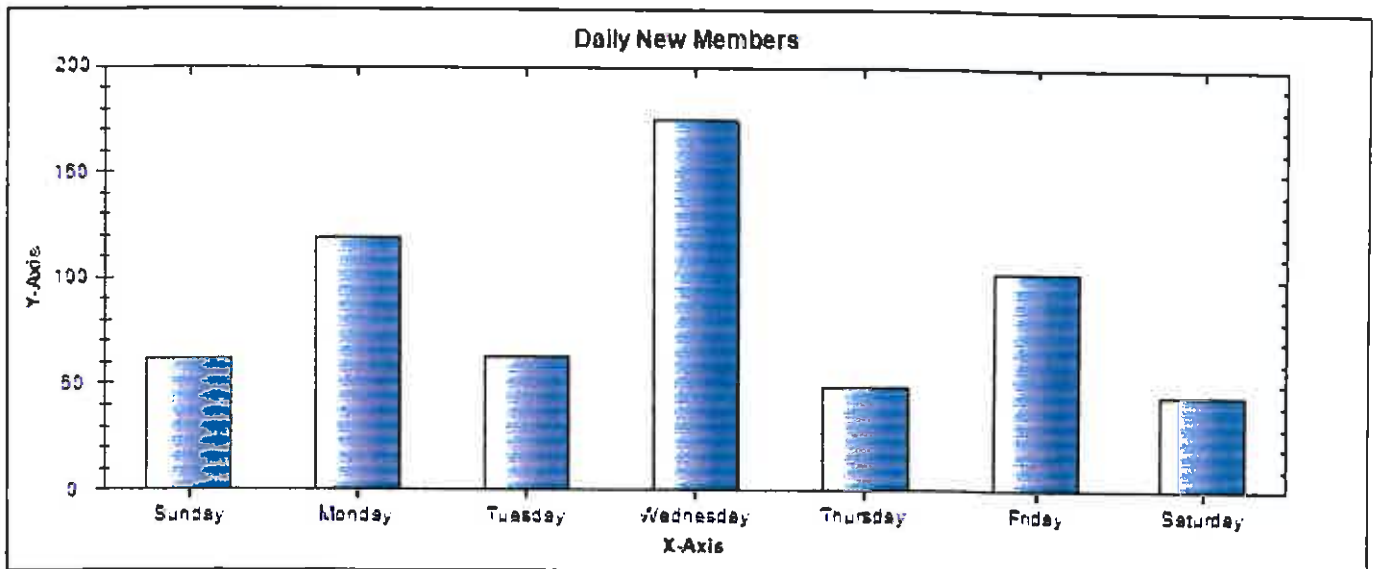
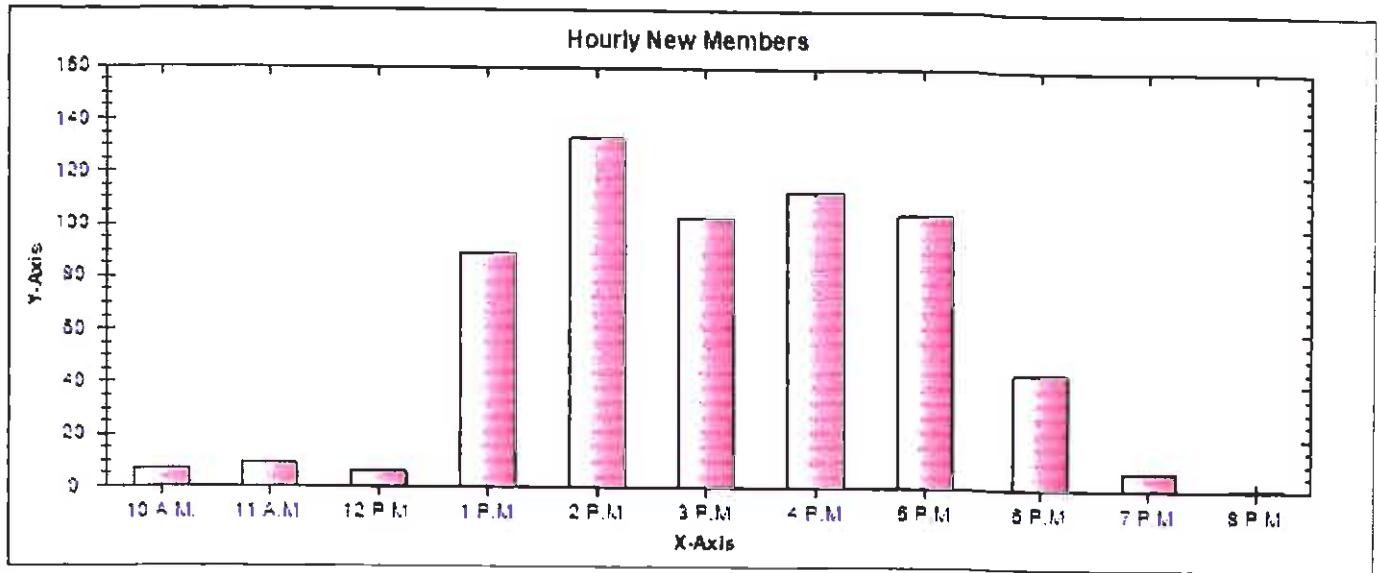




# New Members Statistics

03/25/2012

5/30/2011 - 8/15/2011



Mulvane Public Library  
2011 Statistics for the City of Mulvane Annual Report

**Service and Collection Facts:**

Public service hours per typical week	45
Annual estimate	2,300
Library visits per typical week	975
Annual estimate	44,100
Reference transactions per typical week	140
Annual estimate	7,280
Number registered card holders	1,517
# of users of electronic resources per typical week	70
Annual estimate	3,569
Number of bound volumes owned 01-01-2011	25,613
Added during 2011	2,235
Withdrawn during 2011	1,909
Total owned 12-31-2011	25,939
Number of audio materials	292
Number of video materials	1,276
Number of periodical subscriptions	62
Number of materials in electronic form	100
Number of loans received from system rotating coll.	1,028

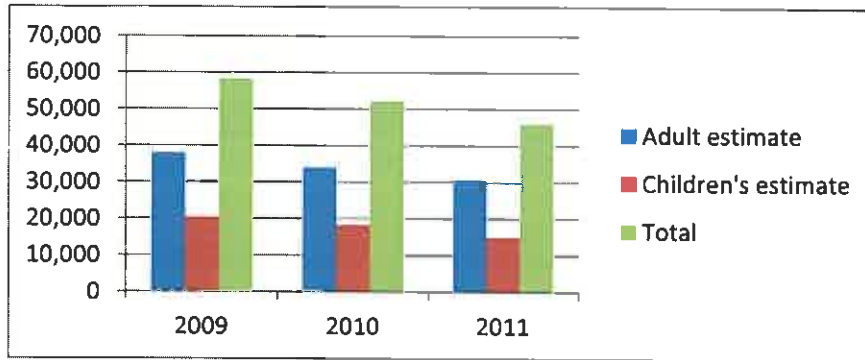
**Overview of Library activities:**

The Mulvane Public Library received six grants in 2011. The grants were used to purchase new, updated adult and juvenile titles and replace old equipment. The building is showing its age with maintenance issues such as electric wiring and worn roofing becoming issues. We continue our efforts for outreach through loaning of large print books to Maria Court, Quad Manor, and Villa Maria. Circulation of library materials decreased slightly as the economy started to improve. The Children Librarian Assistant read to preschool classes for National Children's Book Week. In addition, the Children Librarian Assistant provided a number of outreach programs for children of all ages at Mother's Day Out and at the Preschool. We continue our efforts in literacy by providing weekly programs for "Wee Read" for infants pre-school age and "Storytime" for pre-school age children and their caregivers. Along with several local area businesses and the Levand Trust, the library was able to provide a well-received and well-participated Summer Reading Program. We provide several adult programs, such as the adult book discussions, as requested by our clients. In 2011 the library hired a new Library Director. A new Library Aide was hired in October to fill a vacancy created by a resignation. The Mulvane Public Library strives to serve the entire community with services and materials to meet both informational and recreational needs.

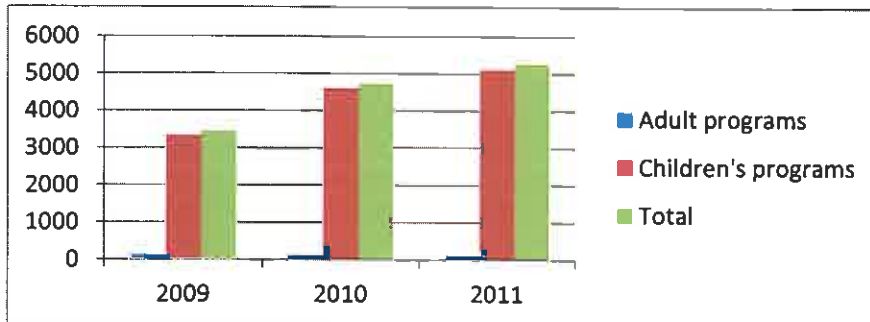


Mulvane Public Library  
2011 Statistics for the City of Mulvane Annual Report

<b>Circulation:</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
Adult estimate	37,938	34,001	30,823
Children's estimate	20,428	18,308	15,084
<b>Total</b>	<b>58,366</b>	<b>52,309</b>	<b>46,053</b>



<b>Program Attendance:</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
Adult programs	131	126	120
Children's programs	3327	4605	5,100
<b>Total</b>	<b>3458</b>	<b>4731</b>	<b>5,265</b>



2011 Programs included 10 adult, 4 YA and 128 children's programs for a total attendance of 5,265

**Summer Reading Program 2011 (attendance included in above totals)**

**Children's Reading Program, One World-Many Stories**

Number of kids signed up to read	244
Number completed their reading goal	184
Number did not complete goal	60

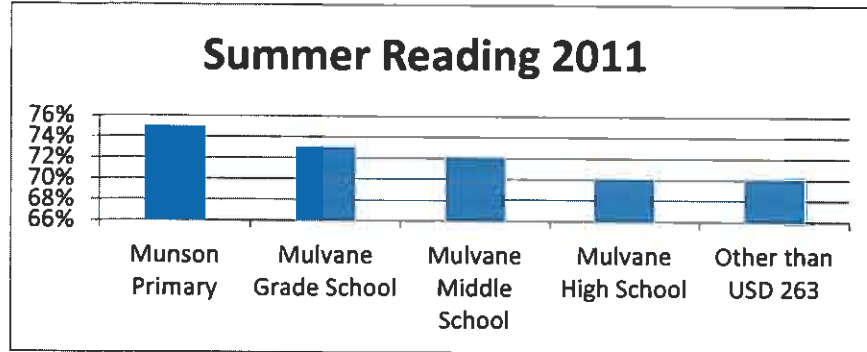
**Teen Reading Program/You Are Here**

Number Signed up to read	43
Number completed their reading goal	26
Number did not complete their goal	17

Mulvane Public Library  
2011 Statistics for the City of Mulvane Annual Report

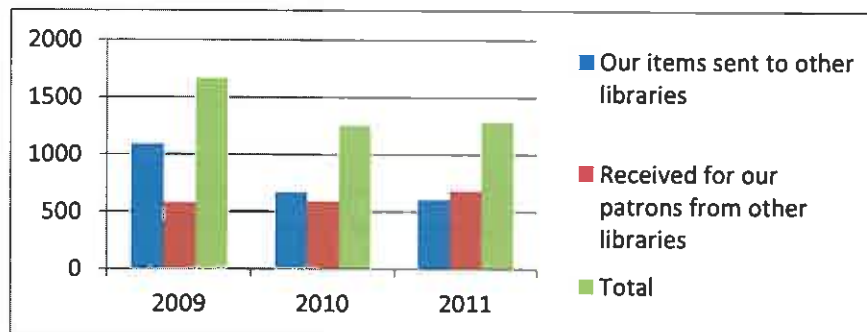
**Percentage of SRP finishers by school:**

Munson Primary	75%
Mulvane Grade School	73%
Mulvane Middle School	72%
Mulvane High School	70%
Other than USD 263	70%



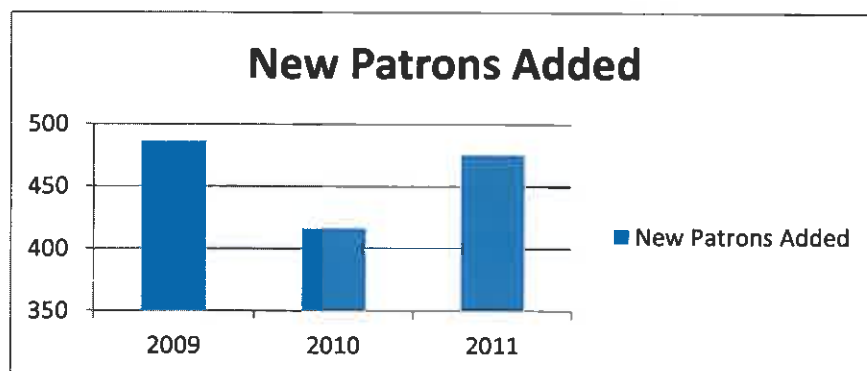
**Interlibrary loans:**

	2009	2010	2011
Our items sent to other libraries	1090	668	603
Received for our patrons from other libraries	574	583	675
<b>Total</b>	<b>1664</b>	<b>1251</b>	<b>1278</b>



**New patrons added:**

	2009	2010	2011
	486	416	475



# **MULVANE STREET DEPARTMENT**

## **2011 Year End Report**

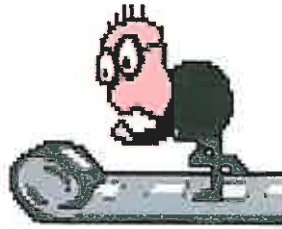


**Prepared by  
Kevin G. Baker  
Street Superintendent**

### **Mission Statement**

**The Mulvane Street Department will continually strive to provide the citizens of Mulvane and the Governing body optimum, superior service, while maintaining a safe and productive work environment.**

## **2011 General Summary City of Mulvane Street Department**



Once again street maintenance for 2011 went very well, was extremely successful, and beneficial. The department did not encounter one storm that caused a hardship. The summer was very hot and dry which allowed us to work pretty much uninterrupted. Every year we pull together to try and get the annual slurry sealing completed by September – and we did – which is the target month. Our yearly, maintenance program is crucial to the overall condition of City streets. Our focus in 2011 was on the streets south of Main St. Our slurry sealing maintenance program on these low volume streets is very cost effective and contributes to the preservation of the streets, and of appropriated funds.

### **New Equipment**



In 2011, the City of Mulvane became proud owners of a new Elgin Pelican Street Sweeper. Our old Johnston sweeper was sold on Purple Wave. We were able to finance the new street sweeper in house, which in return saved the City several thousand dollars of interest that would have otherwise been paid to an outside lender. As a standard operating procedure, during the fiscal year of 2011 I strived to hold the line and continue to offer superior service to Mulvane residents. I believe that our service remains at a high level, utilizing 100% of appropriated resources in the General Fund and 99.20% in the Special Highway. That's about as close to zero-dollar budgeting you can get. These figures are clearly shown on my budget analysis page in this report, demonstrating the responsible fiscal management of my department.

## Yearly Chronological Operating Procedures

[illegible]



## **Completed Task List for 2011**


**In addition to our general street maintenance the street department takes on many projects unrelated to annual street maintenance. We take pride in helping other departments achieve their goals. I consider the City's multiple departments as one "Big Team". Other departments depend on the street department for a variety of task, which I define as dissimilar work.**

**The following is a listing of what our general operations consist of, and, dissimilar work done in 2011:**

- Slurry seal and/or crack seal approximately 85,000 to 90,000 square yards of city streets equivalent to 55 city blocks. This work done in house saves the city 100% compared to contracting the work out. Cost would likely exceed \$200,000 if the work was contracted out.**
- Grade and rock alleyways, yearly or as needed.**
- Over 200 tons of asphalt was placed and/or replaced 2011 for maintenance and repairs.**
- Repair 12 street cuts for Water Dept.**
- Repair 11 street cuts for Kansas Gas Co. (The Gas Co. reimburses us for these repairs).**
- Crack seal Hickory Hills addition**
- Crack seal Country Walk additon**
- One of our big projects was to remove 2 driveway entrance culverts on Webb Rd. to the Sports Complex and install 2 - 35' sections'of 3' concrete culvert It was quite an undertaking as you can see by the photos below.**





- **Over 2000 cubic yards of material was swept off of city streets (sand, leaves, trash etc.)**
- **Remove and replace 150' of sidewalk on Rock Rd. This sidewalk had severe longitude cracking and posed a hazard for pedestrians.**
- **Pick-up several hundred bags of leaves that Mulvane High School Students raked for needy residents.**
- **Eliminate weeds on medians of K-15, Rock Rd., Second St., Main St., K53, and around road bridges.**
- **Maintain sewer plant road/brush pit road as needed.**
- **Clean public works facility and the downtown area weekly.**
- **Clean concrete storm valley drain on W. 53 when needed**
- **Remove a total of 6 dead or diseased trees on city right of ways and in City Parks** 
- **Cleared woody brush off of bridge embankments on K-15.**
- **Pick up tree limbs for residents when requested September through May.**
- **Cut weeds around all traffic signs, guard rails etc.**

- The brush pit was burned 6 times in 2011.
- Cut drainage ditches and clean box culverts for improved storm water run-off. This is done on an as needed basis.
- Trim low hanging tree limbs.
- Hauled and stock piled 320 tons AB3 rock.
- Construct a 150' x 90' fenced in area for horse rides at Christmas time downtown.
- Installed 5 cement pads for Park Benches at various locals around town.



### **Storm Related Summary - 2011**

The summer offered plenty of heat and not much rain. Storms were minimal. It was one of the hottest and driest summers in history. Tree damage from storms was not an issue this year, which allowed us to better concentrate on street maintenance work...at least until the funds ran out.

The winter was not much different; we had above average temperature and below average moisture. So, little resources were needed for snow removal and ice control. We experienced only one weather event that required salting and sanding.



## **Street Sign Related Work Summary – 2011**

The street department has a large inventory of street signs that are categorized as regulatory, advisory, and prohibitive. The department replaces regulatory signs on an as needed bases, damage is usually the cause of typical replacement. The reflectivity life of a street sign is between 5 to 7 years; depending on how much direct sun exposure the sign receives. There are many street name signs in Mulvane that need replaced. Due to budget constraints, we typically only replace street names signs that become significantly illegible.

- 60 new sets of barricades were constructed in 2011



(All departments in the city depend on the street department for barricades, the average cost per year of maintaining our barricade inventory is about \$3,000.)

- Re-painted all dead end barricades

- Supply barricades for Motor cycle show



- Supply barricades for Marauder's Car show/Rod run



- Repaint traffic stripes on Second St. and install new Turn Lane arrows at Second St. and Main St.

- Set up detour route for Old Settler's Celebration



- This involves the setting up and taking down of approximately 145 barricades, and 80 temporary no parking signs. Preparation for this event takes an entire week.

- 26 regulatory signs were replaced (stop, speed limit, no parking etc.)
- 17 street name signs were replaced
- Install paving tape (hash markings) on Second St. where needed
- Paint parking stripes on City Hall parking lot.

## **Budget Analysis Street Department**

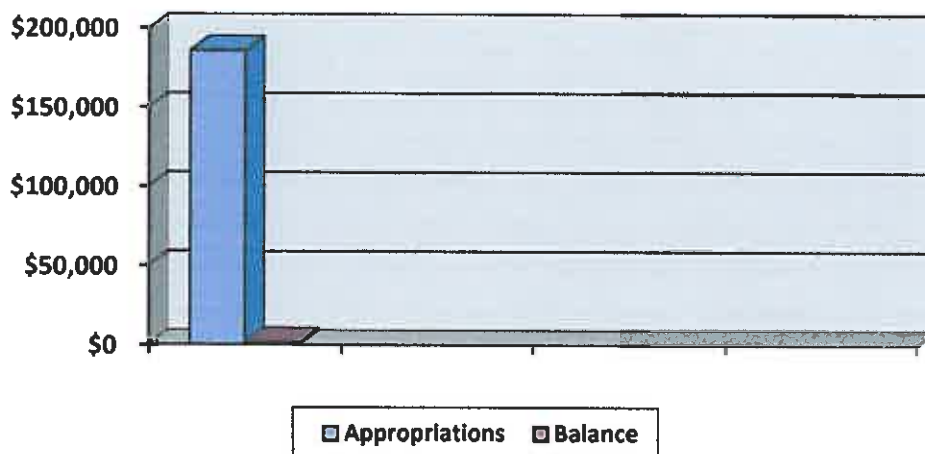
### **General Fund Budget 2011 Street Department**



**Total Appropriations for the General Fund were \$369.284  
As of December 31, 2011 there was an unencumbered \*balance of \$0.00**

\*\*\*\*\*

### **Special Highway Fund 2011**



**Appropriations for the Special Highway Fund were \$227,459  
As of Dec. 31<sup>st</sup> 2011 there was an unencumbered \*balance of \$1,832**

# Mulvane Emergency Services

## 2011 Annual Report



*August 2011 - Blue Ridge Ct.*

## **The Year 2011 in Review!**

**EMS ran 705 calls or 2 per day!**

**Mulvane Fire Rescue ran 389 calls or 1 per day!**

**Mulvane Fire hosted Driver Operator / Pumper class.**

**Mulvane Fire raises \$3,077 for MDA in boot drive**

**Automatic aid agreement between Sedgwick County Fire Department and Mulvane Fire Rescue was signed into effect.**

**Mulvane Fire Rescue is awarded a VFA Grant from Kansas State Forestry Service for \$1,938 for a foam system on Tender 406.**

**Mulvane EMS receives two new Stryker Power cots**

**MES Fire Prevention crews visited approximately 700 children in 4 preschools and grades K-2 this year.**

**M.E.S. received a 2010 Assistance to Firefighters Grant (AFG) to help replace most of its UHF radio system to new narrowband digital equipment. This federal grant to Mulvane was for \$26,885.**

**M.E.S. also received a 2010 Regional AFG Grant in cooperation with the Sumner County Fire Chief's Association. Mulvane Fire Rescue acted as the host department for the grant. This grant was for \$98,325. It assisted 9 Fire Departments and 4 EMS Services in Sumner County to purchase 209 new pagers.**

**Public Safety study was conducted to prepare for the Kansas Star Casino.**

**2011 Firefighter II class;**

**Lt. Mike Fells Instructor, Trent Julius, Chris Nolan, Kyle Gasaway, Jayson Williams, Nate Yarnell.**

**2011 MFR Probie Class welcomes;**

**FF Carl Edgell, FF Nick Ryan, FF Stuart McDowell, FF1/EMT Nathan Yarnell, FF1/EMT Duane Brill & FF2/MICT Kurt VinZant.**

**Mulvane Fire Reserves welcomes;**

**Kasey Meeks, David Burton & Parker Ryan**





# Mulvane Emergency Services

Fire Rescue Division

*ISO Class 3*



*March 2011 – Grass fire by the Sports Complex*

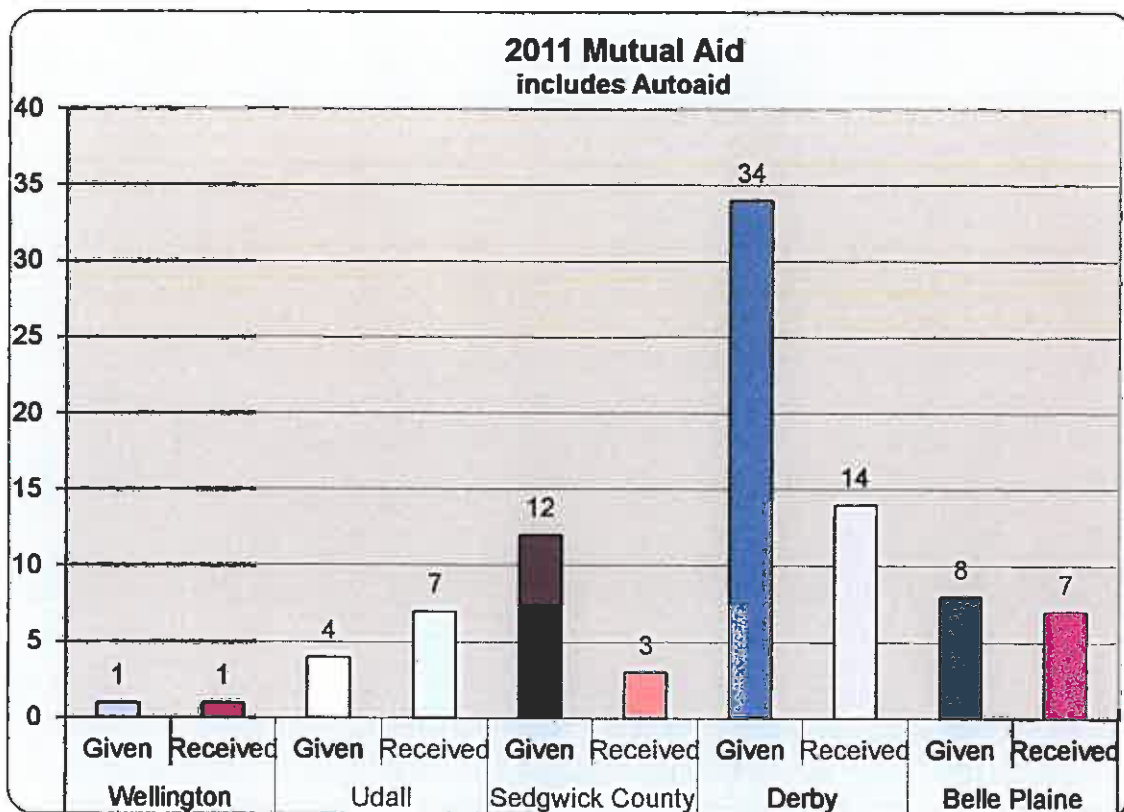
Mulvane Fire Rescue responded to 389 alarms in 2011. This ties us with 2008 which set a new record for call volume. We have hovered around one call per day for about the last 5 years. Our call volume was over average every month in 2011.

Mulvane Fire Rescue welcomed five new members into its ranks during 2011. Firefighters Carl Edgell, Firefighter Stuart McDowell, Firefighter Nick Ryan, Firefighter 1/EMT Nathan Yarnell & Firefighter 1/EMT Duane Brill all successfully passed the new member training taught by Lt. Jason Mundell.

Lt. Mike Fells instructed a KU Firefighter II class with 5 Mulvane Firefighters attending. That class was followed with a KU Driver/Operator Pumper class with another 5 Mulvane Firefighters attending. Firefighter Kyle Gasaway obtained his EMT certification thru Cowley County CC.

Mulvane Fire Rescue has a dedicated Training & Safety Lieutenant with 4 nationally certified Instructor 1's. 82% of our department is nationally certified to Firefighter 1 (2 waiting on testing, 4 new members waiting on a class). We require all members to be Firefighter 1 certified within 5 years of membership and offer the class in-house every couple of years free of charge thru Kansas University Fire Service Training. 48 % of our department is nationally certified to Firefighter II.

Haz-Mat awareness is taught annually to 100% of our membership with 60% our members certified to Haz-Mat Operations. 28% of our members are trained as Incident Safety Officers. 20% of our department is nationally certified as Driver Operator / Pumper. We have credentialed our firefighters to NIMS standards according to their certifications. 100% of our members are 100 & 700 NIMS certified. 85% have NIMS 200, 21% are NIMS 300, 63% are NIMS 800 certified and 10% have obtained NIMS 400. 67% of our department is First Responder or above.

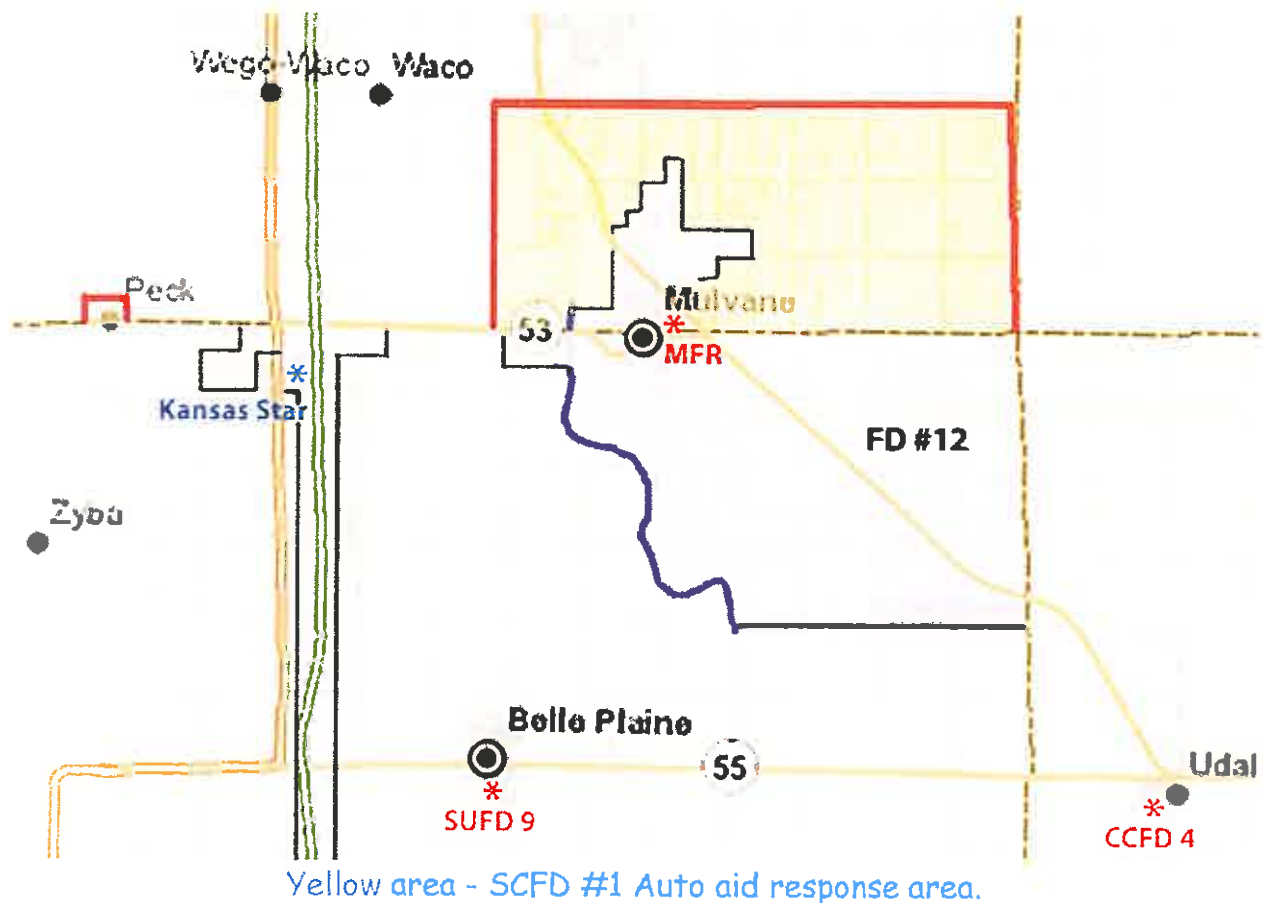


*Mulvane received Aid 32 times, gave aid 59 times.*



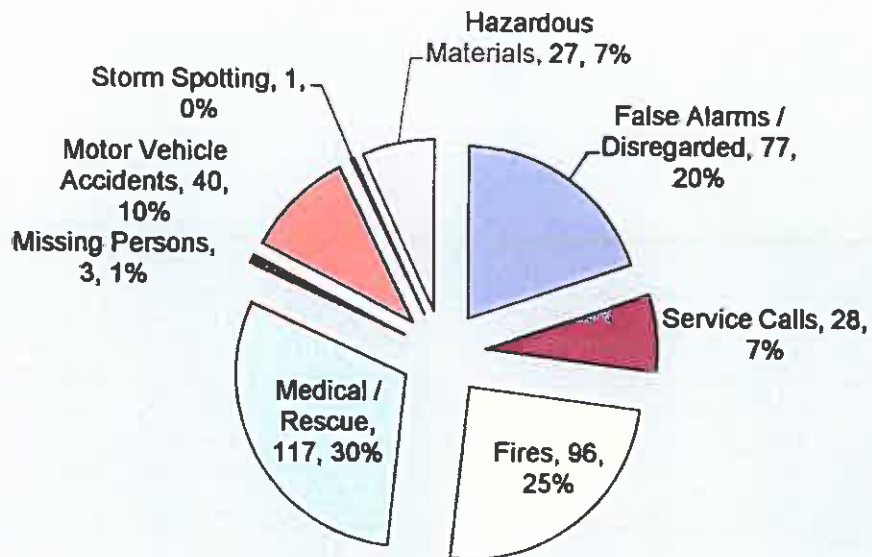
Mulvane Fire Rescue entered into an Automatic Aid agreement in December with Sedgwick County Fire District #1 for Structure Fire responses. SCFD #1 will respond to areas west of the BNSF railroad tracks in Mulvane, which includes the newly opened Kansas Star Casino. The goal is to provide a timely response to residences & business owners without train delays. Mulvane will respond to an area East of Mulvane up to 95<sup>th</sup> Street South & the Butler / Sumner County lines. This agreement will help property owners in that area reduce their Insurance Premiums by lowering their ISO rating.

Mulvane Fire Rescue also entered into a verbal Automatic Aid agreement in July with Cowley County FD #4 out of Udall. This aid agreement was for a Water Tender response into Fire District #12 for all rural fire alarms. This was due to the water emergency created by the drying up of the August City Lake and Santa Fe Lake, both which help supply Mulvane's water. Several residences in Fire District #12 also benefited from this agreement with lower insurance rates.

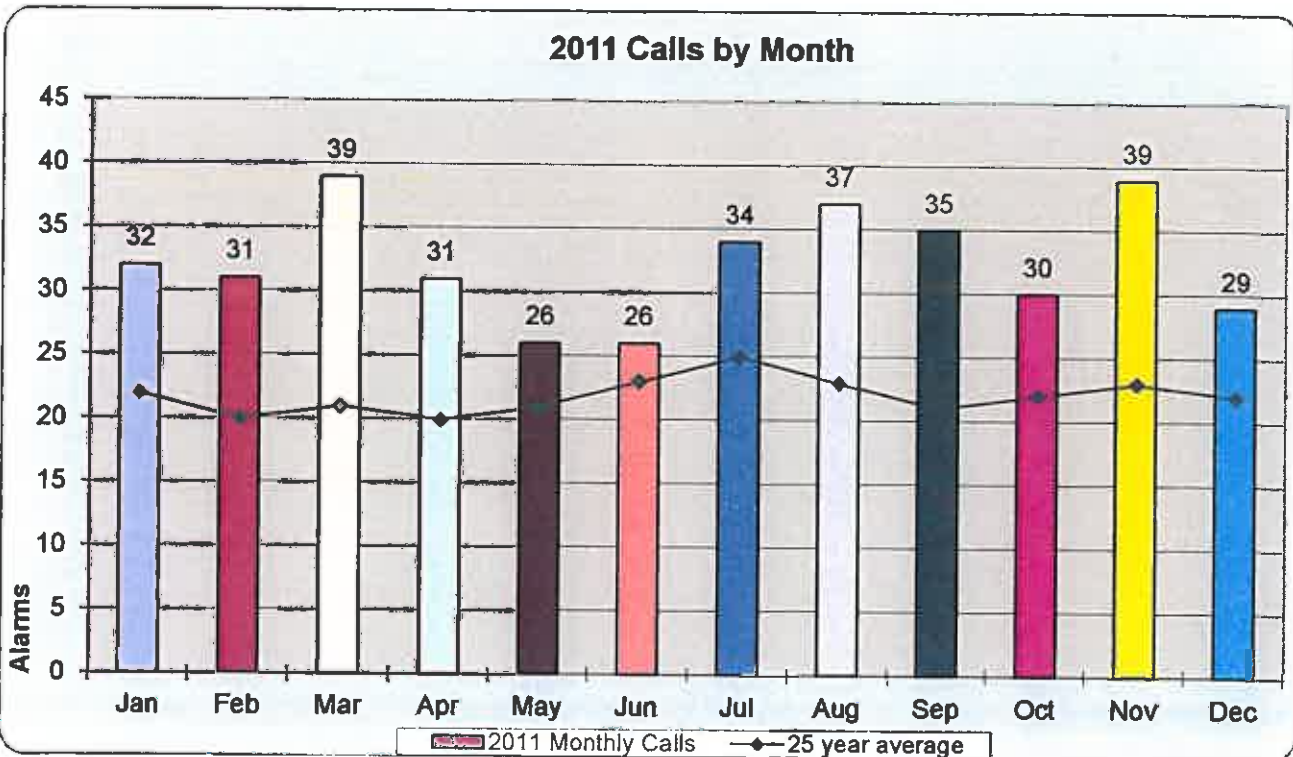


Mulvane Fire Rescue secured three grants this year worth \$60,000. One grant through the Kansas Forest Service helped purchase a foam system on Tender 406. This equipment helps extinguish grass fires and can be used for salvage & overhaul on structure fires. The other two grants were thru FEMA and helped us upgrade our UHF Radio system to FCC mandated narrow banding. We were

able to replace obsolete radios and add a new repeater at the Kansas Star Casino to improve radio reception inside that building. The other grant was a regional Pager grant that helped Mulvane Fire & EMS plus 11 other Sumner County Fire & EMS agencies obtain 209 new pagers.

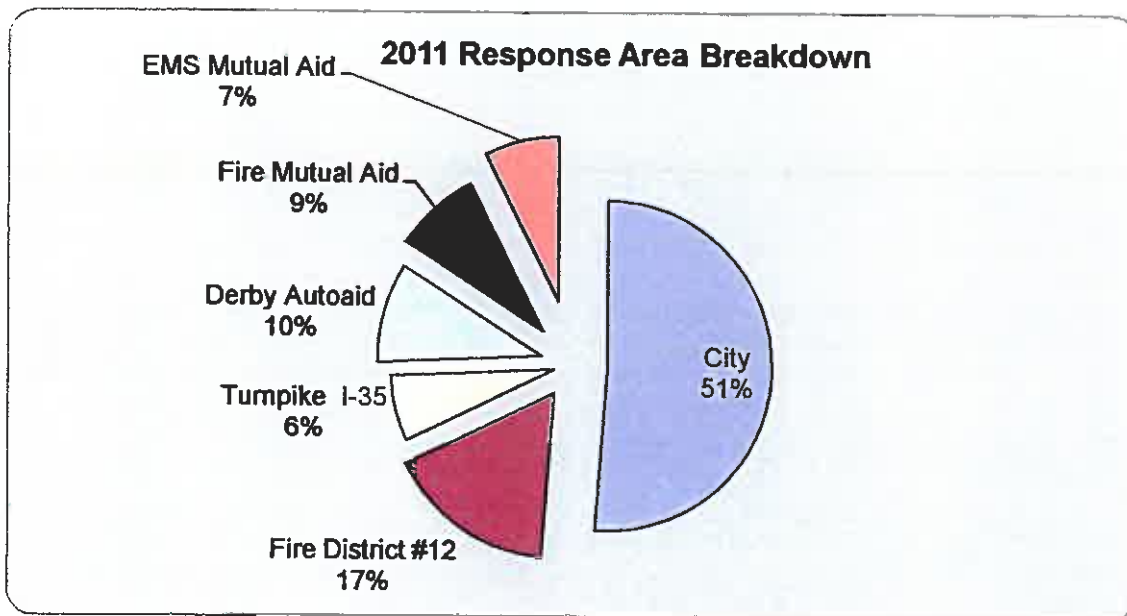


**2011 Response Breakdown**



Our Junior Fire Reserve program has 7 cadets this year, ages 14 through 18. One of these Fire Reserves will move onto the Fire Department this year.

Fire Inspections and plans review have been a full time job this year with the construction of the new Kansas Star Casino. Inspections have been weekly, sometimes daily. Sedgwick County Fire District #1 has also been contracted to assist with inspections & plans reviews.



*November 2011 - Semi fire on KTA*



*2011 Mulvane Volunteer Firefighters*

### **Mulvane Fire Rescue Needs Assessment**

NFPA and Homeland Security have done three “Needs Assessment” surveys for the US, one in 2001, 2005 and in 2010. These results were broken down by state. Mulvane has participated in these past surveys.

I am happy to report that Mulvane Fire Rescue has done well in most aspects of these reports. These reports are important for obtaining grants in what FEMA determines to be critical areas. This report will try to break down the NFPA’s report in its relationship to Mulvane Fire Rescue.



## **Personnel and their capabilities in Kansas.**

- **69% of Kansas Fire Departments do not have formal training for structural firefighting.**
  - Mulvane trains all Firefighters to a Nationally Certified Firefighter 1 level. Our members are required to obtain this within 5 years. We offer the training free of charge to our members and do it in-house with our own KU certified Instructors.
  - We have 12 Firefighter 1's, 14 Firefighter 2's and 6 Driver/Operators. We have 3 certified Fire Service Instructors.
- **63% of Kansas Fire Departments do not have formal training in EMS.**
  - Although not a mandatory requirement for firefighters, Mulvane has 60% of its staff trained to First Responder or above.
  - We have 3 Emergency Medical Responders, 16 Emergency Medical Technicians and one Paramedic. These firefighters assist EMS with critical patients and help staff 2<sup>nd</sup> out ambulance calls.
- **81% of Kansas Fire Departments do not have Health & Fitness programs.**
  - Mulvane does not have a Health & Fitness program. Due to our staff consisting of volunteers it is hard to create any type of formal program with required participation.
  - Mulvane does do baseline physicals on new members including pulmonary function tests. We also have a Firefighter Rehab program which is implemented by Mulvane EMS crew's at all major incidents to help reduce firefighter injuries.
  - Fit testing is done annually for anyone wearing Self Contained Breathing Apparatus.

## **Facilities, Apparatus and Equipment in Kansas.**

- **23% of Kansas Fire Stations are at least 40 years old, 48% do not have backup power and 61% do not have exhaust emission control.**
  - Mulvane Emergency Services building is 9 years old, has a 100 KW backup generator and has exhaust emission removal system in both Fire & EMS bays.
  - Our generator is run weekly for one hour under load to assure proper operation and the exhaust emission system is checked and certified annually.
- **24% of all Kansas Fire Engines are from 15 to 19 years old, 18% are 20 to 29 years old.**
  - Mulvane has three Fire Engines. The oldest is 21 years old, a 1990 Ford Pumper which belongs to the City. It is scheduled for replacement at 25 years in 2015.
  - The City also has a 2006 Fire Engine which is 5 years old. Fire District #12 has a 2002 Fire Engine which is 9 years old. Fire Engine's start around \$300,000.
- **54% of all Kansas Fire Departments do not have enough portable radios to equip responders.**
  - Mulvane has enough portable radios to equip each firefighter. This is an important safety issue in case of a trapped or injured firefighter. The portable radios are carried on each of the fire apparatus.
  - All of Mulvane's radios were upgraded this year with the help of several different grants and programs. Besides our normal 450 MHz radios that we operate on

daily, each truck has an 800 MHz mobile & portable to communicate with State Agencies and Sedgwick County. Federal grants amounted to over \$60,000 of this \$80,000 project.

- **73% of Kansas Fire Departments do not have enough self-contained breathing apparatus (SCBA) to equip all responders on an alarm.**
  - Mulvane has 21 SCBA units online in our Fire Apparatus. This is a sufficient amount to equip all firefighters at a major incident. We also have three training SCBAs.
  - Mulvane has 26 spare SCBA bottles.
  - 10 of our SCBA's were replaced with a FEMA grant in 2006 @ \$5,000 each.
  - Mulvane has a new SCBA compressor at the station to refill bottles after an incident. This was purchased new for \$35,000 thanks to a FEMA grant in 2006.
  - It is our hope to add a larger Rescue Truck in 2013 that will be able to carry a high pressure cascade system to resupply our SCBA's on-scene.
- **62% of all Kansas Fire Departments do not have personal alert safety systems (PASS).**
  - Mulvane issues each firefighter an individual PASS device, which are checked annually for proper operation. This device will sound an alert if a firefighter is exposed to extreme heat or quits moving for over 20 seconds.
  - All of our SCBAs are also equipped with PASS devices which sound if a firefighter quits moving or runs out of air. PASS devices are \$350 each and were purchased new with a FEMA grant in 2004.
- **16% of Kansas Fire Departments do not have personal protective gear.**
  - All members are issued their own personal protective gear. This consists of bunker pants and coats, boots, helmet, nomex hoods and gloves.
  - 23 sets of Bunker Gear were replaced in 2004 with a FEMA grant at a cost of about \$1,800 per person.
  - New gear is purchased as needed. Old gear is re-used if still in good condition. Gear is checked annually.

#### **Ability to Handle Unusually Challenging Incidents in Kansas.**

- **20% of Kansas Fire Departments reported they could handle a technical rescue with EMS at a structural collapse of a building with 50 occupants.**
  - Mulvane does not have the equipment to handle this type of a response, even though it would be our responsibility. We have schools, college, gyms & soon a Casino, sport arena and hotel all with occupancies over 50 people.
  - Mulvane does have a written Mutual Aid agreement with Sedgwick County Fire District #1 to assist in an event of this nature. This agreement was used in the Rescue of Baby Jessy in May of 1999.
  - Mulvane EMS has been awarded a FEMA Regional Mass Casualty trailer which we should be receiving any day. It has the equipment to stabilize 100 patients.
  - It is our hope to add a larger Rescue Truck that will be able to carry more equipment for these types of events, however it is not feasible for Mulvane to be able to provide this service without Mutual Aid.

- **19% of Kansas Fire Departments reported they could handle a hazmat and EMS incident involving chemical/biological agents and 10 injuries.**
  - Mulvane does not have the equipment to handle this type of a response, even though it would be our responsibility. We have two major rail lines, two state and one federal interstate highway all of which could pose a threat for an incident of this type.
  - Mulvane does have some limited Haz-Mat equipment to make emergency lifesaving rescues if necessary. We are trained to handle most local Haz-Mat incidents that we deal with on a monthly basis (i.e., gas spills, anhydrous ammonia leaks, natural gas leaks, propane leaks & CO alarms).
  - Mulvane trains all of its responders to Hazardous Material Awareness level and requires annual recertification. Mulvane also has 20 firefighters trained to Haz-Mat Operations level.
  - Mulvane does have a written Mutual Aid agreement with Sedgwick County Fire District #1 to assist in an event of this nature.
  - FEMA Regional Haz-Mat resources are also available from the State
  - It is our goal to carry more Haz-Mat equipment when we replace our Rescue Truck. Grant monies may be available to help purchase equipment.
- **61% of Kansas Fire Departments reported they could handle a wildland/urban interface fire affecting 500 acres.**
  - Mulvane does have some resources available, however we would not be able to handle a fire of this magnitude.
  - Mulvane trains annually on wildland fires. Fire District #12 has two brush trucks and two water tenders that are utilized for these fires. We also have one City engine and our rescue truck which could also assist.
  - Mulvane has written Mutual Aid agreements with 7 surrounding departments which could assist.
  - Mulvane is a member of FORCEe, which is a 19 county regional fire resource response group which sends fire trucks to assist from outside our normal area.
  - Mulvane has applied for a FEMA grant to replace one of FD #12's 1988 brush truck.
- **48% of Kansas Fire Departments reported they could handle mitigation of a developing major flood.**
  - Mulvane does not have the equipment to handle this type of a response, even though it would be our responsibility.
  - Mulvane does have written mutual aid agreements with Derby Fire Department, SCFD #1 and Wellington FD, all of which have water rescue teams.
  - FEMA also has a regional Swift water rescue team which is available locally.
  - Mulvane has a history of minor flooding, however is not prone to major flooding.
  - Both Sedgwick County and Sumner County Emergency Management agencies have resources and plans for mitigation of such an event. Mulvane does have an existing plan for Emergency Drinking water should such an event occur.

The full report here: <http://www.nfpa.org/assets/files//PDF/50%20states/KansasNeedsIII.pdf>

**MULVANE POLICE DEPARTMENT**

**CITY OF MULVANE, KANSAS**

**YEAR END REPORT**

**2011**

**DAVID W. WILLIAMS**

**PUBLIC SAFETY DIRECTOR**



## **MISSION STATEMENT**

The Mulvane Police Department will do everything in its power to provide protection, arrest law-breakers, and to be of service to all citizens within the community in a professional and ethical manner.

This is the basic mission of every member of the Department and it can be realized by:

1. Effective Use of Resources.
2. Utilization of Creative Innovation.
3. Acquisition of Enhanced Public Safety Technology.
4. Acquisition of Community Involvement and Support.

## **STATE OF THE DEPARTMENT**

One officer left in 2010 and one was hired as a replacement.

Two dispatchers left and two were hired. Both left employment to be at home with their small children.

The Department finished the year with 11 full-time officers and 6 full-time dispatchers serving a community of 6100.

## **WORK PROJECTS**

We transferred 911 services to Sedgwick County 911. This will save the city well over \$40,000 per year in equipment and maintenance costs. Now citizens that call 911 will be answered in Sedgwick County and their call will be forwarded to our dispatchers. They may also call 777-1111 that we have advertised to our community.

We went the entire year without a pistol range as we are waiting for the City of Derby to re-build their range. We have agreed to partially fund the new range. Rose Hill PD and Sumner County Sheriff's Department has allowed us to use their ranges and will continue to do so until the Derby range is completed sometime in 2012.

One new police vehicle, a 2012 Chevrolet Tahoe was ordered in September and is expected to be delivered sometime in January 2012. This is radical change from the Impalas we have used for the past 11 years.

The Kansas Star Casino opened for business in December of 2011. We have seen a slight increase in calls for both Police and EMS. We will have a better picture of what to expect during 2012.

As a result of the casino opening, patrol officers were moved to a 12-hour schedule from their usual 10-hour schedule. This allows more officers to be available during the night as the casino operates until 4:00 a.m. and is expected to operate 24 hours a day once additional personnel are trained.

## **GOALS AND OBJECTIVES**

### **1. Increase DUI arrests by 5%.**

Arrests decreased by 11%. I expect a huge increase in 2012 due to more aggressive enforcement.

### **2. Maintain accident rate.**

Accidents decreased by 26%. A total of 38 accidents were reported which is the lowest total in over 15 years.

### **3. Budget**

The annual goal is to finish at least 5% under budget. We finished 3% under budget that allowed us to transfer funds to the Municipal Equipment Replacement Fund that will facilitate a new vehicle purchase in 2012.

### **4. Sick Leave and Overtime**

I set a goal of a 5% reduction in both areas. In 2010, sick leave increased by 33% due to extended leaves due to births. The overtime decreased by 1% from 2010.

### **5. Vehicle Maintenance**

Maintenance costs decreased by 24% from 2010. 2010 was 36% below 2009 levels. Newer vehicles help keep our costs down.

## STATISTICS

Calls for Service	2003	2004	2005	2006	2007	2008	2009	2010	2011
	3033	3202	3113	3561	4398	4182	3856	3669	3508

This is a 4% decrease from 2010. The ten-year average is 3523 per year.

Cases	2003	2004	2005	2006	2007	2008	2009	2010	2011
	788	840	648	622	836	704	691	663	658

This is less than a 1% decrease from 2010. The ten-year average is 715 per year.

Tickets	2003	2004	2005	2006	2007	2008	2009	2010	2011
	947	1208	1284	864	752	733	639	517	623

This is a 20% increase from 2010. The ten-year average is 839 per year.

Warnings	2003	2004	2005	2006	2007	2008	2009	2010	2011
	593	884	981	1381	1327	982	1044	1265	1801

This is a 42% increase over 2010. The ten-year average is 1123 per year.

DUI	2003	2004	2005	2006	2007	2008	2009	2010	2011
	25	26	71	20	22	18	25	17	15

This is an 11% decrease from 2010. The ten-year average is 27 per year.

Accidents	2003	2004	2005	2006	2007	2008	2009	2010	2011
	49	46	50	50	54	57	42	52	38

This is a 26% decrease from 2010. The ten-year average is 50 per year.

Arrests	2003	2004	2005	2006	2007	2008	2009	2010	2011
	179	325	314	200	236	224	229	214	213

This is unchanged from 2010. The ten-year average is 231 per year.

## BIASED BASED POLICING

The Mulvane Police Department began tracking whom they wrote moving and warning citations to in September 2004. The Mulvane Police Department does not and will not tolerate any bias against any race, sex, or creed.

Tickets	White	Black	Hispanic	Asian
2007	88.7%	5.2%	4.2%	2.0%
2008	89.3%	4.3%	4.4%	2.0%
2009	92.8%	2.8%	2.8%	0.9%
2010	87.9%	4.8%	2.8%	1.9%
2011	88.2%	4.4%	3.3%	1.5%
Warnings	White	Black	Hispanic	Asian
2007	93.7%	2.6%	2.6%	1.1%
2008	92.7%	2.8%	2.9%	1.6%
2009	92.9%	2.4%	2.6%	1.2%
2010	91.1%	3.8%	2.3%	1.6%
2011	92.4%	3.0%	2.5%	1.3%

## CRIMES REPORTED IN MULVANE

Classification	2003	2004	2005	2006	2007	2008	2009	2010	2011
Murder	0	0	0	0	0	0	0	0	0
Rape	2	0	4	1	1	0	0	3	1
Robbery	0	1	0	1	0	1	1	1	0
Agg. Asslt.	4	7	7	0	3	2	5	5	1
Res. Burg.	5	6	11	7	18	11	9	12	13
N.R. Burg.	9	5	4	3	10	9	10	6	9
Larceny	80	91	93	131	165	127	97	98	107
Auto Theft	4	3	2	0	0	1	2	0	2
Misd. Asslt.	53	41	49	41	39	34	29	49	48
Vandalism	79	76	53	67	71	65	40	65	63
Dis.Conduct	36	35	17	8	4	11	10	10	19
Drug Viol.	8	14	18	6	23	32	21	5	23
Liquor Viol.	5	7	17	1	5	8	9	12	9
Arson	0	3	1	0	0	1	0	0	1
<b>TOTAL</b>	<b>285</b>	<b>289</b>	<b>276</b>	<b>266</b>	<b>339</b>	<b>302</b>	<b>233</b>	<b>266</b>	<b>296</b>

This is an increase of 11% from 2010. The ten-year average is 280 per year.

## OVERTIME – SICK LEAVE

The Department switched to a 4-day workweek in 1996. The number reflects the savings in overtime since 1995. Another change occurred during December 2011 when we changed to 12-hour shifts. Overall, we see a reduction of 32% in overtime since 1995.

Year	Overtime(hours)	Sick Leave(hours)
1995	1411	691
1996	818	812
1997	1267	599
1998	898	952
1999	763	920
2000	878	511
2001	920	601
2002	907	910
2003	1069	1434
2004	863	947
2005	1022	1066
2006	793	858
2007	960	910
2008	1162	1124
2009	983	823
2010	795	1186
2011	781	1580
17 yr. Avg.	958	936



## CUSTOMER SERVICE

The Department randomly contacts citizens who have had contact with us over the year. Whether as a victim, witness, or someone who even received a traffic ticket, we strive to treat our citizens with respect and it shows.

Year	Contacts	Satisfied	Unsatisfied	% Approval
1996	66	64	2	96.9%
1997	58	56	2	96.5%
1998	84	82	2	97.6%
1999	91	89	2	97.8%
2000	92	91	1	98.9%
2001	87	86	1	98.8%
2002	87	85	2	97.7%
2003	103	101	2 neutrals	98.0%
2004	93	92	1	98.9%
2005	90	90	0	100.0%
2006	99	99	0	100.0%
2007	96	95	1	98.9%
2008	97	96	1 neutral	98.9%
2009	100	100	0	100.0%
2010	98	98	0	100.0%
2011	96	95	1	98.9%
TOTAL				
	1437	1419	17	98.7%

## **CONCLUSION**

2011 reflects little change from 2010. The drop in accidents to our lowest level in over 15 years is a result of our officers paying close attention to traffic patterns at high accident locations.

The Kansas Star Casino opened in late 2011. I anticipate increases in police services required for the business. We have a good working relationship with casino security and the agents from Kansas Racing Gaming Commission.

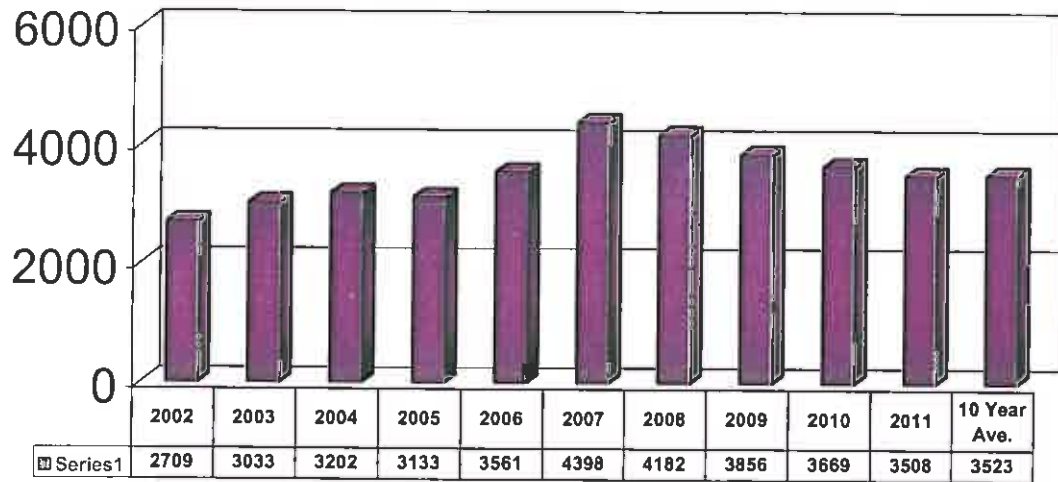
We have an experienced staff and problems are almost non-existent.

We look forward to the coming year and whatever challenges may come our way.

On behalf of the members of the Police Department, I would like to thank the city council, mayor, and city administrator for your strong support and commitment to your Police Department.

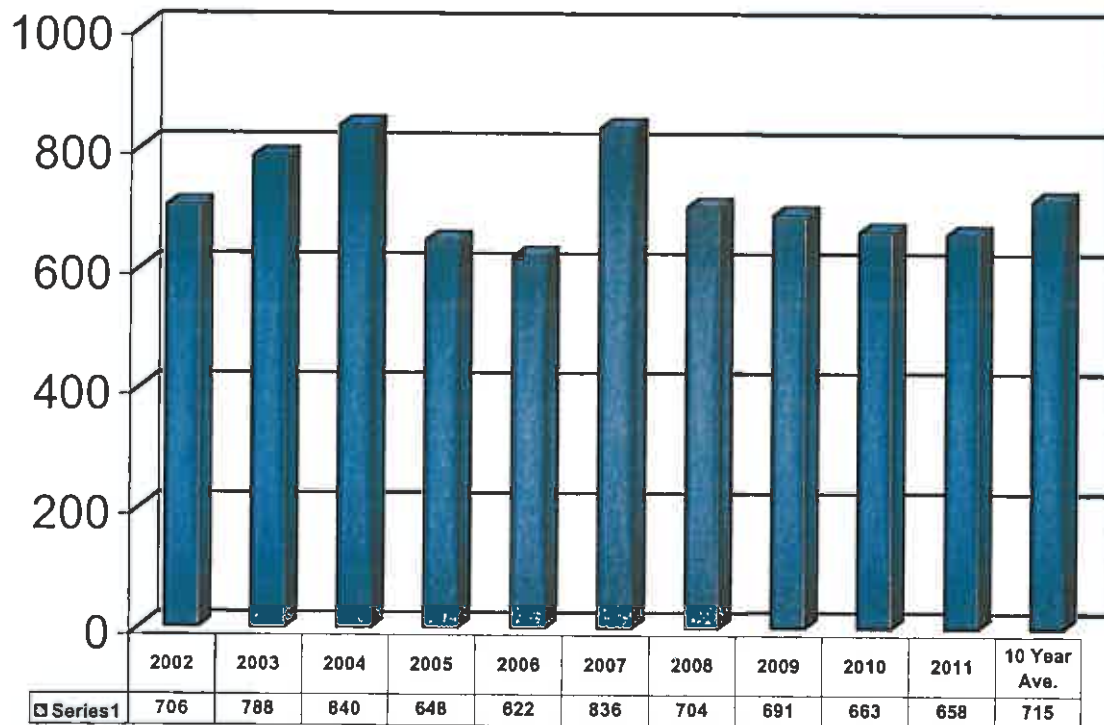
David W. Williams  
Public Safety Director

## CALLS FOR SERVICE



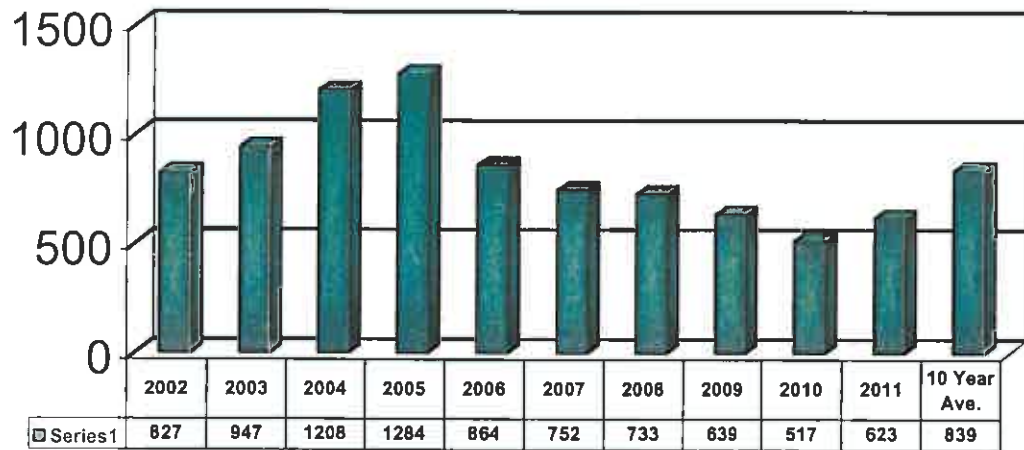
4 % Decrease  
From 2010

## POLICE CASES



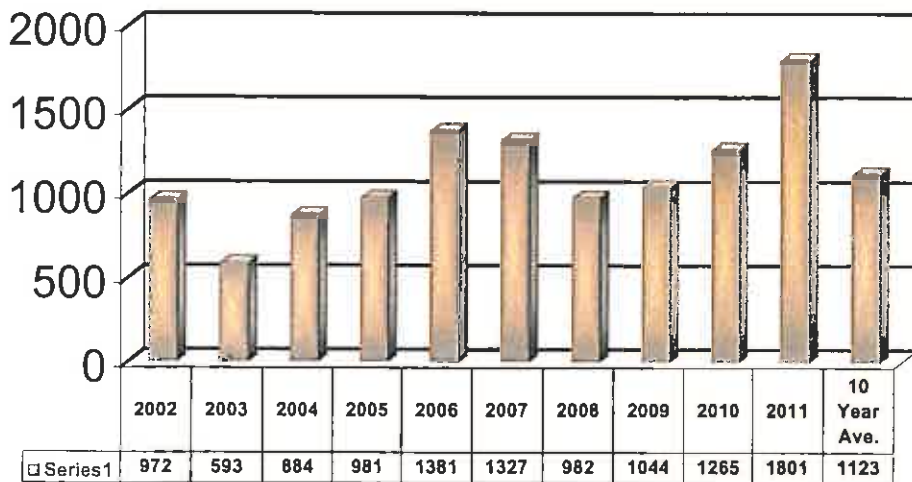
1% Decrease  
From 2010

## MOVING CITATIONS



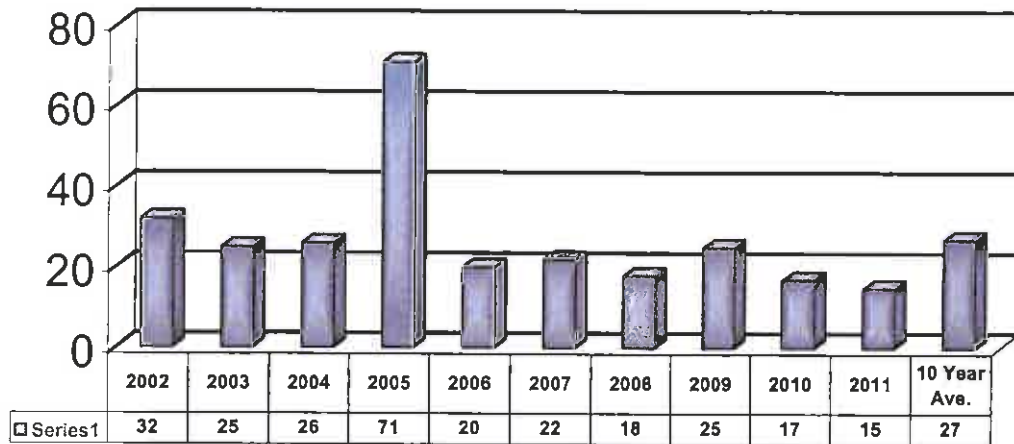
20% Increase  
From 2010

## WARNING CITATIONS



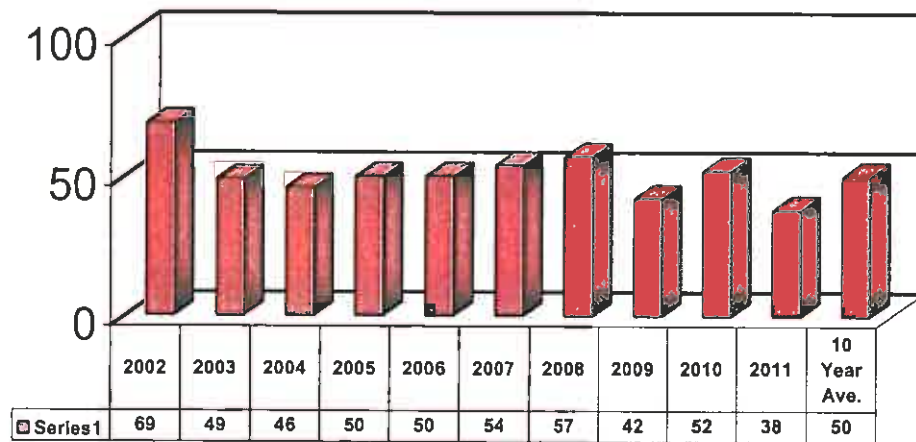
42% Increase  
From 2010

## DUI ARRESTS



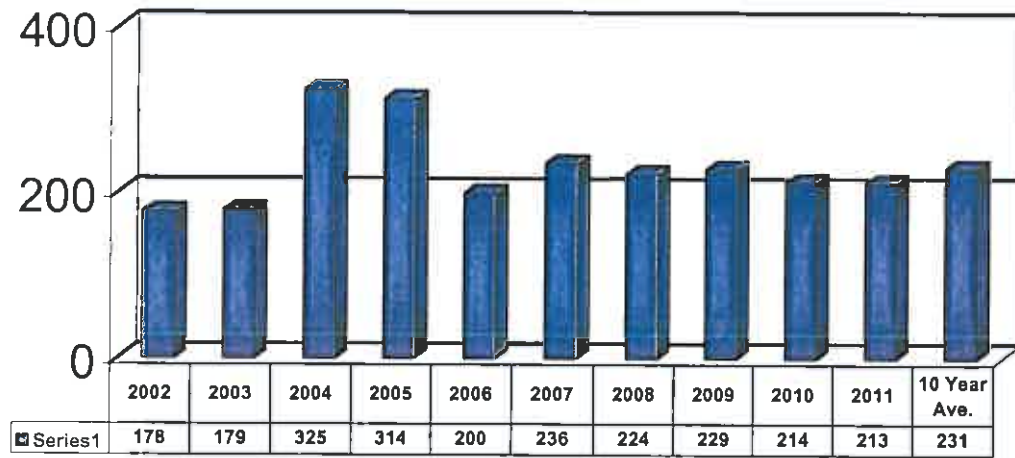
11% Decrease  
From 2010

## TRAFFIC ACCIDENTS



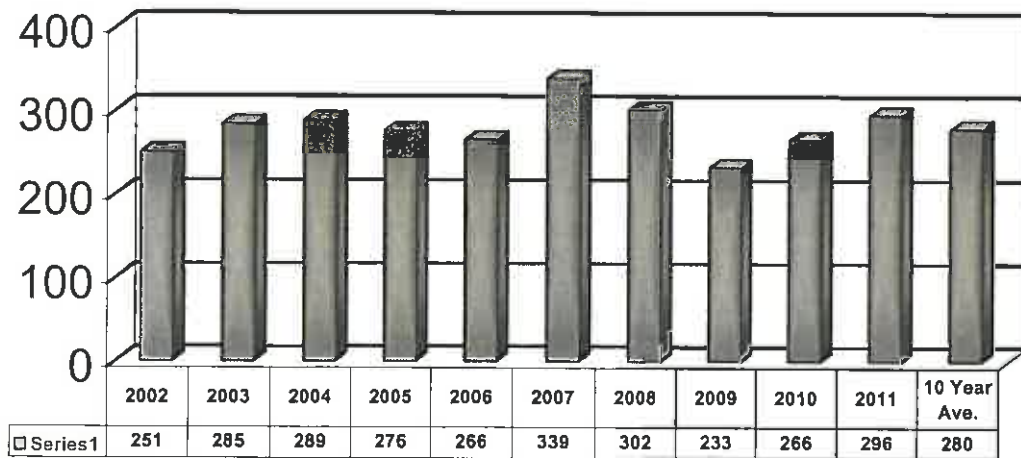
26% Decrease  
From 2010

## PERSONS ARRESTED



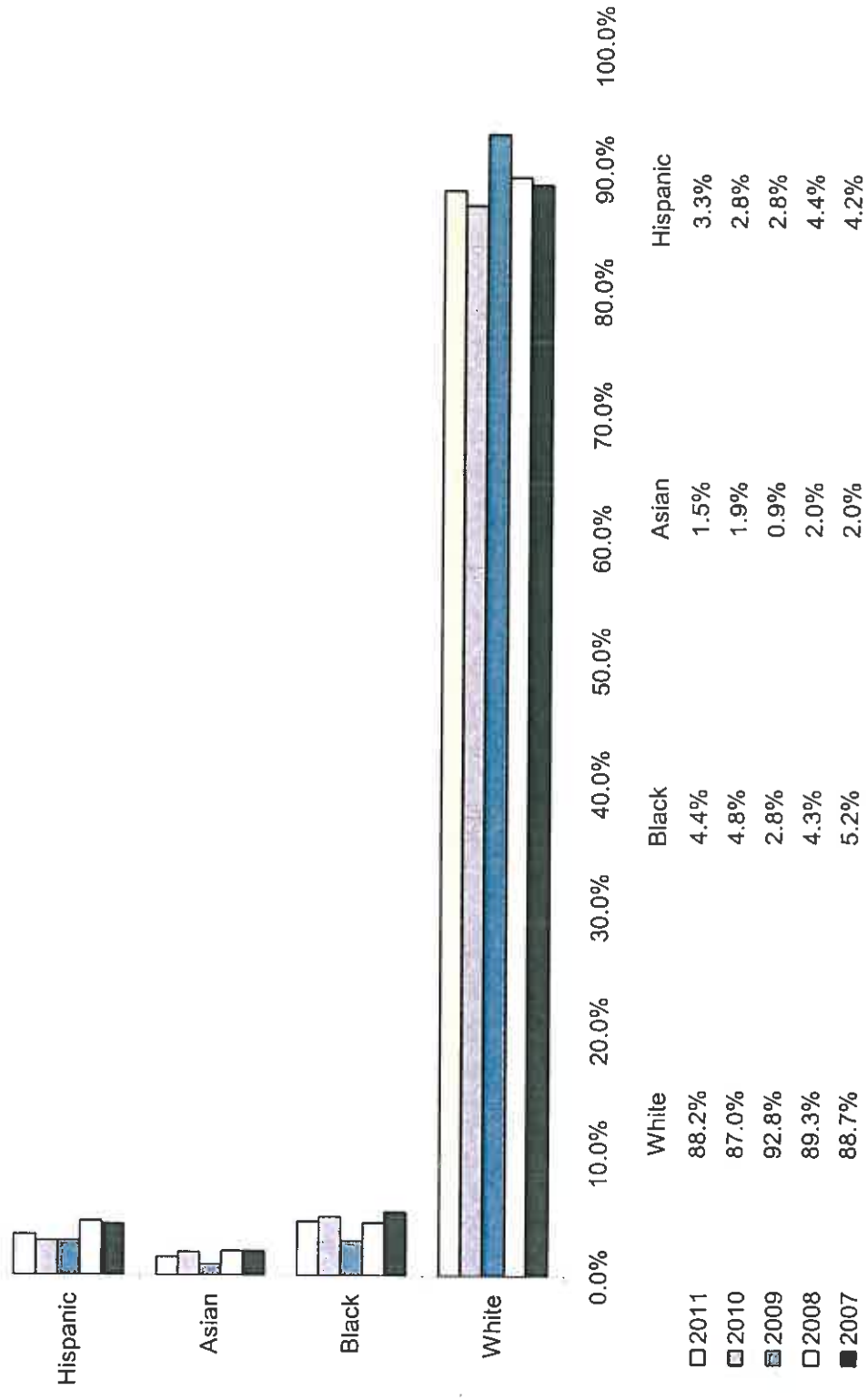
Unchanged  
From 2010

## CRIMES REPORTED

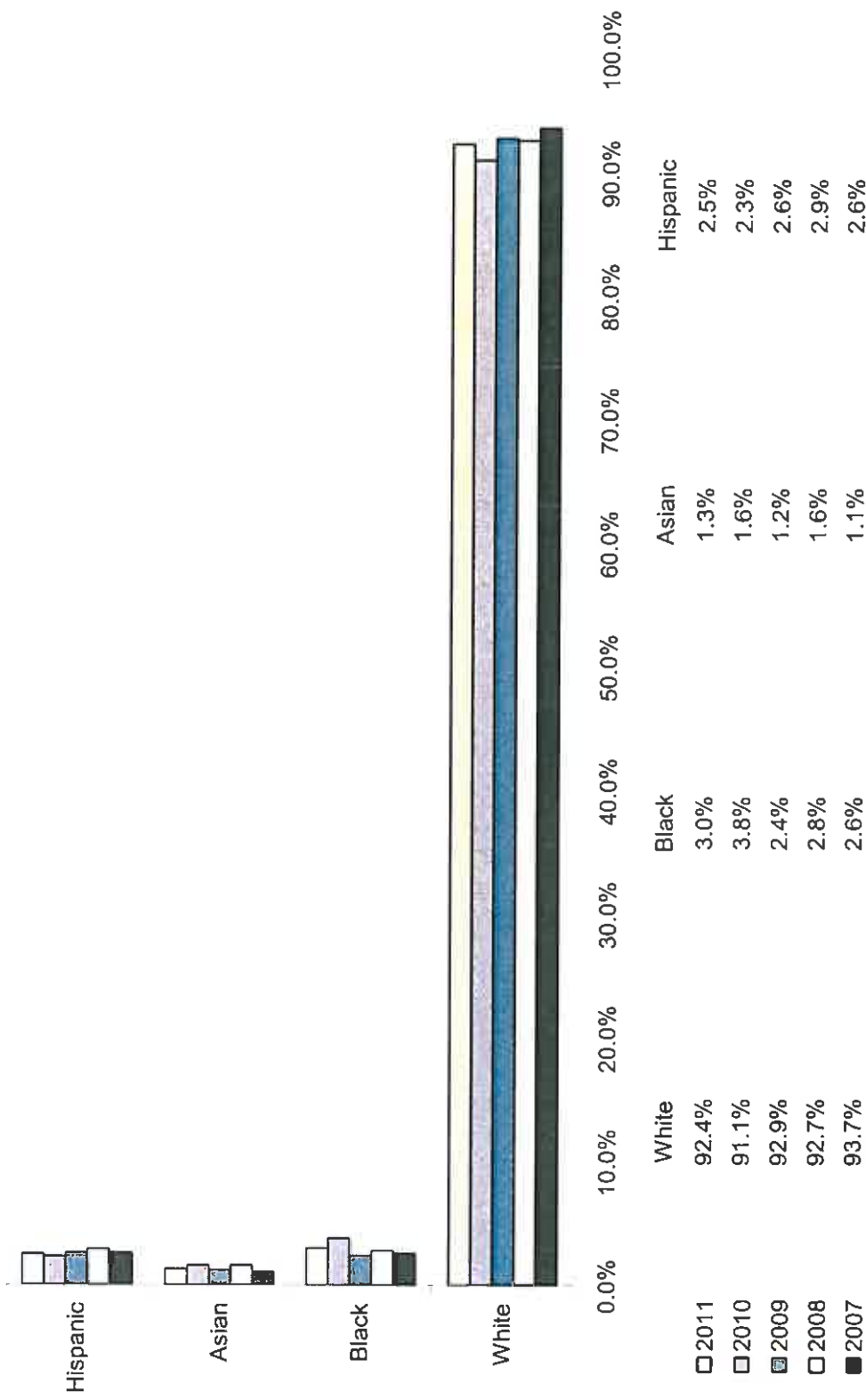


11% Increase  
From 2010

## Biased Based Policing - Tickets

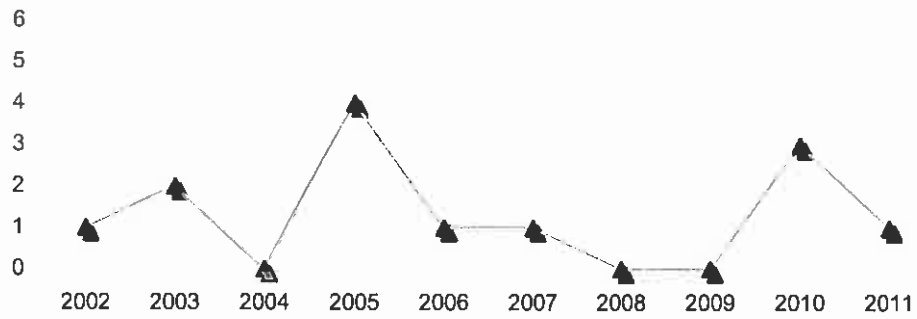


Biased Based Policing-Warnings

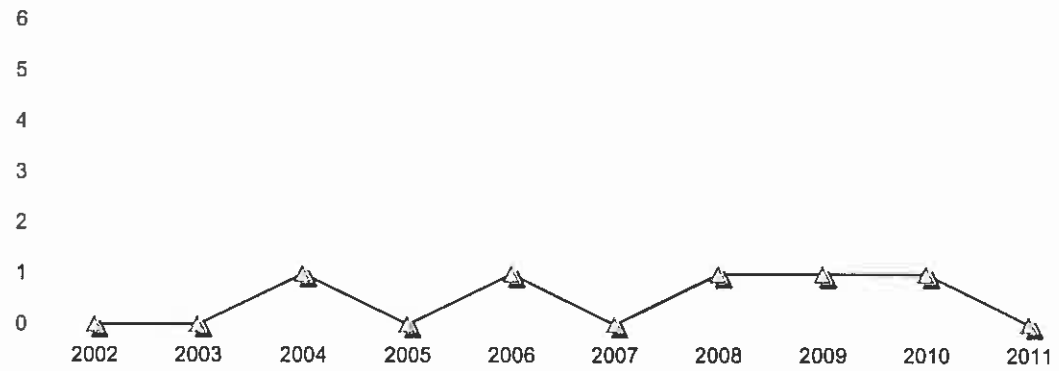




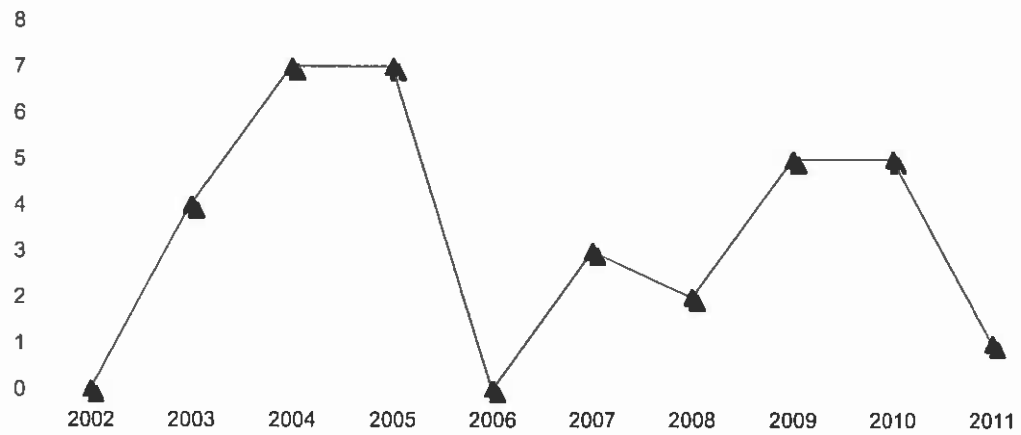
### RAPE



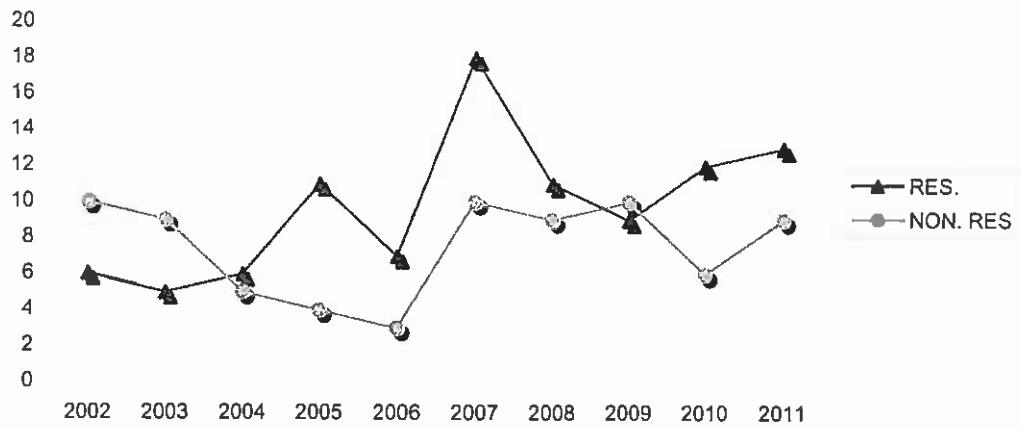
### ROBBERY



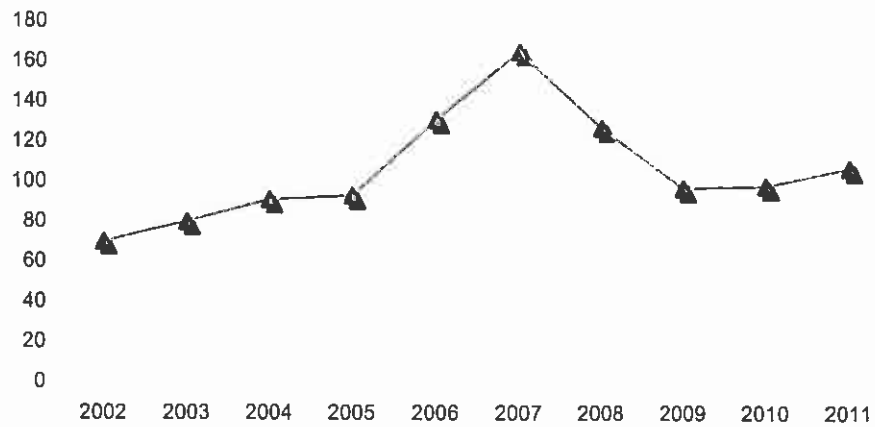
### AGG. ASSAULT



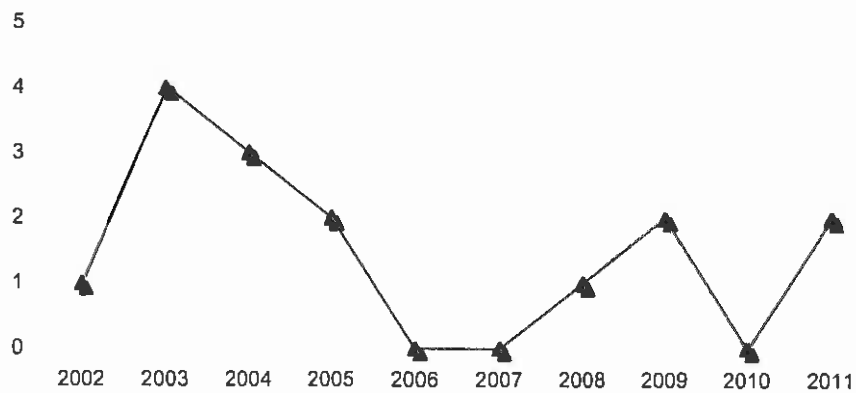
### RES. & NON-RES. BURGLARY



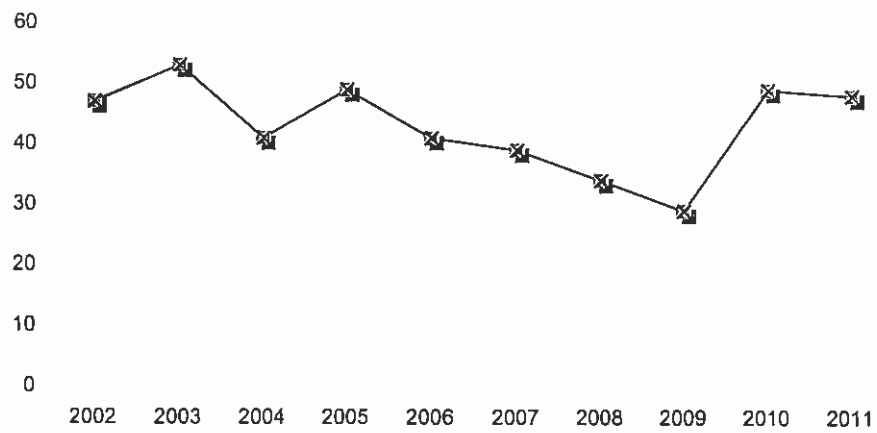
### LARCENY



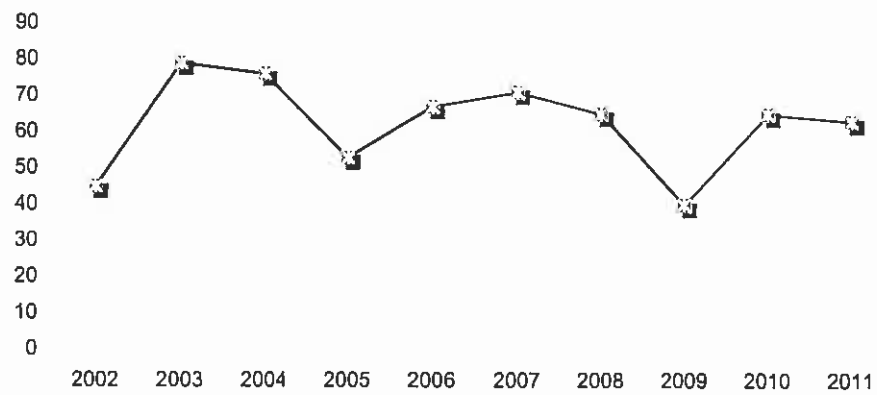
### AUTO THEFT



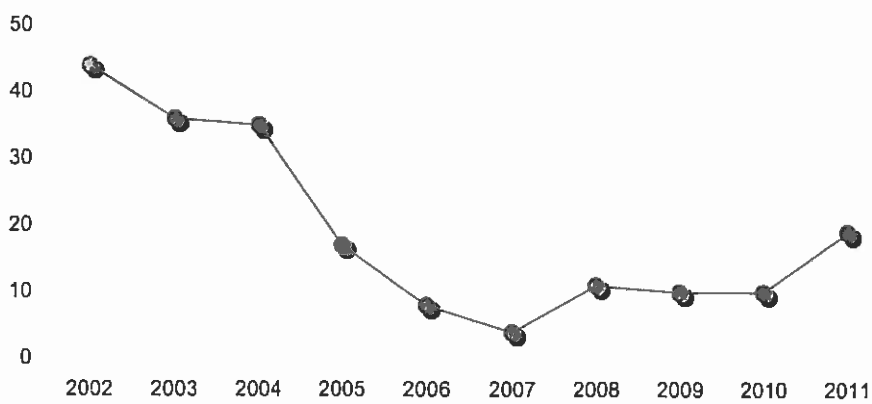
### MISD. ASSAULT



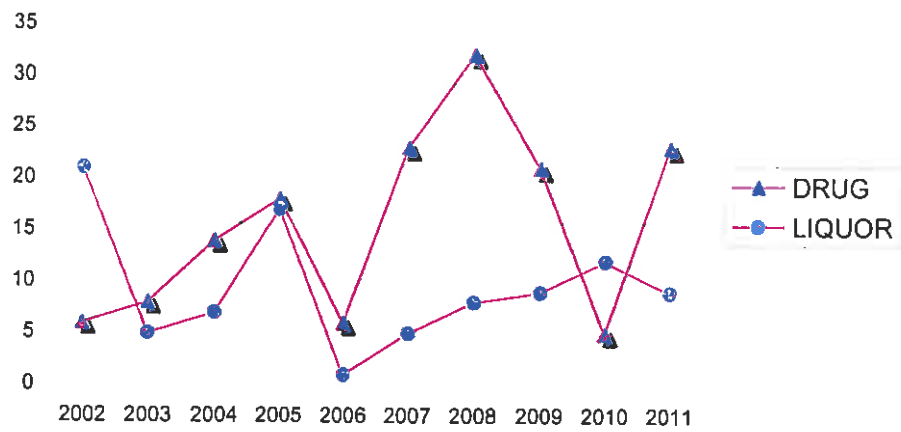
### VANDALISM



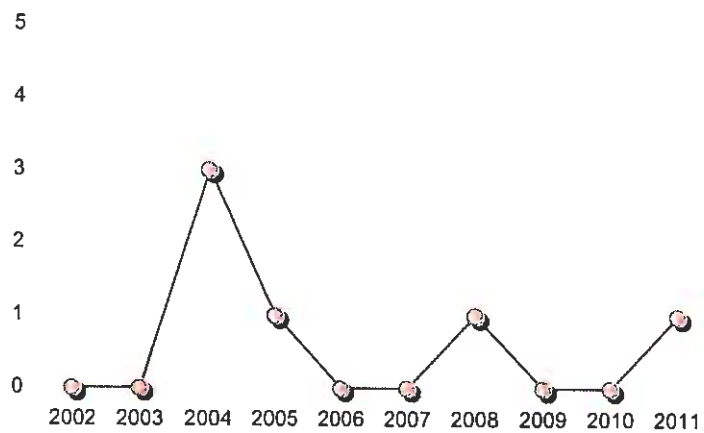
### DISORDERLY CONDUCT



### DRUG & LIQUOR VIOLATIONS



### ARSON



2011 YEAR END REPORT

KENDRA I WALLS

PARKS SUPERINTENDENT



## Parks Department 2011

Total Man Hours	5280
Office Work Hours	840
Street & Highway Mowing Hours	1085
Parks Employee's Sick Leave	198.50
Trees Removed	30



## New Purchases in 2011

2011 Chevrolet Extended Cab 4x4 ½ ton Pickup

2 - 1435 72" John Deere Mower

New playground equipment was purchased in 2010 and installed in 2011 for Trail Ridge, Carson, Rockwood, Sunset, Settlers, English, Collier, and Country Walk parks.

## Parks Department for 2011

Maintain City Hall Grounds

Maintain EMS Building Grounds

Maintain Library's Grounds

Maintain Grounds at Both Power Plants and Sewer Plant

Maintain Grounds at Quad County Manor

Maintain Grounds at East Water Reservoir

Ice and snow removal at City Hall, Library, EMS Building, and sidewalks from Filmore Street to the Baptist Church, Library to 4<sup>th</sup> & Main, Ridgecrest to High School, Plaza Lane to Sunset, Country Walk to High School, and Quad County Manor

Mow and Keep Clean All Water Ways to the Arkansas River

Mow over 62 miles of Road Right of Way per week

Set up Main Street Park and Band Shell for Old Settler's Weekend

Pick up Commodities from Wichita and deliver to Care and Share/Sr. Center

Water and Maintain Flowers on Main Street

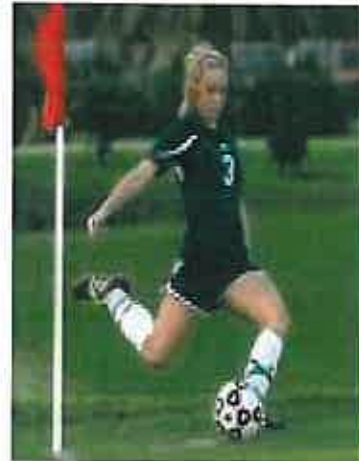
Weed Eating on K-15 from City Limits to City Limits

Hang Christmas Lights on Main Street, Second Street, K-15, City Hall, Main Street Park, and Rock Road

Hang Flags for all Occasions on Main Street and Second Street

## **Sports Complex 2011**

Total Man Hours	3520
Total Sick Leave Hours	35
Fertilizer and Turface Cost	\$9,321.49
Maintenance & Repair Cost	
Build, Equipment, Vehicle	\$6,664.72



## **New Purchases in 2011**

Weed Eaters

Stihl Edger

Walk Behind Wheeled Weed Trimmer

2012 Chevrolet ¾ Ton 4x4 pickup

## **Mulvane Parks Department 2011 Expenses for School District**

- Prepared the Fields and Restrooms for All Practices and Games
- Prepared and Set Up For Boy's and Girl's High School Soccer Games (Spring & Fall)
- Set up Bleachers at High School for Prom

## **2011 TOTAL NUMBER OF TREES**

Maintenance	30
Removals	30





## Parks Department Summary for 2011

**January**-Removed Christmas lights and painted restrooms and concession stand at the Sports Complex, and serviced all mowers and weed edger's for the upcoming mowing season. In addition, we rebuilt and repainted picnic tables and removed snow and ice throughout the month. Rented a stump grinder to grind out all the tree stumps that we cut all year.

**February**-Completed the repairs and finished painting the picnic table project from January. Cleaned the gutters at Main Street Park and began to pick up trash throughout the mowing route. At the Sports Complex the crew put down red shale on the ball fields as well as continually working to remove snow and ice throughout the city.

**March**-Opened the Sports Complex and began preparation for upcoming ball games, such as, mowing, edging, and finished application of shale. All of the bridges in the parks were repainted.

**April**-We began mowing the parks, street canals, City Hall, EMS, Library, Quad County, CC Park, Sports Complex, and pruned trees followed by taking the bleachers to the High School for Prom.

**May**-Prepared the parks for numerous reunions, watered and pruned the trees throughout the city as well as mowing the parks, street canals, City Hall, EMS, Library, Quad County, CC Park, and Sports Complex. Lastly we assisted in setting up the pool for the season and watered flowers downtown. The high school students did a community project and painted all the bridges in the parks green.

**June**-Picked up commodities for the Care & Share. The Parks Dept. continued mowing the parks, street canals, City Hall, EMS, Library, Quad County, CC Park, Sports Complex and pruned trees followed by watering flowers downtown.

**July**-Setup for the 4<sup>th</sup> of July at the Sports Complex, worked the fields and worked on waterlines. Next we mowed the parks, street canals, City Hall, EMS, Library, Quad County, CC Park, Sports Complex, and pruned trees. In addition to mowing we watered flowers downtown, and cleaned out the fountain at Cobb Park. Lastly we picked up food for Care & Share.

**August**-With this being Old Settlers month we began by completing the mowing of the parks, street canals, City Hall, EMS, Library, Quad County, CC Park, Sports Complex, water flowers downtown, and weed edged. Prepared downtown for Old Settlers and cleaned up after Old Settlers.

**September**-Sports Complex: prepared fields for football, soccer, and slow pitch. We over seeded the Sport's complex. Next we mowed the parks, street canals, City Hall, EMS, Library, Quad County, CC Park, Sports Complex, street easements and pruned trees. We finished putting in the new playground equipment.



**October**-Cut down dead pine trees throughout City. Worked the ball fields. Mowed the parks, street canals, City Hall, EMS, Library, Quad County, CC Park, Sports Complex, and pruned trees. Rebuilt the bridges in English Park.

**November**-Winterized the Sports Complex, Main Street Park, all Park equipment, and then collected picnic tables throughout the city and the Sports Complex to paint and repair. Collected supplies for the picnic table repairs and fixed Christmas lights followed by hanging them throughout the city. Raked leaves at City Hall and Library and then watered new trees and plants at EMS building, daily. Completed safety meetings.

**December**-Picked up supplies to fix the benches in the downtown area. Began repainting and rebuilding picnic tables for Sports Complex and Parks and assisted EMS with the Toys for Tots drive. Picked up food for Care & Share and worked in shop on the equipment. Checked parks on a daily basis for damage, trash and checked Christmas Lights.



## **CITY OF MULVANE PARKS AND EQUIPMENT**

### **OLD MAIN STREET PARK-1.1 ACRES**

Band Shell, Playground Equipment, Restrooms, Picnic Tables, and two Barbeque Grills

### **RALPH BELL PARK- 5.9 ACRES**

Picnic Tables, two sets of Playground Equipment, Barbeque Grills, three Basketball Courts, Tennis Courts, Horseshoe Pits and Port o Pots, Skate Board Park

### **FAIRCHILD PARK -3.2 ACRES**

Two Softball Fields

### **SPORTS COMPLEX-39 ACRES**

Two lighted Softball Fields, one lighted Baseball Field, two lighted T-Ball Fields, five Soccer Fields, Restrooms, Concession Stand, Playground Equipment, and Fishing Pond

### **ENGLISH PARK -7.3 ACRES**

Shelter House, two Sand Volleyball Courts, Barbeque Grills, two Basketball Courts, Playground Equipment, Walking Path, Benches, Fire Truck and Little Digger

### **NORTHVIEW NEIGHBORHOOD PARK -1 ACRE**

Playground Equipment, Picnic Tables, Satellite Climber

### **ROCKWOOD NEIGHBORHOOD PARK-.62 ACRES**

Playground Equipment, Picnic Tables, Satellite Climber, Little Digger and Dino Dig

### **SETTLERS PARK- .43 ACRES**

Playground Equipment, Basketball Court, Picnic Tables, Maypole

### **TRAIL RIDGE NEIGHBORHOOD PARK- .75 ACRES**

Playground Equipment, Picnic Tables, Tunnel slide, 6 ft Merry-Go-Round

### **COLLIER PARK- .33 ACRES**

Playground Equipment, Picnic Tables

### **WILLOWDELL PARK – 2.4 ACRES**

Horseshoe Pits and Picnic Tables

### **CHAMBER OF COMMERCE PARK - .25 ACRES**

Park Benches and Walk Thru

### **HAZEL CRAIG PARK- .75 ACRES**

Playground Equipment, Picnic Tables, School bus, Satellite Climber

### **COBB PARK -.75 ACRES**

Fountain, Benches and Museums

### **103RD STREET PARK- 4 ACRES**

Yet to be named and unfinished

### **CARSON PARK – 1.5 ACRES**

Twin Lake Area, Playground Equipment and Picnic Table, 8 ft Merry-Go-Round





***Mulvane EMS  
Year-end Report  
2011***

## *Personnel*

EMS is a combination of part-time paid and volunteer personnel with different levels of certification.

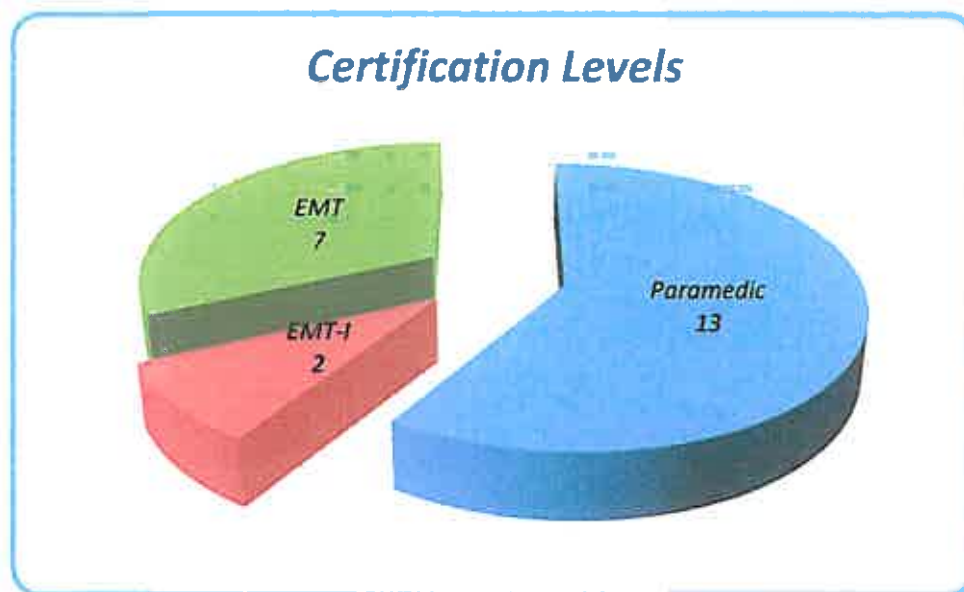
Mulvane is licensed with the State of Kansas as a Type II service. This licensure allows us to provide BLS (Basic Life Support) care. It requires a minimum of a First Responder and EMT or EMT-I to be on the ambulance when transporting. However; ALS (Advanced Life Support) care, also known as Type I care, may be provided with an MICT (Paramedic) on the truck. A brief definition of the levels of certifications is as follows:

**First Responder** – Assist other levels of care (This certification was changed to Emergency Medical Responder with more skills added.)

**EMT-B (Emergency Medical Technician – Basic)** – Provides Basic Life Support (This certification was changed to EMT with more skills added.)

**EMT-I (Emergency Medical Technician –Intermediate)** – Provides Basic Life Support and starts IV's without medications. (This certification is being changed to AEMT with broad changes in skills.)

**MICT (Paramedics)** – Provides Advanced Life Support by administering medications and monitoring EKG. (This certification changed to Paramedic.)



712 patients received an MICT evaluation.

27 received care from an EMT or EMT-I. (This is in large part due to second or third-out calls.)



## *Level of Care*



As well as their paperwork, truck and equipment checks, blood pressure checks, and walk-in patients the crews are also responsible for the building janitorial duties.

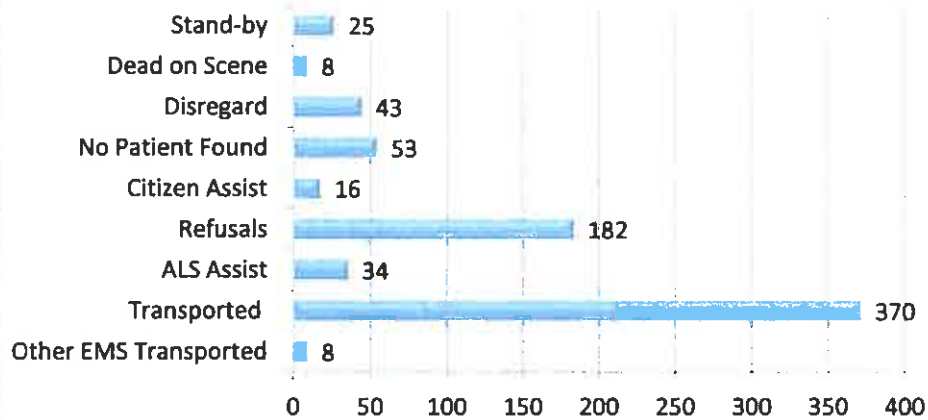


## Calls

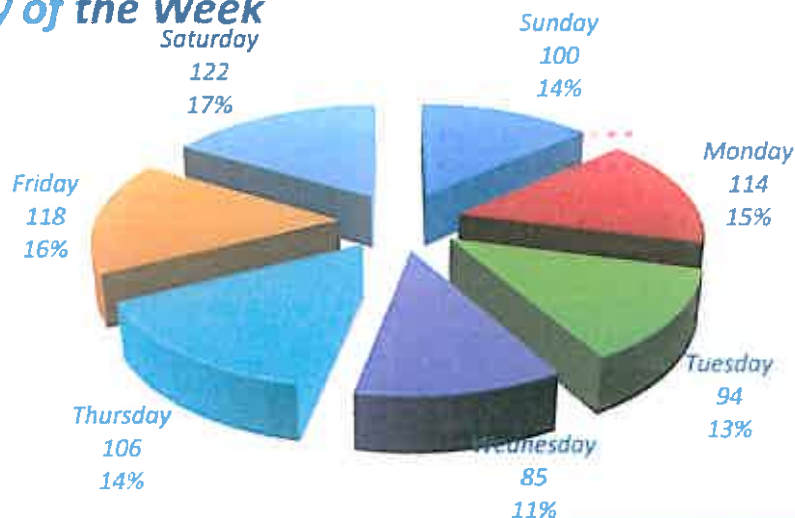
Following is a brief explanation of the different outcomes and how many there were of each:

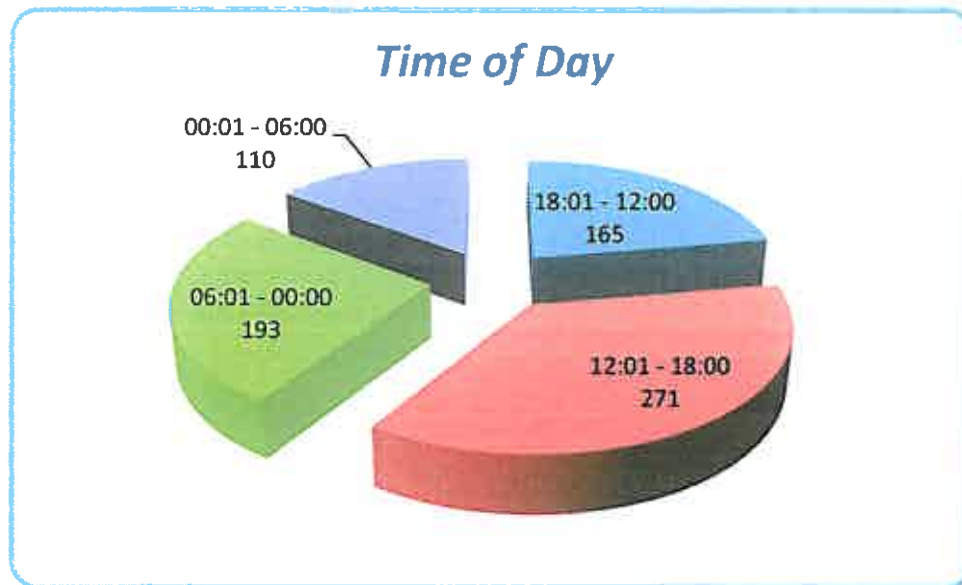
Transported – Patient went to hospital.	370
Transported by other EMS – Second-out calls.	8
ALS Assist – MICT provided care for Belle Plaine EMS.	34
Refusals – Patient decided to not go by ambulance.	182
Citizen Assist – Provided lifting assistance.	16
No Patient Found – Good intent calls.	53
Disregard – Determined not needed by Duty Officer or requesting agency.	43
Dead on Scene – Signs of obvious death evident.	8
Stand-by – Rodeos, Gun Shoot, Football Games, and Fires.	25

### Outcome



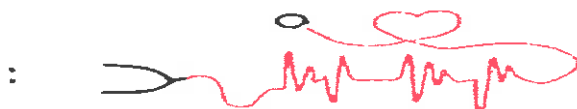
### Day of the Week





The patient volume decreased 23 calls this year as is shown in the chart below. The red numbers indicated highest responses for that month or year. There were two months that became the highest.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
January	51	31	43	49	62	<u>60</u>	35	45	72	<u>76</u>	53	57
February	45	50	42	42	45	58	42	54	<u>62</u>	57	66	54
March	51	37	58	32	46	39	46	61	60	<u>66</u>	65	63
April	50	54	51	40	50	54	<u>58</u>	56	56	53	<u>61</u>	<u>62</u>
May	50	40	49	51	<u>77</u>	43	<u>65</u>	53	65	68	72	64
June	42	48	39	54	53	51	52	40	55	<u>76</u>	66	51
July	45	46	53	<u>60</u>	50	37	50	42	58	59	<u>78</u>	<u>60</u>
August	55	<u>68</u>	<u>59</u>	59	53	50	<u>65</u>	<u>81</u>	60	77	65	<u>91</u>
September	47	44	52	59	52	40	43	<u>61</u>	56	55	59	56
October	39	43	37	<u>66</u>	53	44	51	67	<u>67</u>	<u>68</u>	61	61
November	32	48	40	31	52	51	53	<u>74</u>	56	61	61	<u>69</u>
December	<u>56</u>	56	51	51	52	42	46	70	71	<u>71</u>	55	51
Total	563	565	574	594	645	569	606	707	743	<u>787</u>	762	739





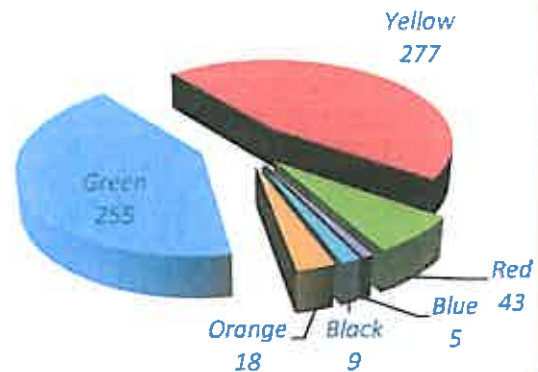
## Graphs of Interesting Stats

### Medical Categories

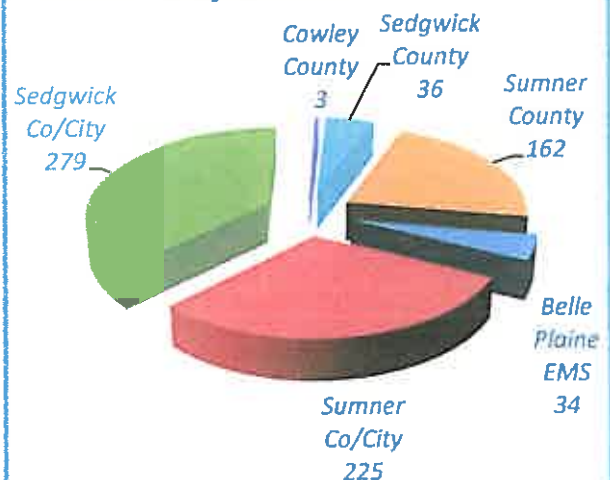
Abdominal Pain	28	3.8%
Allergies	5	0.7%
Animal Bites	2	0.3%
Assault	11	1.5%
Back Pain	4	0.5%
Burns	2	0.3%
Cardiac Arrest	7	0.9%
Chest Pain	69	9.3%
Choking	2	0.3%
Citizen Assist	20	2.7%
Code Black/DOA	3	0.4%
Convulsions/Seizure	19	2.6%
Diabetic Problem	26	3.5%
Eye Problem	1	0.1%
Fall Victim	70	9.5%
Headache	5	0.7%
Heart Problems	8	1.1%
Heat/Cold Exposure	4	0.5%
Hemorrhage/Laceration	15	2.0%
Ingestion/Poisoning	1	0.1%
MCI	8	1.1%
Other	52	7.0
Overdose	9	1.2%
Overdose (accidental)	2	0.3
Pain	6	0.8%
Pregnancy Complications	2	0.3%
Psychiatric Problems	33	4.5%
Respiratory Arrest	2	0.3%
Respiratory Distress	53	7.2%
Sick Person	84	11.4%
Stab/Gunshot Wound	1	0.1%
Stand-by (Event)	17	2.3%
Stand-by (Fire Rehab)	4	0.5%
Stroke/CVA	14	1.9%
Traffic Accident	71	9.6%
Traumatic Injury	44	6.0%
Unconscious/Fainting	29	3.9%

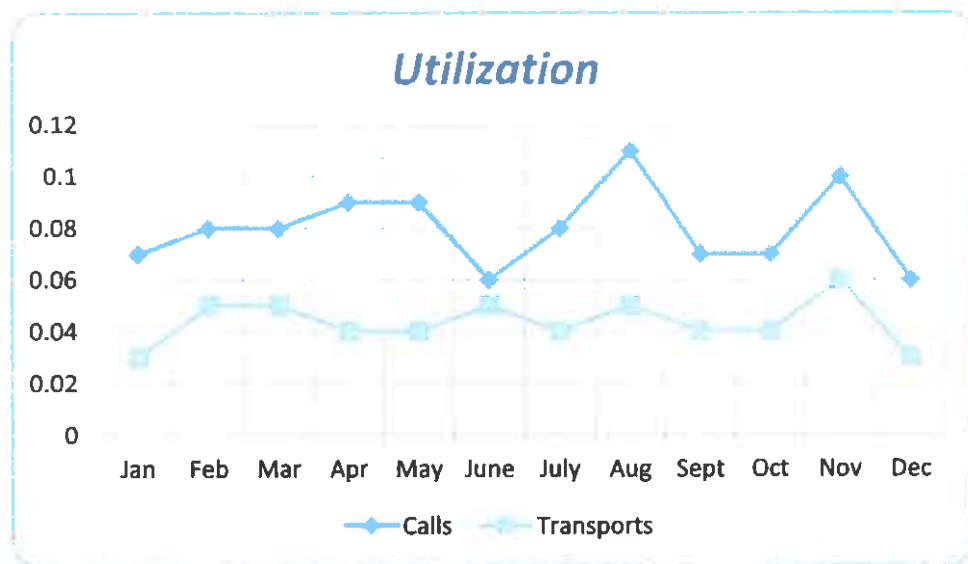
- ✓ Code Orange – Psychiatric
- ✓ Code Green – Minor
- ✓ Code Yellow – Stable but Urgent
- ✓ Code Red – Critical
- ✓ Code Blue – Loss of Respirations and or pulse
- ✓ Code Black – Dead on Scene

### Triage Codes



### Area Responses





## New Equipment

We received three new Stryker Power Cots this year. It has greatly reduced the amount of lifting by the crews helping reduce the risk of injury to our crews and patients.



We received funding from the KRAF grant through the Kansas Board of EMS for the purchase of a Panasonic Toughbook Tablet. Charting and signatures can be done while on the call and then uploaded once they return to the station. This improves HIPAA security and reduces paper.

<i>Name</i>	<i># of Calls</i>
John Andrews	26
John Ashlock	117
Jason Bowker	121
Keena Campbell	131
Jeremy Crocker	142
Darrell Dutcher	11
Carl Edgell	1
Lowell Ester	131
Mike Fells	32
Shane Goldwater	4
Terri Griffin	28
Doug Hatfield	1
Fred Heersche	72
Jon Hicks	1
Amy Houston	2
Jeff Johnson	13
Ashley Kichler	139
Robert Kimble	46
Shawn Lamm	45
Kim Landers	49
Aaron Mattson	37
Chad Maugans	93
Duane McDaniel	15
Jim McDaniel	20
Joe McDaniel	50
Peter Mick	7
Jason Mundell	60
Keith Niemann	35
Judi Patterson	164
Travis Patterson	8
Jed Rea	64
Chris Shaft	10
Mike Turner	22
Cody Vandeest	99
Kurt VinZant	90
Preston White	153
Nick Woods	15
Phillip Wright	1
Nathan Yarnell	3

## *Quality Assurance/Training*

Quarterly Quality Assurance meetings were held with Dr. Carro and Dr. Comer to assure the patient's received proper care and treatment.

As part of the QA process surveys are sent to every fifth patient, Code Red patients, any call with a crew complaint, or any call with a patient complaint. 148 surveys were sent out with only 61 responding back. 7 were returned as undeliverable. The majority were complimentary. The crews do receive a copy of these in their drawers so they too can monitor how the patient's feel about their care and interaction.

Our Program Provider was extended for five years. This allows training classes be held without individual approval from the State. The changes in the Scope of Practice for EMT and First Responder levels of certification dictated the majority of our training classes this year. The EMT level had to meet 28 hours of training and First Responders had to meet 16 hours of training to transition.

## *Toys For Kids*

Fifty-two families which consisted of one hundred-fifty kids were assisted in 2011. Requests for assistance were higher and donations were down. We were still able to provide each family with a turkey, 10 pounds of potatoes, and two loaves of bread. The Middle school collected money and food which turned into a nice box for each family.

Requests for clothing, shoes, and coats were high this year. We were able to provide a coat for each one requested along with at least one of their "wishes" provided by the parents.

The Poker Run sponsored by the Police Department was once again very successful. The proceeds from this and the Little Miss Pioneer Contest allowed us the ability to purchase the food and clothing.

Once again, the community and business support was outstanding. Kris Carson was given a copy of the "wish list" which she put on the angels for the Angel Tree. This provided so many of the kids their requests. All of the parents were very grateful for what they received.



## Billing

*Kim Benson is the Office Manager and billing is part of her duties. This has become a complicated process with Healthcare Reform and the constantly changing requirements with Medicare.*

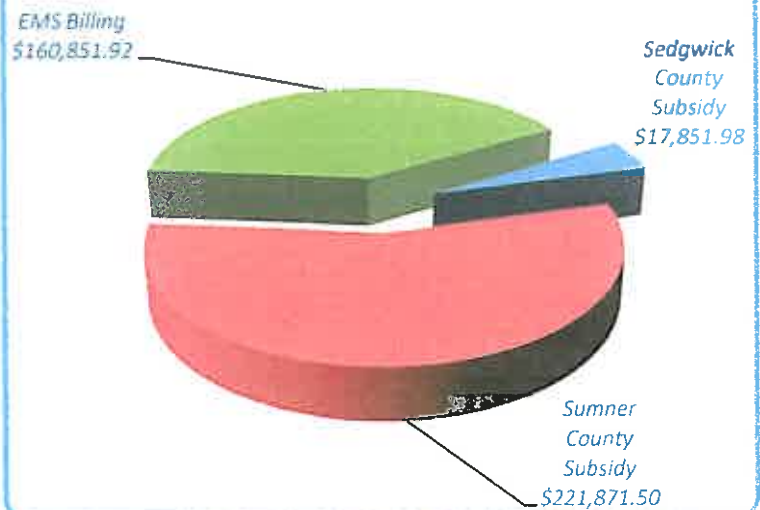
*There were 405 billable calls last year with 42 left to collect.*

*Following are some of the stats she has provided for 2011.*

## Billing Statistics

Month	Billed	Collected
January	\$16,959.00	\$13,700.82
February	\$20,761.00	\$8,905.08
March	\$23,861.00	\$15,460.12
April	\$20,515.00	\$19,062.37
May	\$20,557.00	\$16,759.29
June	\$21,559.00	\$13,442.08
July	\$21,984.00	\$8,135.58
August	\$24,171.00	\$20,118.96
September	\$18,269.00	\$8,384.79
October	\$21,208.00	\$11,854.55
November	\$26,438.00	\$13,320.88
December	\$13,315.00	\$11,707.94
<b>Total</b>	<b>\$249,597.00</b>	<b>\$183,352.53</b>

## Collection Breakdown





## ***Summary***

Everyone working together towards a common goal of providing quality care and services once again made a very successful year.

Each challenge was met and everyone pulled together to make sure the Department as a whole met the needs of every situation.

Mulvane is very fortunate to have such dedicated and caring people answering their call for help as I am to work with them.

Submitted by,

*Judi Patterson*

Judi Patterson

EMS Captain

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**2011**

**UTILITY DEPARTMENT YEAR END REPORT**

**CITY OF MULVANE, KANSAS**



## 2011 MULVANE UTILITY DEPARTMENT YEAR END REPORT

**Forward** The following pages list the status of some of the ongoing projects, describe Utility Department activities, and provide a financial summary of the 2011 operating year for the Electric, Water, and Wastewater Departments.

In the mid-1990s Mulvane entered a cycle of rapid growth that dominated the activities of the Utility Department. Several housing developments were active in rapid succession and some simultaneously. It was a challenge for Utility Department personnel to keep up with the rapid expansion of our city. There were also major capital improvement projects including, the Second Street four lane project, moving nearly two miles of the 69,000 volt power line through derby, the K-15 project, the 111<sup>th</sup> St project, constructing a new wastewater plant, constructing a new power plant, and the Swimming Pool project. Looking back, we have accomplished a lot in a relatively short time.



During the past five years the Utility Department has been busy responding to the inquiries of several developers who desired to build and operate a casino near exit 33 of I35. We have gone to considerable effort to develop principals and guidelines designed to protect the interests of our utility. This may be the single biggest development in the history of Sumner County. Completing the first of several phases of the Kansas Star Casino has been a challenge for the Utility Department. We have come a long way, and we have a long way to go to provide the water and wastewater infrastructure needed to accommodate the full build-out of the project. Great care and diligence must be taken to assure this project delivers its promise of better services, lower taxes and lower utilities costs for Mulvane citizens.

The Mulvane Utility Department staff is looking forward to continuing an aggressive program of efficiently providing utilities to the community at the lowest sustainable cost.

This report was prepared to provide a useful and informative tool for the administrative staff, Mayor, City Council and our citizen-consumers.

Sincerely Submitted  
Mulvane Utilities Department

Brad Modlin  
Utility Distribution Director

Galen Cummins  
Utility Generation Director

## Overview

The Utility Department consists of three divisions, Electric, Water, and Wastewater. The combined annual budget of these departments is over 10 million dollars. The Utility Department currently has 16 full time positions in addition to 6 support personnel in the city office that the Utilities Department pays all, or most of their salary and benefits.

In the mid-1990s Mulvane entered a cycle of rapid growth that dominated the activities of the Utility Department. From 1994 to 2007, the number of residential water customers increased by over 30%. The housing developments of Country Walk, Cedar Brook, Autumn Valley, The Woodlands, and Merlin's Glenn had all been active development areas. Keeping up with this rapid growth was a challenge. The Electric, Water, and Wastewater utilities all experienced expensive "growing pains" in one form or another.

The continuing growth of our city was not without cost and consequence. In 2002 we constructed a new power plant with enough capacity to support the projected growth of our city. By the year 2000, Mulvane had out grown its wastewater plant. In 2003, KDHE issued an order that started the process of requiring Mulvane to build a new wastewater treatment plant. On August 2, 2006, our new wastewater treatment plant came on line. Today, are nearing the maximum limit of our water supply contract with the City of Augusta. An economical option for our next increment of water is currently under study. These were, and are, interesting times for the Mulvane Utility Department, with many challenges to be overcome in rapid succession.

From 2007 through 2010, Mulvane had almost stopped growing. The existing housing developments were nearing completion. The entire nation has experienced a slowdown in the new home market. In 2011 the construction of the forty units Homestead Addition began. Lately, we have had inquiries concerning the addition of additional apartment complex to our community, and some additional development near I35.

In mid-2007, we began contemplating the implications of serving a casino development. The following principals were suggested to guide our actions during this project.

1. None of the cost of this project should be borne by our existing utility customers.
2. Our existing utility customers should be insulated from the risks associated with this project.
3. The utility rates should be uniform throughout the city. Customers located in the vicinity of the casino should not have lower rates than our existing customers.
4. The Utility Department infrastructure and facilities should be high quality and built to stand the test of time.

The first phase of the Kansas Star Casino Development was completed in 2011. While the utility infrastructure needed to serve that phase is in place, much remains to be accomplished before the entire project is completed.



## **The History of Public utilities in the Early Years of Mulvane.**

Life in the early days of Mulvane was a lot different than today. Before 1906, there were no utilities of any sort. Burning wood or coal was the only source of heat. Except for very few acetylene light systems, kerosene lamps and candles were the only choices for lighting. Water had to be hand pumped or hauled. The inevitable trips to the outhouse must have been miserable on a subzero degree winter morning. That was how life was in Mulvane, as well as most other places in Kansas during those early times.

1906 was a busy year, and marked the beginning of public utilities in Mulvane. Alex Rucker and J. L. Nessly had been operating a very successful steam-powered roller mill in Mulvane since 1885. In March of 1906, the city granted the operators of the mill a franchise creating the Nessly & Rucker Light and Power Co. In May of that year, the city granted a franchise creating The Mulvane Mutual Telephone Co. Later, in August of that year, the city granted T. N. Barnsdall & A. P. McBride a franchise to operate a natural gas utility within the city limits of Mulvane.

The Nessly & Rucker, Light and Power Co. was the first operational public utility in Mulvane. By June of 1906 electricians had wired many homes and businesses, linemen had constructed a distribution system, and generating equipment had been installed at the mill. On June 13, 1906, the electric distribution system was energized and the streetlights were turned on for the first time. The first natural gas was delivered to Mulvane on March 14, 1907.

Over the next five years, there was significant progress in the modernization of Mulvane. In those days, perishables were kept in an icebox that required 25 pound blocks of ice. Many citizens resented the monopoly that the Wichita ice company enjoyed at that time. Local investors banded together to form The Mulvane Ice and Cold Storage Company, the first ice was produced in May of 1908.

Most residents wanted a public water supply. Without an adequate source of water, major fires in 1891, 1893, and 1905 had destroyed several Mulvane businesses. As usual, there was a vocal minority that opposed any kind of progress. It took until June of 1911 to establish a city owned public water system and deliver water to the first customers.

Mulvane's first water system consisted of 4 to 6 driven wells on the west side of the railroad tracks, a brick pump house that still stands at 120 Boxelder, one 500 gpm deep well type triplex pump, connected to a 35 hp natural gas engine at one end of its pinion shaft with a clutch and a 35 hp electric motor at the other end, in addition to a 50,000 gallon, 90 foot tall, riveted construction water tower. The entire water system including mains and fire hydrants were paid for with a \$30,000 bond issue.

The next major accomplishment for Mulvane utilities was the establishment of a sewer system. The first section of sewer extended from the intersection of Emery St. and Third St. to the river. It was constructed by the E. M. Eby construction company of Wellington for \$8,350.00. The Sewer System was accepted, and the first tap made on January 25, 1913. Over the next several months, sewer mains were extended to the remainder of town and financed by separate bond issues.

Around 1911, The Mulvane Mills & Elevator Co. sold the electric utility to Mulvane Ice and Cold Storage Co. After operating the electric utility until 1919, Mulvane Ice and Cold Storage Co. sold the electric utility to the City of Mulvane. At that time the city was holding a bond election to finance the replacement of the water pump that had been in service for nine years, as well as other improvements to the water system valued a \$22,250. The Ice Co. expressed a desire to sell the electric utility to the City for \$15,750. Both items were put on the ballot. Both passed. The first section of the Boxelder Power plant was built in 1919. The first generating units installed at that location were two 70kW two cylinder natural gas fired engines purchased from the Lazier Gas Engine Co. of Buffalo NY. The move was made to that location in 1920. With the purchase of the electric utility, the City Of Mulvane owned the water, sewer, and electric utilities. The city felt like it was in control of its destiny, resulting in rapid growth and progress for the next several years.

## **Electric Department Section**

### **The Goals and Accomplishments of Mulvane's Electric Utility**

#### **Goals**

- Provide our customers with the lowest possible sustainable electric rates.
- Maintain and improve the reliability of the electric system to minimize outages.
- Provide a high level of prompt and effective service.
- Use our expertise and equipment to benefit the City and community.
- Establish a legacy of affordable electricity for future generations of Mulvane citizens.

#### **Accomplishments**

- The Electric Department currently contributes over \$250,000 per year for the salaries and benefits of personnel that would be necessary even if Mulvane had no Electric Department.
- In 2011, the Electric Department transferred \$202,898.72 to the general fund. This money helps finance the tax supported City departments. If this money were not available, taxes would have to be raised or services cut.
- The Electric Department bore the entire cost of public street lighting, saving the general fund \$188,014 in 2011.
- The Electric Department frequently makes expensive repairs to and expensive repair parts for non-Electric Department City equipment.
- The Electric Department has helped to complete many City projects such as the Main Street Park; the Sports Complex; The Second Avenue improvement project; the construction of the Public Works Building' and the completion of the Swimming Pool Project.
- Having an electric utility enables local control of rates and service. Currently Mulvane's electric rates are the lowest in our area.

## **Electric Department Year-End Report Summary for 2011**

1. Revenues exceeded Expenses by \$22,479.86
2. The Electric Department is in good financial condition.
3. Some of the Electric Department Revenue Bonds were refunded into General Obligation Bonds at a lower interest rate. The General Obligation bonds do not require funds to be held in reserve accounts. The release of the funds added to the Electric department working capital. Some of these funds can be used to finance one-time capital improvement projects, without a negative long-term effect on electric Department finances.
4. Unusually hot summer weather produced record electric loads, resulting in additional Electric department revenues over those expected in a typical year.
5. Mulvane was the low cost provider of the generation municipalities within 50 miles, with the single exception of Winfield in 2010. . The difference between Winfield's residential electric cost and Mulvane's is less than 0.02%. For all practical purposes, Mulvane and Winfield were tied in 2010. 2010 is the most recent year that we have data for, the 2011 reporting data should be available in the fall of 2012.
6. Substantial revenue will flow to the City of Mulvane as the result of the Kansas Star Casino project. Part of this revenue can be used to reverse some of the subsidies that have traditionally flowed from the Electric Department to the General Fund. Providing our customers with the lowest possible sustainable electric rates is one of the primary goals of our electric utility. The resulting reduction of Electric department expenses can be used to lower electric rates.
7. The Southwest Power Pool (SPP) is in the process of implementing radical changes to the structure and management of all aspects of power exchange within the SPP footprint. These changes will make it necessary for independent utilities, like Mulvane, to have the support of a larger organization such as The Kansas Power Pool (KPP), or The Kansas Municipal Energy Agency (KMEA) to perform the new mandated labor intensive functions. These changes are scheduled to be fully implemented in March of 2014. Over the next few weeks we will be evaluating proposals from KMEA and KPP, with the goal of making a recommendation for the city councils consideration sometime in the spring of 2012.

## **Electric Department Financial Summary**

### **Electricity Utility Fund Activity Summary**

<b>2011 Revenue (from all activates)</b>	<b>\$ 4,386,653.30</b>
<b><u>2011 Expenditures</u></b>	<b><u>\$ 4,364,173.44</u></b>
<b>Cash Carryover Gain Accumulated in 2011</b>	<b>\$ 22,479.86</b>

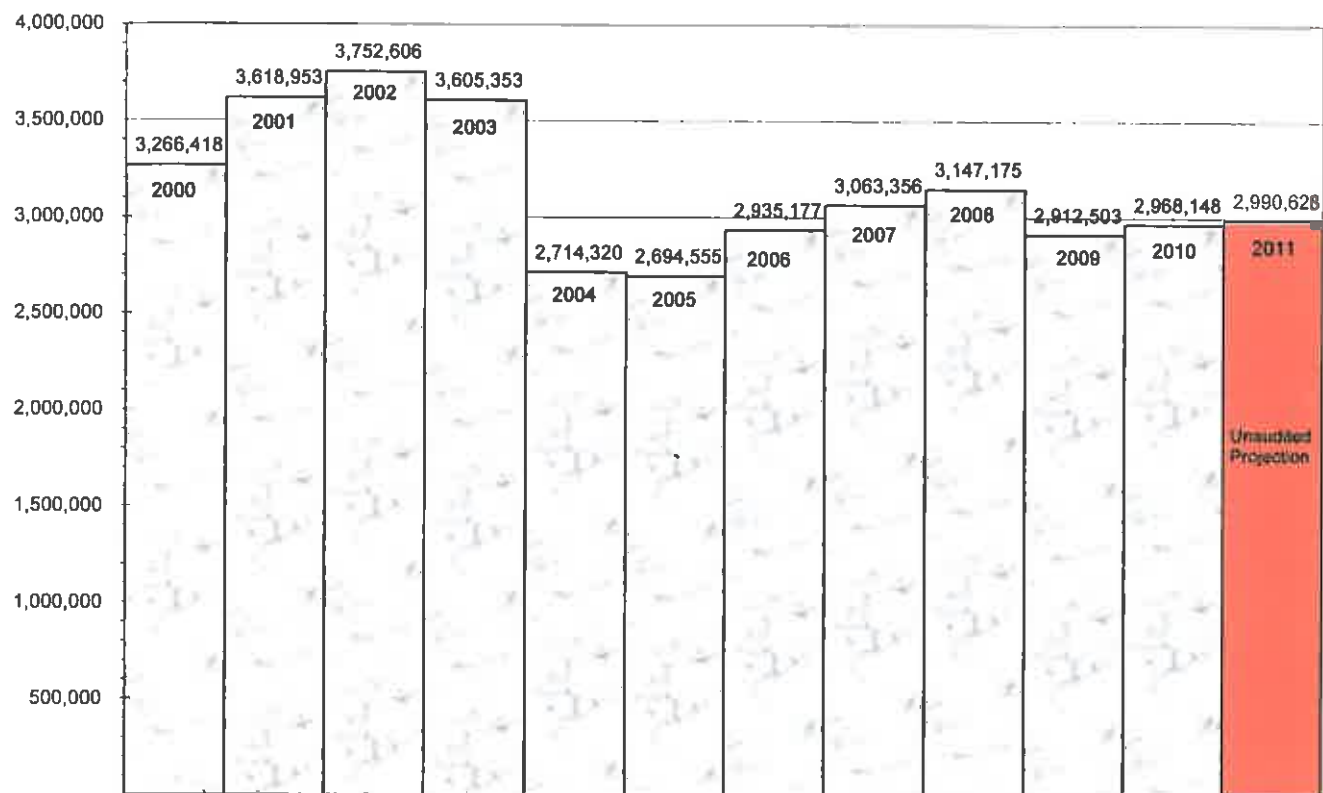
## 2011 Utility Department Year-End Report

### Cash Carryovers

Cash carryovers are one of many indicators of the financial stability of a utility. A utility is in good financial condition if the annual cash carryover is increasing at or above the rate of inflation, and is adequate to cover the utility's unanticipated emergency expenditures in addition to any unbonded capital improvements. When cash carryovers show a continuing downward trend, it's only a matter of time before adjustments to bring revenues and expenses into alignment must be made.

File CASH\_CO\_10

Electric Department Cash Carryover



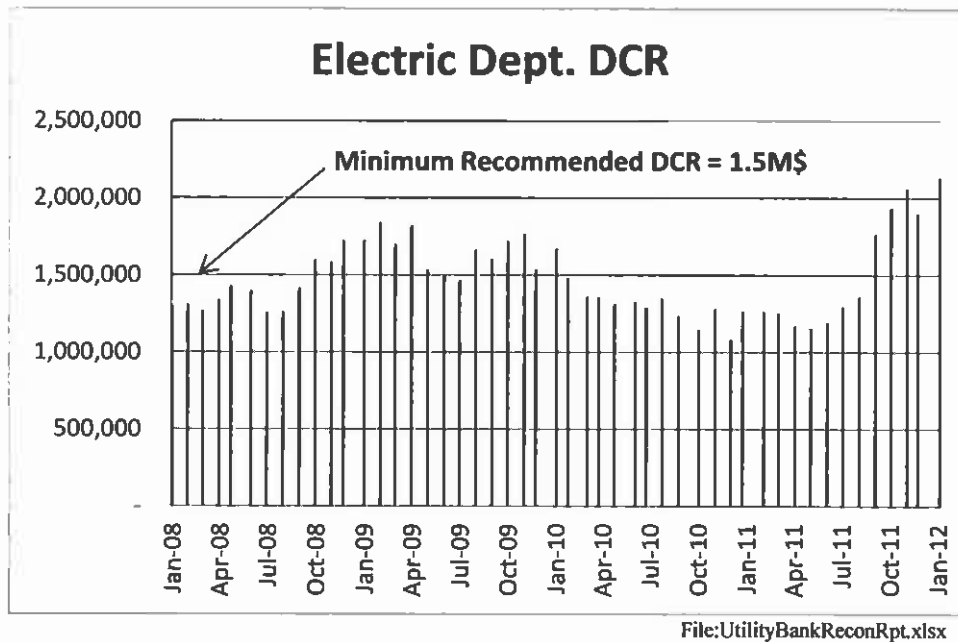
The results of the 2011 audit are not available at this time. The projected cash carry over was calculated from the cities internal revenue and expenditure reports. Until 2002, the electric utility's revenues had been more than the expenditures, resulting in a slight increase in cash carryovers. In 2003 the first bond payment for the new power plant was due. In 2004, the Council took the first steps to put the resulting \$333,000 incremental difference in bond payments into the electric rate base. Consistent with good utility management, these rate increases were scheduled to go into effect over time to minimize rate shock. The sharp decrease in the 2004 cash carry-over is largely attributable to one-time expenditures for various internal finance projects such as the Twin Lakes Sewer Project and the Rivers Land Purchase. The Electric Department experienced a gain of \$22,479.86 in 2011. The electric utility is in reasonably fair economic condition.

Note: Cash Carryovers represent a summary of the financial events that took place in the calendar year. It is not an indicator of the amount of revenue available for discretionary spending at a given time.

### Discretionary Cash Reserve Benchmark

The Discretionary Cash Reserve (DCR) is always less than the Cash Carryover from the Auditor's Report. Cash Reserves are necessary in any well run business in order to smooth the normal ebb and flow of revenues and expenditures, to meet extraordinary one time requirements, and to provide time for adjustment to new and unanticipated operating conditions. Due to the unpredictable nature of utility costs, regulatory requirements, and potential electric system damage, and the need for periodic improvements, establishing an adequate Discretionary Cash Reserve benchmark, as well as a mechanism to achieve that goal, is important to an electric utility. Three of the factors considered in establishing the minimum Discretionary Cash Benchmark are, (1) the extent to which a utility self-insures its assets, (2) the probable cost of rebuilding recovering after a catastrophic event, and (3) the cost of periodic electric system improvements and maintenance. In 2004, staff reviewed the various risk factors involved in operating our electric utility, and recommend that a minimum Discretionary Cash benchmark be established at \$1,500,000. We are currently above that recommended benchmark.

The following chart trends Electric Department's share of the various unrestricted cash and investment accounts that the City of Mulvane maintains.



Currently, the DCR is well above the minimum recommended benchmark. The electric utility was only marginally profitable in 2011, (\$22,479.86). Most of the rapid increase in the DCR that occurred toward the end of the year was the result of re-financing existing Revenue Bonds into General Obligation Bonds. The profit that resulted from the more favorable interest rate was scheduled "up front". The new GO bonds do not require maintaining bond reserve accounts, therefore the bond reserve accounts for the re-funded revenue bonds were released, resulting in the substantial boost in the Discretionary Cash Reserves.

## 2011 Utility Department Year-End Report

### Electric Department Revenues by selected Line Items

File:ElectFinance 2011		Revenues Tab					Revenues Tab		
YEAR	Sales to Customers	Cost of Power Adj	Penalties	Interest Income	Misc. Income	Payment	Rare Events	Other Revenues	Total Revenues
						Internal Financing			
1998	2,401,075		21,316	157,334	2,181	-		10,414	2,592,320
1999	2,340,157		19,886	158,852	23,100	-		10,669	2,552,664
2000	2,612,122		23,660	189,410	3,848	-		11,178	2,840,218
2001	2,598,662		24,902	201,584	4,931	-		94,381	2,924,460
2002	2,647,696		37,336	134,719	3,400	-		122,188	2,945,339
2003	2,663,463		37,308	60,863	262,104	-		8,902	3,032,639
2004	2,656,411		23,394	46,790	141,093	70,000		11,806	2,949,494
2005	2,953,264	509,699	32,468	64,187	32,991	1,500	690,886	20,684	4,305,678
2006	3,084,747	827,640	38,770	107,753	26,620	28,901		80,458	4,194,889
2007	3,247,149	675,071	39,264	143,706	21,375	53,904		28,854	4,209,323
2008	3,122,346	1,032,017	38,092	101,188	50,015	43,901		13,948	4,401,507
2009	3,024,153	612,635	38,553	36,286	21,068	37,974	387,434	6,169	4,164,273
2010	3,223,019	763,662	42,563	11,154	35,957	18,901		5,563	4,100,820
2011	3,276,279	985,464	42,703	8,812	30,488	39,073		3,834	4,386,653

A Cost of Power adjustment was implemented in May of 2005. These revenues are passed along to Mulvane's wholesale power providers, and do not provide additional income for operating the Electric Department. The economic recession contributed to lower costs for electricity since 2008.

Over the years, interest on investments has been a substantial source of income to the Electric Department. The decline of available cash in 2003 resulted in a loss of income. The recent interest rate decline has resulted in a substantial loss of income.

In 2005 we received reimbursements totaling \$429,277 from FEMA for the 2005 ice storm damage, also 261,609 in bond proceeds.

The unusually mild weather conditions experienced during 2008 and 2009 resulted in declining sales to customers. The unusually hot weather patterns of 2010 and 2011 produced an additional \$200,000 in customer sales over the sales in 2009, which had 48% less cooling degree days than 2011.

Due to a change in our utility billing program early in 2002, customer penalty charges due to the Water & Wastewater Departments were credited to the Electric Department. This condition has been corrected, resulting in a \$11,500 loss of revenue starting in 2004. Fees for utility turn-ons and turn-offs were increased in 2005 to recover more of the costs of providing these services.

The Street lighting revenues beginning in 2001 are deceptive since offsetting transfers from 2001 through 2004 to the General Fund were made in each of those years. The actual net revenues were 2001=\$8,000, 2002=\$8,000, & 2003=\$944, 2004=-20,000. The resulting phantom revenues make the Total Revenues for those years seem higher than they really were.

## 2011 Utility Department Year-End Report

File:ElectFinance 2011		Personnel Services	Utility Plant Addition	New Equipment	Expenditures Tab					Gain (Loss)
YEAR	Power Cost				Insurance	Other Expenses	Internal Finance	Electric Bond	Total Expenses	
1998	1,160,156	498,126	217,570	66,558	11,671	486,610		49,242	2,489,933	102,387
1999	1,312,855	471,716	160,047	26,724	15,832	273,812		49,709	2,310,695	241,969
2000	1,448,685	525,362	388,129	1,692	13,528	480,632		48,990	2,907,018	(66,800)
2001	1,370,842	547,279	157,489	32,534	16,116	398,288		49,377	2,571,925	352,535
2002	1,229,360	516,754	160,196	179,328	21,977	546,328	157,743	-	2,811,686	133,653
2003	1,405,684	625,241	203,095	85,643	32,574	457,672	374,983	370,918	3,555,810	(523,171)
2004	1,409,973	558,055	98,677	60,157	44,342	495,585	785,552	388,185	3,840,526	(891,032)
2005	1,991,720	692,209	49,734	5,372	46,806	1,153,583	-	386,019	4,325,443	(19,765)
2006	2,336,321	697,341	112,673	41,814	47,968	341,433	-	376,717	3,954,267	240,622
2007	2,254,814	762,743	64,148	72,556	52,575	353,249	122,219	388,132	4,070,436	138,887
2008	2,523,336	810,755	154,192	8,805	51,350	376,546	-	386,615	4,311,599	89,908
2009	2,107,636	864,761	54,402	128,023	52,374	347,781	72,573	771,394	4,398,945	(234,672)
2010	2,323,369	880,404	13,043	20,686	55,020	366,572	-	386,082	4,045,175	55,645
2011	2,507,745	922,189	85,350	5,801	57,572	400,365	-	385,151	4,364,173	22,480

Higher costs of the portion of power Mulvane receives from Westar has been the primary reason for the increase in cost since mid 2005, when a new type of Westar contract went into effect ..

During the cycle of rapid growth that occurred from 1995 to 2003, an average expenditure of \$200,000 was spent expanding the electric distribution system to serve new housing subdivisions. When the labor costs of construction and the cost of power are added, it takes over ten years to realize the first dollar profit from a new customer. In 2008 most of this line item was spent on the power plant expansion/Park Dept. Storage project. In 2011 most of this line item was expenditures for the Homestead addition.

These expenditures are unpredictable by nature. Some large, with no clear time frame for recovery, which for management purposes must be treated as lost resources.

One of the biggest single ongoing changes in expenses was the \$326,000 increase in bond payment resulting from the construction of the new power plant. Bond payments were less than scheduled in 2009 as a result of refunding a bond issue.

Personnel Services includes FICA, Health Insurance, retirement, unemployment, Worker's comp. and life ins. The overall increase in the cost of this line item in 2009 was 6.7%. Measures have been taken to reduce the escalation of these costs in 2010 including a COLA freeze, the elimination of IRA matching funds, and scaling back health care coverage.

In 2005, the Electric Department spent \$468,894 to repair ice storm damage. Also \$209,804 was spent on reissuing bonds that year.

### Streetlight Report

Providing streetlights for a city is a governmental function since they operate for the benefit of the general public, and do not contribute to the process of providing electricity to end users. There is no single source describing how each individual city pays for streetlight services. Most of the cities in Kansas pay for this service through a line item in the general fund. However, many of the 123 Kansas cities that have municipally owned electric systems use electric revenues to subsidize the cost of street lighting.

The vast majority cities in Kansas are served by investor owned electric utilities. The rate that these cities are charged for street lighting is regulated by Kansas Corporation Commission tariffs. It is widely acknowledged that these KCC tariffs are less than the actual costs of providing the service.

Staff has taken detailed inventory of all of the street lights owned by our electric utility. The appropriate KCC tariffs have been researched and applied yielding the results in the table labeled Standard Streetlight Charges on the following page. Since 2003, the Electric Department has not

## 2011 Utility Department Year-End Report

received compensation for providing this service. The value of the electricity that is consumed by the streetlights each year is more than \$91,000.

Our streetlight inventory tracking spreadsheet follows. The KCC tariffs are those in effect in 2010. The inventory count was last updated in December of 2010. The spreadsheet demonstrates that the annual value of lighting our streets that is born by our electric customers is \$188,014. The cost of procuring the electricity and distributing it to the streetlights is over \$84,000 per year.

File:Streetlight12-2008\_Inv.xls

Last Counted

12/1/2009

### Standard Streetlight Charges

Item #	Size	Quantity	KCC Monthly Tariff	Monthly Value	Annual Value	Ave. Hours Operated Per Day	kWh Consumed Per Year
1	67	17	6.74	114.58	1,374.96	12	4,989
2	100	220	8.07	1,775.40	21,304.80	12	96,360
3	150	6	11.06	66.36	796.32	12	3,942
4	175	40	11.06	442.40	5,308.80	12	30,660
5	250	483	16.04	7,747.32	92,967.84	12	528,885
6	400	32	20.06	641.92	7,703.04	12	56,064
7	750	30	32.61	978.30	11,739.60	12	98,550
8	1000	3	45.15	135.45	1,625.40	12	13,140
9	1500	327	32.89	10,755.03	32,265.09	6	147,150
Total		1158		22,656.76	\$ 175,086		979,740

### Additional Charges

#### KCC Tariff for Steel & Concrete Poles

	Location	Quantity	KCC Monthly Tariff	Monthly Value	Annual Value
1	K15	105	5.36	562.8	6,753.60
2	Rock Road	39	5.36	209.04	2,508.48
3	Second Ave.	39	5.36	209.04	2,508.48
4	Main St.	18	5.36	96.48	1,157.76
Total		201		1077.36	\$ 12,928

Athletic field lights, the consumption is based on 50 days operation per year.

<b>Total Annual Value of Mulvane Streetlights</b>	<b>\$ 188,014</b>
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### Statistical Section

Our peak one-hour electric load in 2011 was 13,100 kWh, occurring on Sunday, July 10, 2011 during the hour ending 18:00. The temperature on that day reached 111° F. The 2011 peak surpassed the previous record system peak of 12,959 kWh, which occurred in extreme heat in August of 2006.

Mulvane's 2011 total annual load of 43,852,560 kWh was up 0.7% from the 2010 load of 43,540,330 kWh. Both 2010 and 2011 were very hot years.

### Power Plant Operating Summary

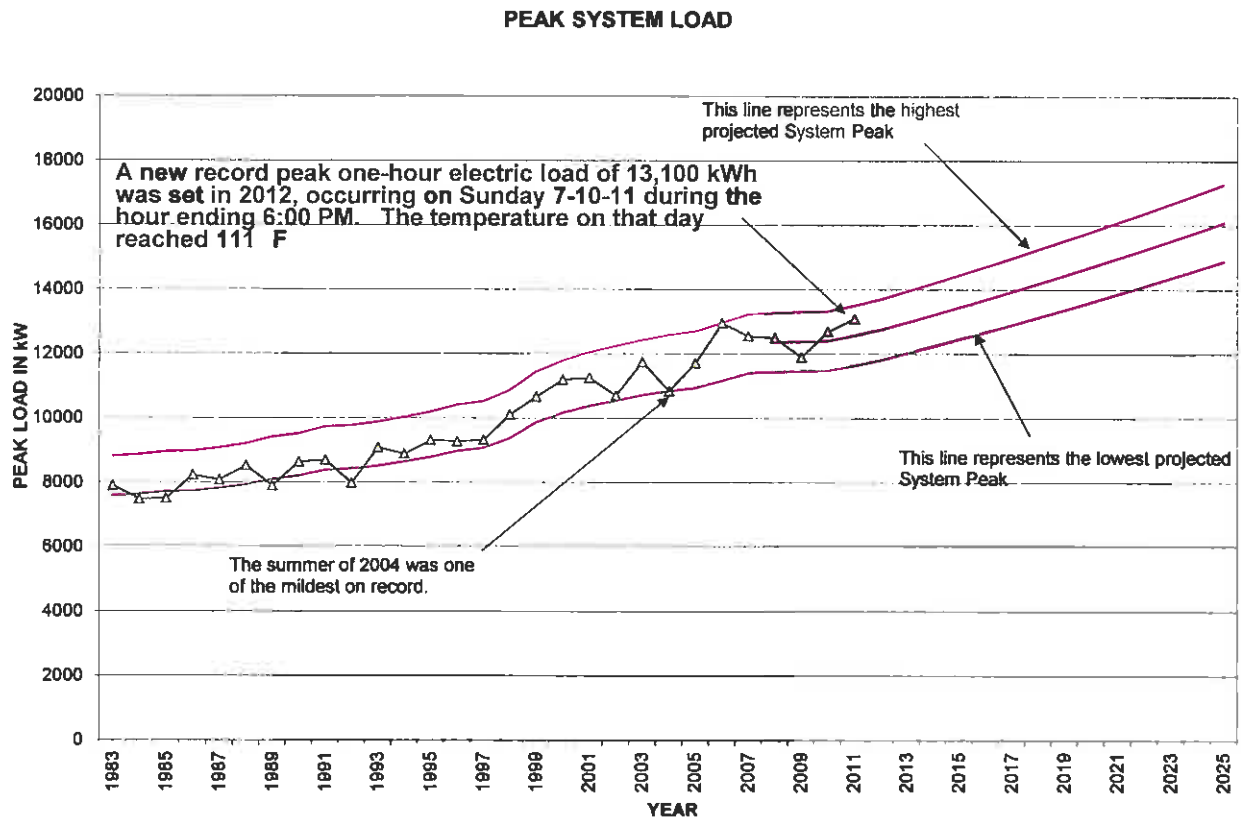
The Mulvane Power Plants generated on four days in 2011, for a total of 156,046 kWh. We generated considerably less than in a typical year. Nearly 10 times that amount was generated in the year 2000. The recession driven decline in industrial load throughout the country has resulted in low prices in the power market the past three years.



## 2011 Utility Department Year-End Report

### Peak Load Chart

Projecting peak loads is an important tool for electric utilities. Advance planning is necessary to organize and financially prepare for future infrastructure upgrades



#### Method of Calculation:

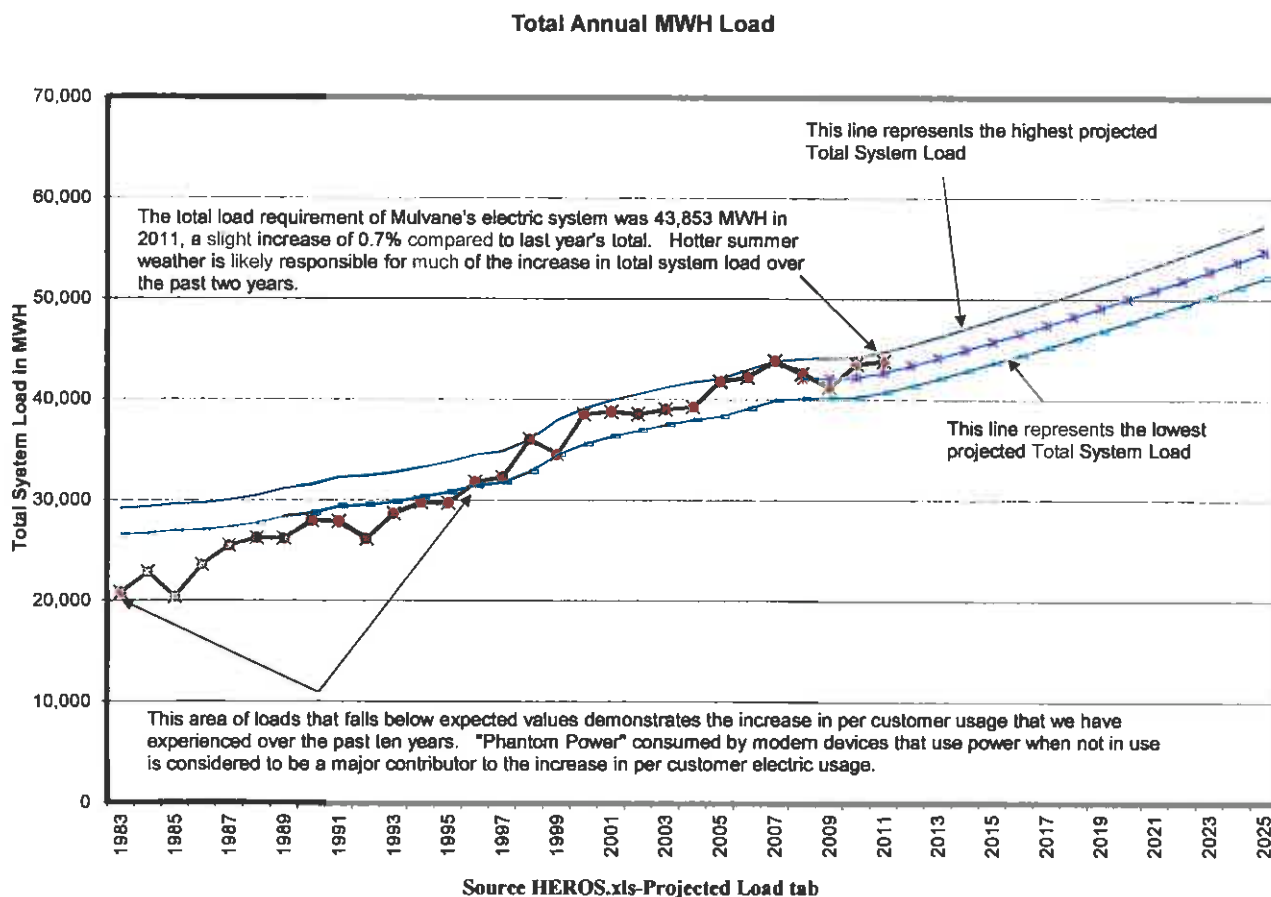
The air-conditioning load is a major contributor to Mulvane's Peak Demand. Weather conditions are the most important factor in predicting peak loads. Since the weather in this area is impossible to predict, we have to be content with predicting a probable range that the Peak Demand will fall into.

The number of customers is easier to predict. Customer growth assumptions start at 1.25% in 2011, and gradually increase to 2.3% in 2016, stabilizing at 2.3% thereafter.

The upper boundary line of the Projected Peak Demand Chart was calculated by multiplying the projected number of customers by 5.08 kW/customer. The lower boundary line of the Projected Peak Demand Chart was calculated by multiplying the projected number of customers by 4.45 kW/customer.

## Total System Load Chart

Total System Load is defined as the total energy entering Mulvane's electric distribution system from outside sources (Westar, KCBPU, & SWPA) plus the total generation from our two power plants, minus the energy consumed by the power plants while generating power. Our Total System Loads equates to the energy consumed by our customers plus the minor energy losses inherent in all electric distribution systems.



### Method of Calculation:

The calculation procedure is similar to the process used to develop the preceding Peak System Load chart, with 15.61 megawatt hours per year per customer used as the low range multiplier, and 17.14 megawatt hours per year per customer used as the high range multiplier. Over the years we have noticed a trend of increased per customer usage. One factor contributing to this trend is the construction of bigger homes that use more energy. Another factor is proliferation of appliances and electronic equipment that have internal timers and circuitry that consume energy when not in use. TVs and VCRs, for example, operate on standby power to allow such things as clocks, memory settings and remote control systems to operate. Much, if not most, of this "phantom energy" is consumed by the appliances' power supplies, which convert alternating current into direct current. The energy wasted by these devices has more than offset the efficiency gains by major appliances such as washing machines and refrigerators.

## 2011 Utility Department Year-End Report

### The cost of electricity to residential customers in 2011

Mulvane's 2,253 residential customers used an average of 971 kW of energy per month in 2011 at an average cost of \$103.26 per month. This calculates to 10.64 cents per kilowatt hour of usage.

#### HISTORY OF RESIDENTIAL ELECTRIC COST PER KWH OF MULVANE CUSTOMERS

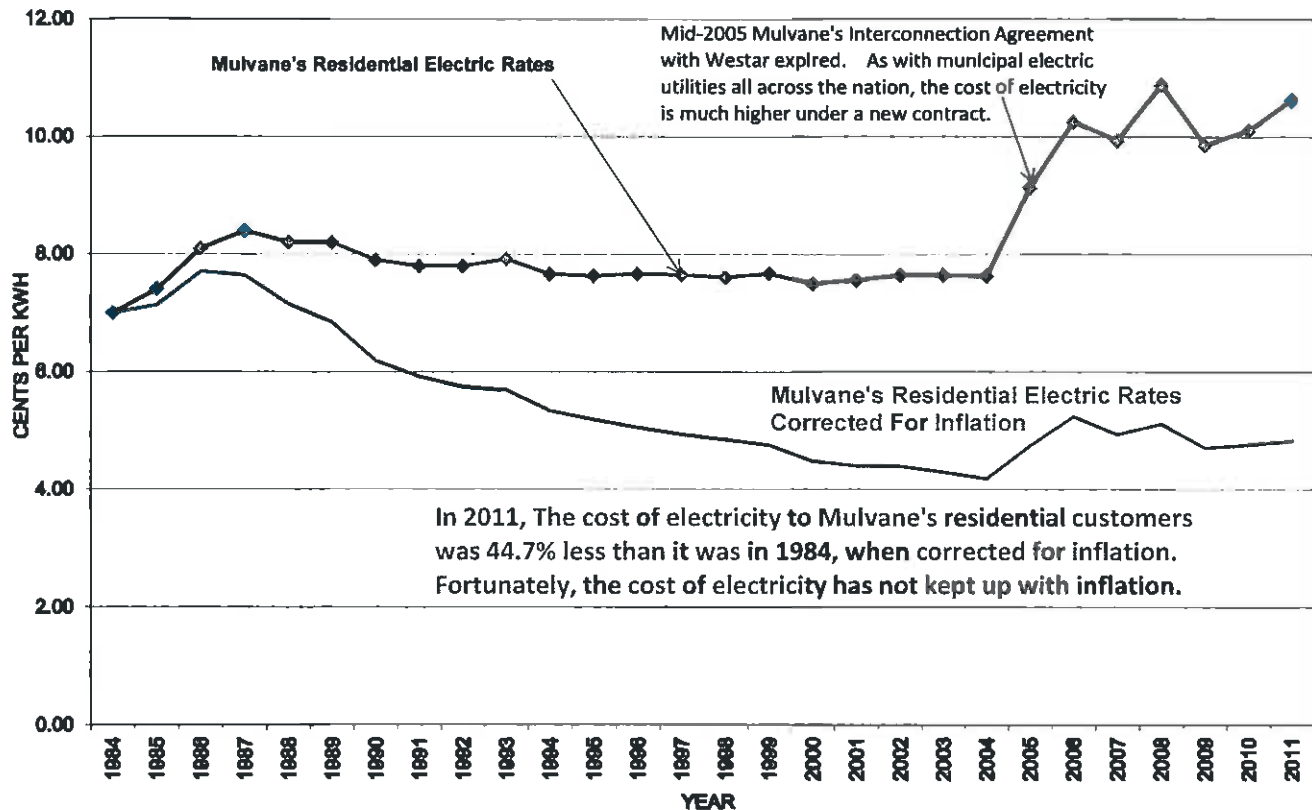


Chart CPI.xls C2

The inflation-adjusted cost of residential energy in Mulvane has declined significantly since 1984. The nation-wide reduction in the inflation-adjusted cost of electricity in the US has helped raise the standard of living for middle class citizens. The rapid growth of our city, and power supply contract changes, made it necessary to add generating capacity in 2002. As always, providing our citizens with low utility rates will remain our primary goal.

## 2011 Utility Department Year-End Report

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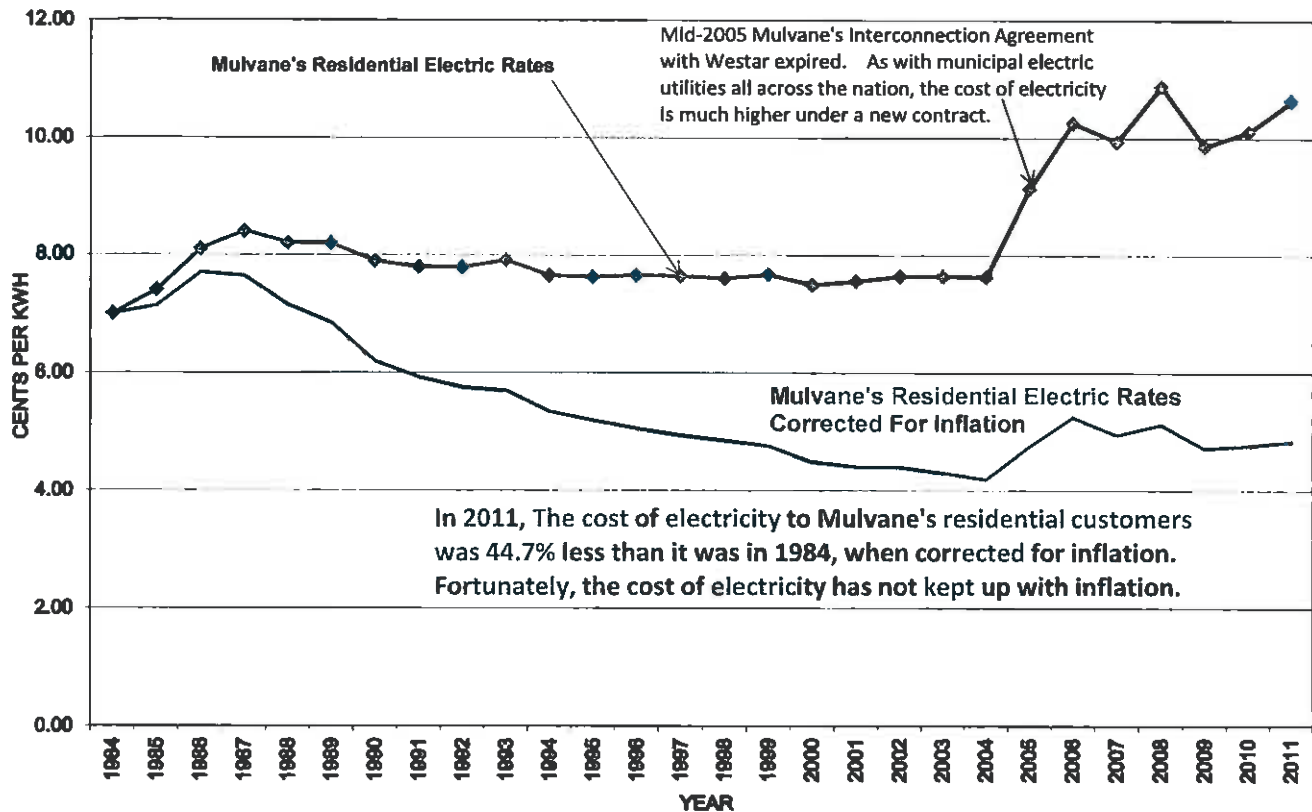


Chart CPL.xls C2

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## 2011 Utility Department Year-End Report

File:ElectricRate Comparision12-17-2011

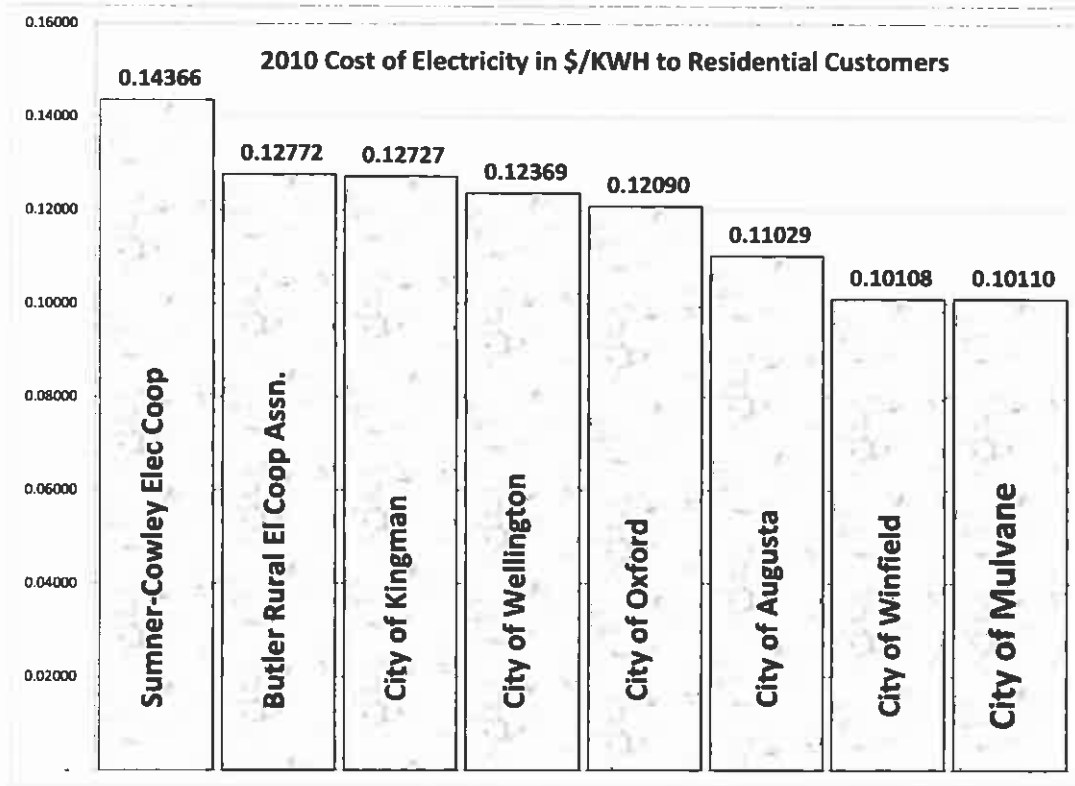
12-17-2011

### Comparing Electric Rates in Kansas

Each electric utility doing business in the United States is required to submit operating data to the Energy Information Agency (EIA) for the previous year by an April 30 deadline. That data is compiled and released around the end of that year. The data covering the 2010 operating year was released in the first part of December, 2011. In 2010 Mulvane ranked at the 26 percentile, meaning that nearly 74% of the 152 electric utilities doing business in Kansas charge their residential customers more for electricity than Mulvane charges.

### Comparing the Mulvane residential electricity cost with the cost in the other Generating Municipalities located within 50 miles.

Mulvane was the low cost provider of the generation municipalities within 50 miles, with the single exception of Winfield. The difference between Winfield's residential electric cost and Mulvane's is less than 0.02%. For all practical purposes, Mulvane and Winfield were tied in 2010.



#### DOE EIA Data for 2010

City of Mulvane	\$0.10110 / kWh	
City of Augusta	\$ 0.11029/ kWh	9.1% higher than Mulvane
City of Winfield	\$ 0.10108/ kWh	0.019% lower than Mulvane
City of Kingman	\$ 0.12727/ kWh	25.9% higher than Mulvane
City of Wellington	\$ 0.12369/ kWh	22.3% higher than Mulvane
City of Oxford	\$0.12090/kWh	19.6% higher than Mulvane

### **Comparing Mulvane residential electricity cost with those of Westar.**

Each month we compare the average cost of electricity per kilowatt hour of Mulvane customers with a typical residential customer's cost on the Westar system. The cost to Mulvane residential customers has been less than the cost to Westar residential customers in the three years that we have data to compare.

**In 2009 Mulvane was 5.24% cheaper than Westar.**

**In 2010 Mulvane was 8.76% cheaper than Westar.**

**In 2011 Mulvane was 2.34% cheaper than Westar.**

Note: Westar has filed for a 5.8 percent increase in electric rates to go into effect in 2012.

### **Summary**

We are proud of the performance of our electric utility. Over the past thirty years, Mulvane has been the low-cost provider of electricity in our area most of the time. In addition to the millions of dollars that our customers have collectively saved through lower rates, our electric utility has benefited the community in countless ways. In addition to savings on electricity, our electric utility has been a significant contributor to Mulvane's General Fund, permitting our city to offer superior police; emergency services; streets; and parks than most communities of our size.

Today we are cheapest provider of the four that serve the area defined by the USD 263 school district including City of Mulvane, Butler Rural El Coop Assn, Inc, Sumner-Cowley Electric Coop, Inc, and Westar Energy.

### **Factors Influencing the Cost of Procuring Electricity for Mulvane Customers in 2011**

There are several factors that have an influence on the cost of procuring electricity each year. Three worth mentioning for the 2011 year are, the cost of natural gas; the weather; and the availability of Mulvane's base load resources.

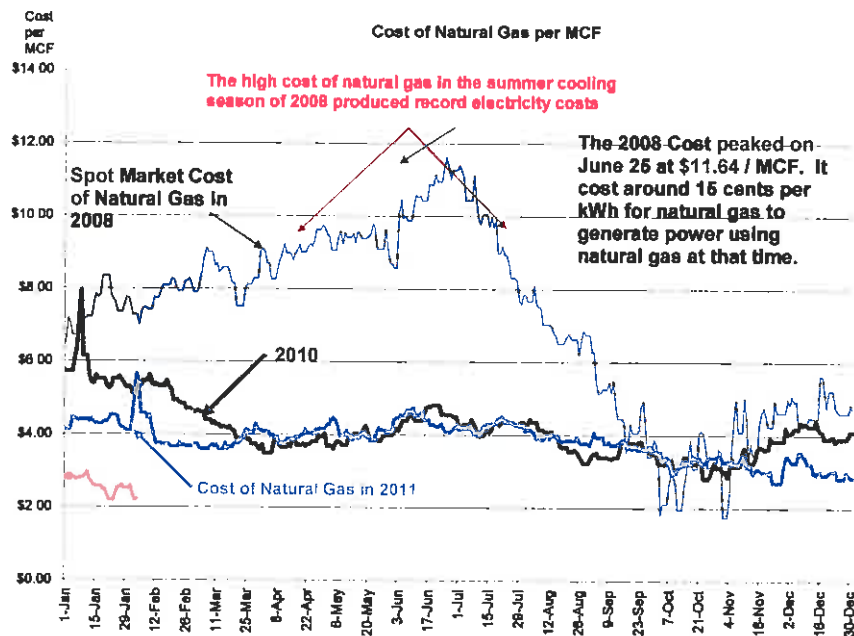
- **Cost of Natural Gas**---The cost of the power that we receive from Westar is based on our position in Westar's generating "stack" each hour. When Westar has enough coal-fired generation on line to serve our combined needs, Mulvane's cost is based on the cost of generating with coal. In hot weather, during peak load conditions, natural gas-fired generating units, that are more expensive to operate, must be used to satisfy the demand. During those times, Mulvane's cost is based on the most expensive units on line during each hour.
- **Weather**---Both hot weather and cold weather have a major influence on the cost of electricity. Mulvane's system requires approximately 215 mWh per day during the hottest days; 90 mWh during pleasant days; and 130 mWh on the coldest days. The increase in demand requires the use of more expensive generating units on the Westar system during extreme temperatures.
- **Availability of base load resources**---Mulvane has invested in two sources of base load energy. We are entitled to 3,000 kW from the Nearman Creek Power Plant owned by the Kansas City Kansas Board of Public Utilities, and 1,000 kW from Southwestern Power Administration. When these sources are not producing power, higher cost sources must be utilized.

### **The Cost of Natural Gas in 2011**

Energy costs skyrocketed over the first half of 2008. During the summer cooling season, the cost of natural gas was nearly double the cost in 2007. In the summer peak usage season, around half of Mulvane's energy requirement comes from Westar. The cost of natural gas exerts a strong influence on the cost of that increment of energy.

In 2010 and 2011, our customers got welcome relief from the high cost of electricity and other forms of energy that we experienced in 2008.

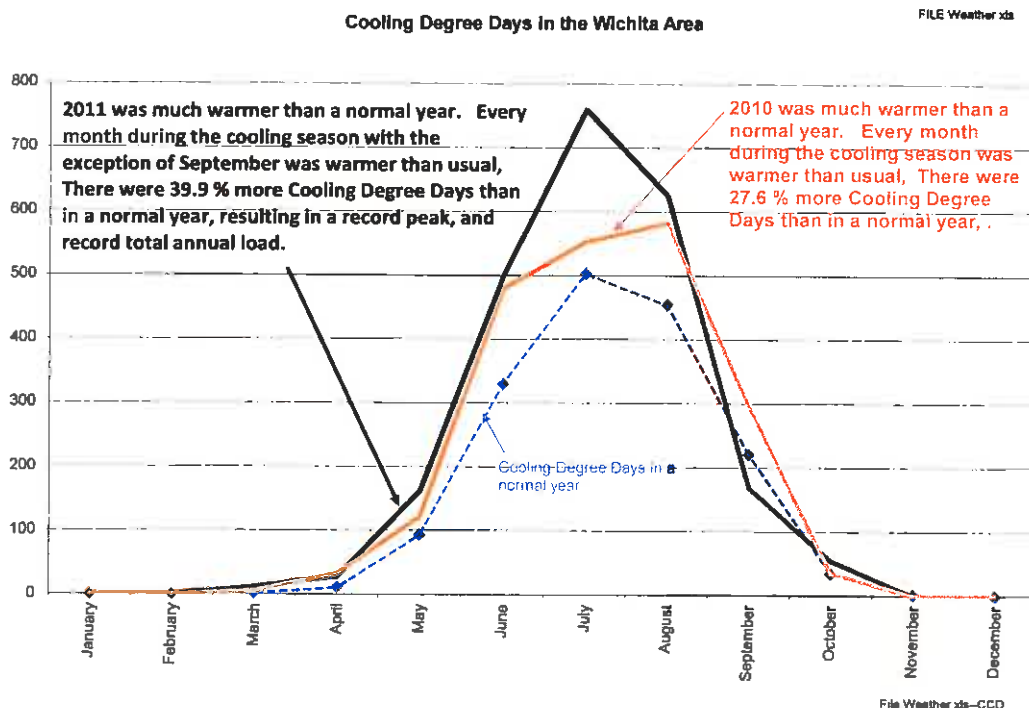
## 2011 Utility Department Year-End Report



### Weather in 2011

As in every other year, our weather was unusual in 2011. January and February were colder than normal. There was much more heat than in a normal during cooling season. The fall heating season (October through December) was milder than normal.

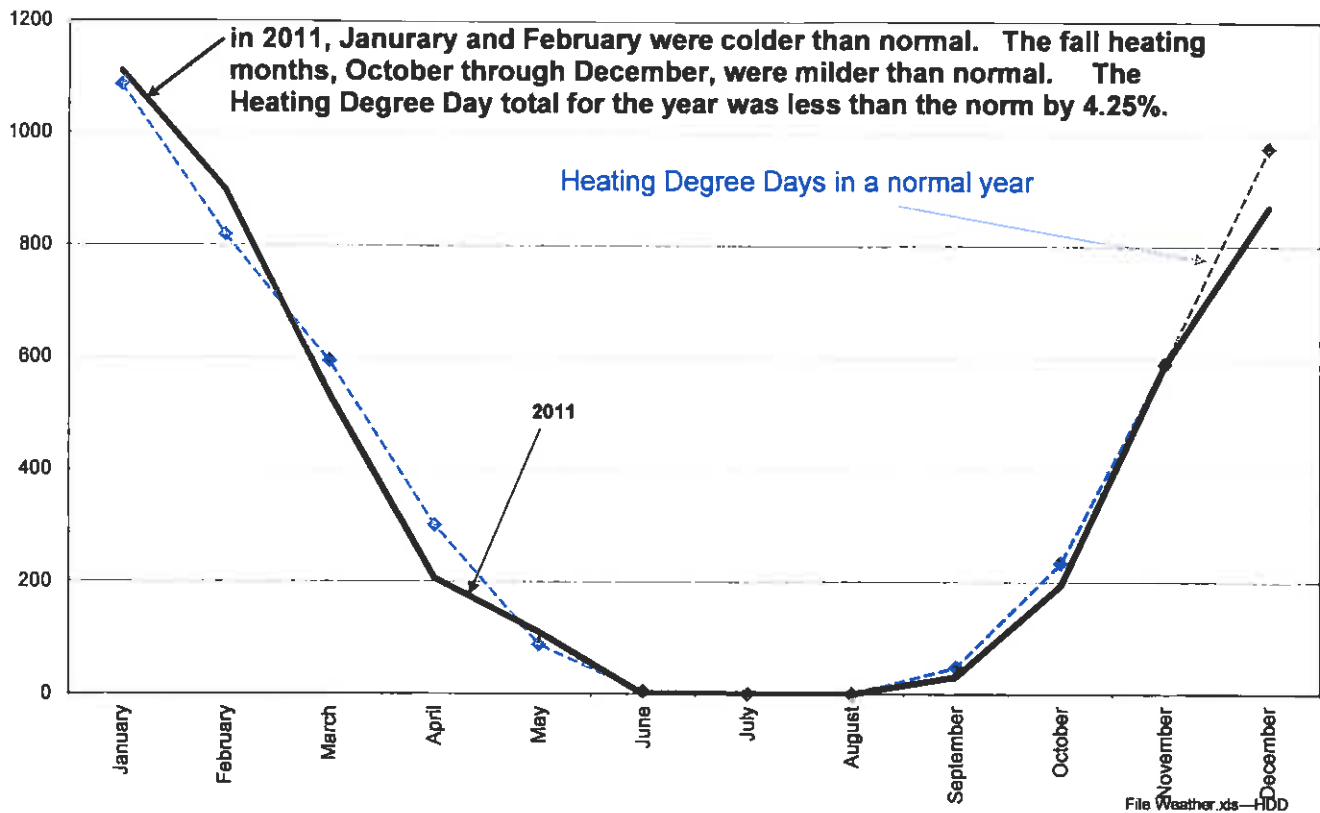
The National Weather Bureau tracks Cooling Degree Days as an indicator of the severity of summer conditions. Cooling Degree Days reflect the amount of energy needed to keep a building cool. It is computed by subtracting a base temperature from the average temperature. There were 39.9 percent more cooling degree days in 2011 than in a normal year. In 2011, we experienced more Cooling Degree Days than in any year since 1998.



## 2011 Utility Department Year-End Report

The National Weather Bureau also tracks Heating Degree Days as an indicator of the severity of winter conditions. Heating Degree Days reflect the amount of energy needed to keep a building warm. Like Cooling Degree Days, it is computed by subtracting a base temperature from the average temperature. There were 4.25 percent less Heating Degree Days in 2011 than in a normal year.

Heating Degree Days in the Wichita Area



Cold weather influences the amount of electricity consumed by our customers. Almost all furnaces require electric motors to distribute heat through the home. Mulvane's system requires approximately 215 mWh per day during the hottest days; 90 mWh during pleasant days; and 130 mWh on the coldest days.

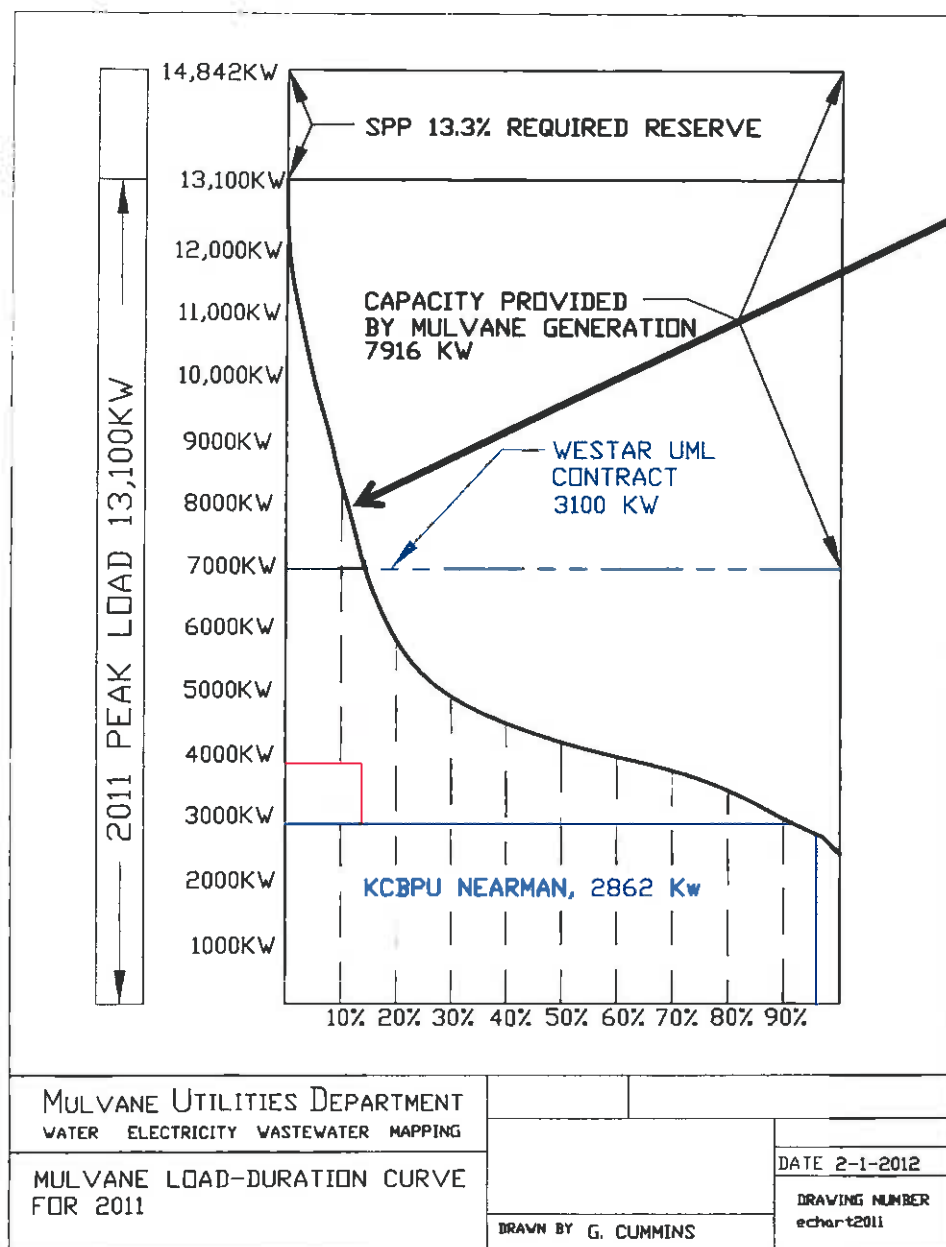
### Load Duration Chart

In the chart below, the curved line represents the percentage of Mulvane's total energy consumption that occurred when the load was above the value on the left vertical axis. For example, only 10 percent of Mulvane's total energy consumed in 2011 was produced by loads in excess of 8,200KW

This chart helps demonstrate the importance of the cost of capacity. Very little energy can be generated with the top 70% of Mulvane's capacity. The term used to express this aspect of electric production is called load factor. The load factor is calculated by dividing the total number of KWH consumed by the system in the year, by the total of 8760 (number of hours in a year) multiplied by the yearly peak. The load factor is expressed in percent, and is an indicator of how much capacity is required by the system to produce a given number of KWH. Mulvane's load factor was 39.91 percent in 2011. Like most "bedroom" communities, Mulvane's load factor is very low. Sixty percent is considered close to optimum by most utilities. Utilities with low load factors are more expensive to serve. More capacity is necessary to serve a utility with low load factor than is necessary to serve a utility with a higher load factor.



## 2011 Utility Department Year-End Report



Mulvane's load is represented by the area below this curved line.

In Mulvane's electric system, very few kilowatt hours of sales occur at the loads above our 7,000 KW.

The load factor for this portion of Mulvane's load is only 4.7%. Traditionally, the most economic method to satisfy this portion of our load has been to have an interruptible contract for a portion of our power supply.

In 2011, loads above 7,000 KW were interrupted on four days. Power was generated by the Mulvane Power Plants to cover the remainder of the load on those occasions.

### THE PRESENT STRATEGY FOR KEEPING MULVANE'S ELECTRICAL COSTS LOW Mulvane's Energy Mix

The energy procurement needs of an electric utility can best be filled utilizing a variety of sources. Some sources are economical for the base load, but cost prohibitive for intermediate or peak loads. Fuel and maintenance costs for peaking units make them uneconomical for base load applications. The cost of fuel is much less important for peaking units.

Having the most economical energy mix involves using the best available sources for each energy classification of load, in the optimum ratios, and at the best compromise between present and future energy needs. Optimizing the energy mix requires considerable cost and load analysis, and is a major challenge for electric utilities.

## **2011 Energy Procurement Summary**

### **Sources of purchased power for Mulvane's electric utility.**

Mulvane receives power from five sources, the Nearman Creek Power Plant, the Southwestern Power Administration, Westar, the Southwest Power Pool, and the Mulvane Power Plant.

### **NEARMAN CREEK POWER PLANT (KCBPU)**

The Nearman Creek Power Plant is a 235 MW coal fired power plant that is located at Kansas City, Kansas, and owned by Kansas City Board of Public Utilities (KCBPU). In 1982, Mulvane contracted with the Kansas Municipal Energy Agency to receive 3,000 kW of capacity and the associated energy. Mulvane pays monthly demand, fuel, operation & maintenance, and KMEA administration charges to KMEA. When the Nearman unit is down for maintenance, Mulvane still has to pay most of the monthly charges as well as its share of the repairs and modifications. Because of transformer and line losses, Westar only allows 2825 KW capacity credit for the Nearman power. Nearman serves as hedge against catastrophic rises in fuel oil and natural gas prices. Because of large domestic reserves, coal is considered to have a more stable price. The other cities participating in the Nearman project are, Baldwin City, Fredonia, Neodesha, Osawatomie, Ottawa, and Winfield.

Before 2006, low water conditions, or frozen cooling pump inlets occasionally caused the plant to be out of service or de-rated in times of critical need. Cooling system modifications to allow the plant to be cooled with a cooling tower were performed during an extended outage in 2006. Our contract for Nearman power terminates on May 31, 2022. 55.09% of Mulvane's total load requirement came from the Nearman Creek Power Plant in 2011.

### **SOUTHWESTERN POWER ADMINISTRATION (SPA, or SWPA)**

In 1943, the SOUTHWESTERN POWER ADMINISTRATION was created using the Executive Branch's emergency war powers authority to meet the growing power demands from military production and domestic needs. The SWPA continued to operate after World War II under the authority of the Flood Control Act of 1944. In 1945 the SWPA was assigned as the agent for marketing power generated by the U.S. Army Corps of Engineers in the States of Arkansas Louisiana, Missouri, Oklahoma, and Texas. Today, the SWPA sells power from 24 hydroelectric facilities that total 2,158 megawatts of installed capacity. In 1983 twenty-four KMEA cities entered into a contract entitling them to hydroelectric power from SWPA. Due to the high transmission costs associated with some of the cities, the individual entitlements were pooled and temporarily reassigned to nine project cities. This power is divided into two categories, firm and supplemental. Firm power is scheduled by KMEA. This energy is scheduled Monday through Friday during peak hours. More energy is scheduled during the summer than in the rest of the year to provide Mulvane the greatest possible utilization of this energy. Supplemental energy is available when there is excess water in participating reservoirs, or when the level of one the lakes below is too low. Mulvane is currently receiving 1000 kW in SWPA power. More cities are expected to participate so Mulvane will most likely receive a smaller share of the SWPA power in the future. We received a total of 1,143,000 kWh from this source in 2011. The current SWPA contract expires on 12-31-2018.

There has been a national preoccupation with "Green Energy" the last few years. In 2007, Governor Kathleen Sebelius announced a goal to produce 10 percent of our state's electricity from renewable sources by 2010, and 20 percent by 2020. A resent interpretation of that mandate is that a utility's renewable energy nameplate capacity should be 10% of their average peak load. Our SWPA power is generated from renewable hydro sources. That capacity equaled 12.5 % of Mulvane's average peak 2010.

## WESTAR

Mulvane interconnected with KG&E (Westar's predecessor) in 1974. All the power that Mulvane receives from other sources must go through the Westar system. Westar charges Mulvane for, transmission service, system control, load scheduling & dispatching service, capacity demand, and energy. Westar also keeps about 5% of the energy and capacity that is wheeled through its system for transmission losses.

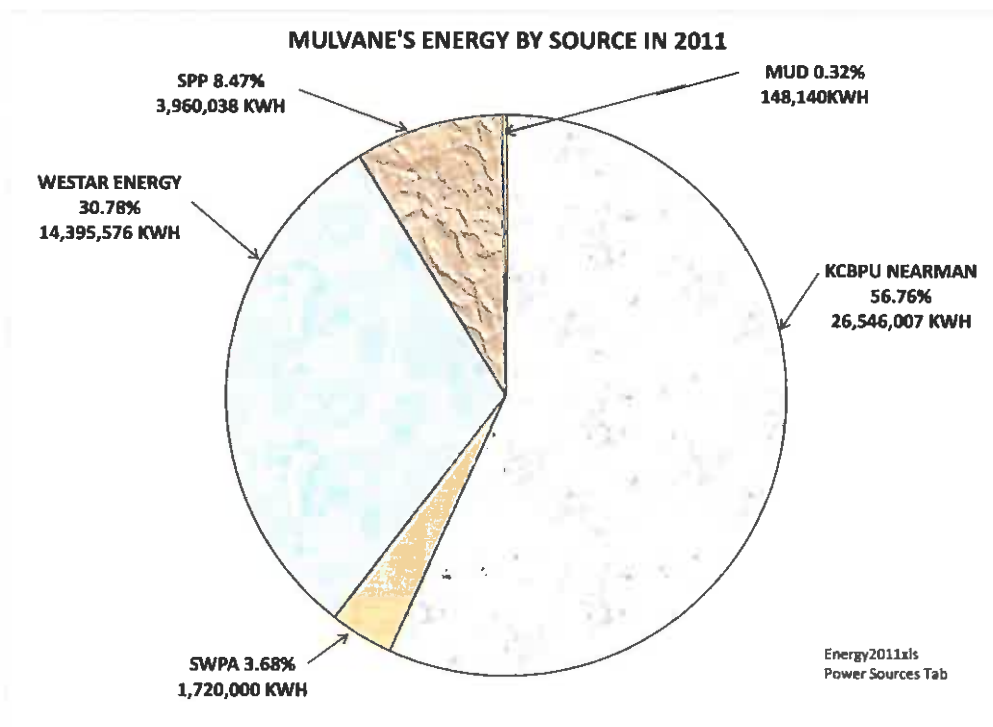
In May of 2010, Mulvane's 2005 contract with Westar expired. Mulvane sought the advice and assistance of the Kansas Municipal Energy Agency, and Sawvel and Associates, Inc. to evaluate Mulvane's options for replacing that critical source of power. Due to constraints on electric transmission systems, the only two options that were available to Mulvane that could provide equivalent service were Westar and Kansas Power Pool. Detailed analysis of those two options suggested that Westar would be the lower cost alternative. The resulting five year Westar contract exposes Mulvane to the Southwest Power Pool market settlement cost for a small portion of our total annual load.

Every effort is being expended to optimize Mulvane's energy mix to put our utility in the best position for these uncertain times.

## SOUTHWEST POWER POOL (SPP)

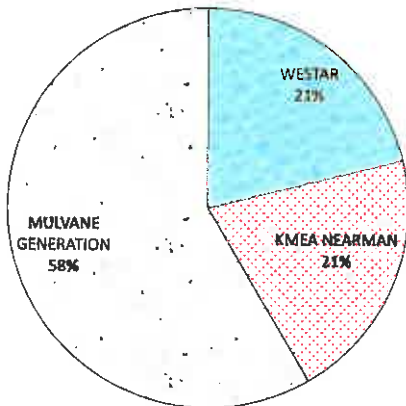
The Southwest Power Pool was a new source of power for Mulvane in 2010. Our new Westar contract limits the capacity we receive from Westar. The remainder is automatically supplied by the SPP at the market settlement price for that hour. The price is subject to market volatility. The economic down turn is projected to suppress the cost of this source of electricity over the remaining three years of this Westar agreement. So far the cost of this source is working out acceptably well.

**Summary of Energy Received From Mulvane's Energy Sources**



## 2011 Utility Department Year-End Report

SOURCES OF CAPACITY  
DURING PEAK HOUR OF 2011



Left--- This chart is a summary of the sources of capacity during the peak load required by Mulvane's electric customers in 2011. That peak occurred on Sunday, July 10 during the hour ending at 6:00 PM. During that hour we did not receive SWPA power. Although the Mulvane power plants were not operating that hour, they supplied 58% of the capacity required by our utility, resulting in much lower power costs than purchasing the necessary capacity through purchase agreements, or a full requirements contract



Above---Mulvane power plant staff are recording full load firing pressures on one of the three generating units located at the new power plant.

## **ELECTRIC DISTRIBUTION DEPARTMENT ACTIVITY**

### **New Construction**

- Homestead Apartment Development
  1. 7200/12470 volt underground primary electric system
  2. 5 – 100 KVA transformers were installed.
  3. 41—residential electric services
- Wastewater treatment Plant Additions
  - 1 1—1000 KVA 7200/12470 volt to 277/480 volt transformer was installed to provide electric service for the additional power requirements of the 2011 plant expansion.

For the last several years, Mulvane has experienced a slowdown of residential construction. The electric department has used this time to improve and upgrade the existing overhead electrical distribution system. Wooden power poles and cross arms are replaced throughout the system as needed. The average life of a wooden power pole is 40 years. The electric department also devotes an adequate amount of time to tree cutting/clearance. This transition from new construction to electric distribution maintenance will continue in order to improve electric distribution reliability.

### **KMEA Mutual Aid Program**

The KMEA Mutual Aid Program was established in 2000 by the Kansas Municipal Energy Agency, a joint action agency of more than seventy Kansas municipalities that operate electric utilities. The program, organized by regions, helps KMEA member cities respond to electric emergencies by mobilizing trained electric crews from neighboring cities to help affected municipalities restore power.

This neighbor-helping-neighbor mutual aid program has responded to a number of urgent situations in its seven year history, including tornadoes in Greensburg, Pratt, and Hoisington, as well as ice storms that occurred throughout the state in 2001, 2002, 2005, 2007, and 2008.

The City of Mulvane continues to participate as an active member in the KMEA Mutual Aid Program. Since its inception, the KMEA Mutual Aid program has responded to three major ice storms, five tornadoes, two straight-line-wind storms and a number of other emergencies which have affected more than 25 member cities. The program establishes coordinators and assistant coordinators who head up efforts for the 78 members in each of its five regions. Membership in a Mutual Aid organization is an important requirement for FEMA disaster relief funding.

### **KS-MAP Mutual Aid Program**

The KS-MAP organization was founded in 2008. The mission is to support and promote statewide emergency preparedness, disaster response, and mutual assistance for all utility systems in Kansas, including Water, Wastewater, Gas, and Electric utilities.

Through this program, municipalities and rural water districts can access a network of resources and assistance including emergency equipment, maintenance equipment, materials, communication devices, and most important, experienced utility personnel.

This program is sponsored by non-profit organizations whose missions are designed to assist the utility industries, environment, health and safety of all Kansans. Sponsoring organizations include Kansas Rural Water Association; Kansas Municipal Utilities; Kansas Section American Water Works Association; and the Kansas Water Environmental Association. In addition, several State Agencies

## 2011 Utility Department Year-End Report

combine their efforts towards the program: Kansas Department of Health & Environment; Kansas Corporation Commission; and the Kansas Division of Emergency Management.

### **KMU Safety Program**

Mulvane's utility department has participated in this program since its inception in 2005. This program meets the requirements, by law, of the occupational safety and health administration. Class room and field training is given to employees pertaining to their occupation. Our goal in utility management is to build a safe working culture and environment amongst our employees. Building such a culture will continue to reduce accidents and reduce workers compensation costs. The program is funded by the Utility Department, and made available to all city departments.

### **Overhead to Underground Electric Service Conversion Subsidy Program**

During the ice storm in January 2005, a large number of residential homes with overhead electric service lines lost power when their service lines were brought down by falling tree limbs that were weighted down by ice. In order to improve electric reliability to our customers, the Mulvane City Council voted to implement a reimbursement program as an incentive for residential property owners to convert their existing overhead service lines to underground services. As of the end of 2011, 40 residential customers have taken advantage of this reimbursement program. Two hundred dollars is reimbursed to the residential customer once the conversion is completed. To date, the total payment by the city to residential customers has been \$8,100.00 total city utility outlay for this program in the annual Electric Department budget for this purpose is \$8,000.00 per year.



## **WATER DEPARTMENT SECTION**

### **Drought created problems for our water utility, and incontinence for our water customers.**

During the peak usage season in 2011, the Augusta Water Department experienced difficulties supplying water in sufficient volumes to match our water customer's needs. The severe drought limited the amount of water that could be taken from two of the three sources that supply the Augusta's water treatment Plant with raw water. Water levels at both the Santa Fe Lake, and the Augusta City Lake declined to the point that no water could be taken from either of those sources. Concerns over the condition of the water supply pipe from the remaining source of water caused Augusta to limit the operating pressure of that pipeline. The flow available from that source is less than the customer demand during the peak season without imposing water use restrictions



The subject of above photograph is a boat ramp at the Augusta City Lake. Note how far the water has receded from this once functional boat ramp. Conditions at the Santa Fe Lake were more severe, The water had receded to the point where there was no water in the vicinity of the intake structure there.

## 2011 Utility Department Year-End Report

### Summary of Water Department Activity in 2011

- 2 fire hydrants were installed to replace outdated fire hydrants.
- Mulvane's Water Distribution Department repaired 11 water main breaks in 2011.
- 10 copper water service lines failed and were replaced under streets & roadways
- 178 water meters were replaced for our routine meter change out program.
- 21 water meter cans were replaced.
- 17 water leaks were repaired in water meter cans.
- Replaced rotating assembly for high service pump #1 at reservoir pump house.
- Replaced the main water meter at the 111<sup>th</sup> ST Reservoir.
- Project of bringing wells #4 & #5 on line to serve as an emergency water supply.

### Water Utility Fund Activity Summary

<b>2011 Actual Revenue (from all activates)</b>	<b>\$ 1,010,373.79</b>
<b><u>2011 Actual Expenditures</u></b>	<b><u>\$ 970,932.79</u></b>
<b>CCO Gain Accumulated in 2011</b>	<b>\$ 39,441.00</b>



## Water Department Financial Condition

### Cash Carryovers

Cash Reserves are necessary in any well run business in order to smooth the normal ebb and flow of revenues and expenditures, to meet extraordinary one time requirements, and to provide time for adjustment to new and unanticipated operating conditions. The Water Department is less susceptible to extraordinary expenses than the Electric Department. Three of the factors considered in establishing the minimum CC Benchmark are (1) the extent to which a utility self-insures its assets, (2) the probable cost of rebuilding the critical system assets damaged by a catastrophic event, and (3) the periodic need to finance pay-as-you-go capital improvement projects such as the Water Tower Renovation Project that was completed in 2007, and the Water Tower Painting Project was completed in 2009, which was financed through the Electric Department and will be paid back over the next few years.

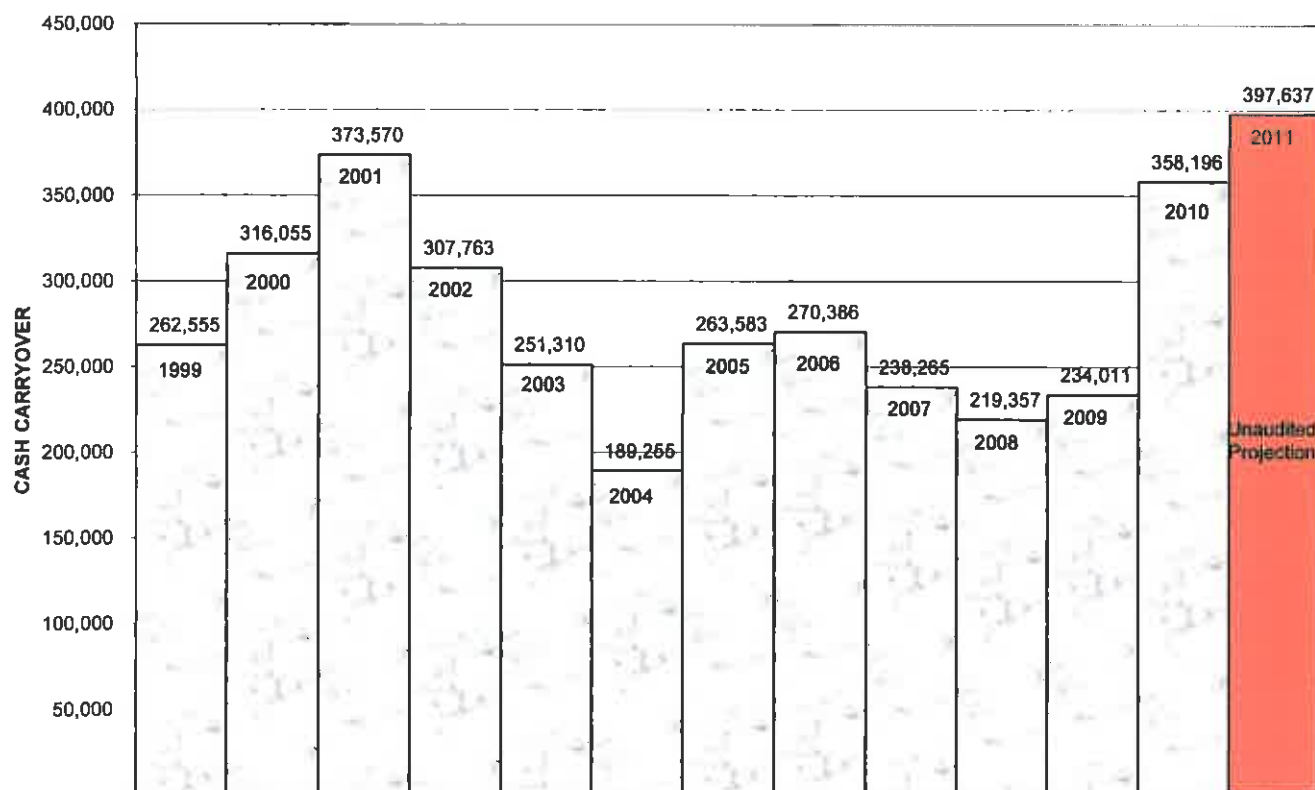
Cash carryovers are one of many indicators of the financial stability of a utility. A utility is in good financial condition if the annual cash carryover is increasing at or above the rate of inflation, and adequate to cover the utility's unanticipated emergency expenditures in addition to unbonded capital improvements. When cash carryovers show a continuing downward trend, it's only a matter of time before adjustments to bring revenues and expenses into alignment must be made.

The results of the 2011 audit are not available at this time. The projected cash carry over was calculated from the city's internal revenue and expenditure reports.

Currently, Cash Carryovers are not adequate to achieve the established Discretionary Cash Reserve benchmark of \$400,000. The 2011 gain in CCO of 39,441 demonstrates substantial progress toward achieving that goal.

File: CASH\_CO\_10

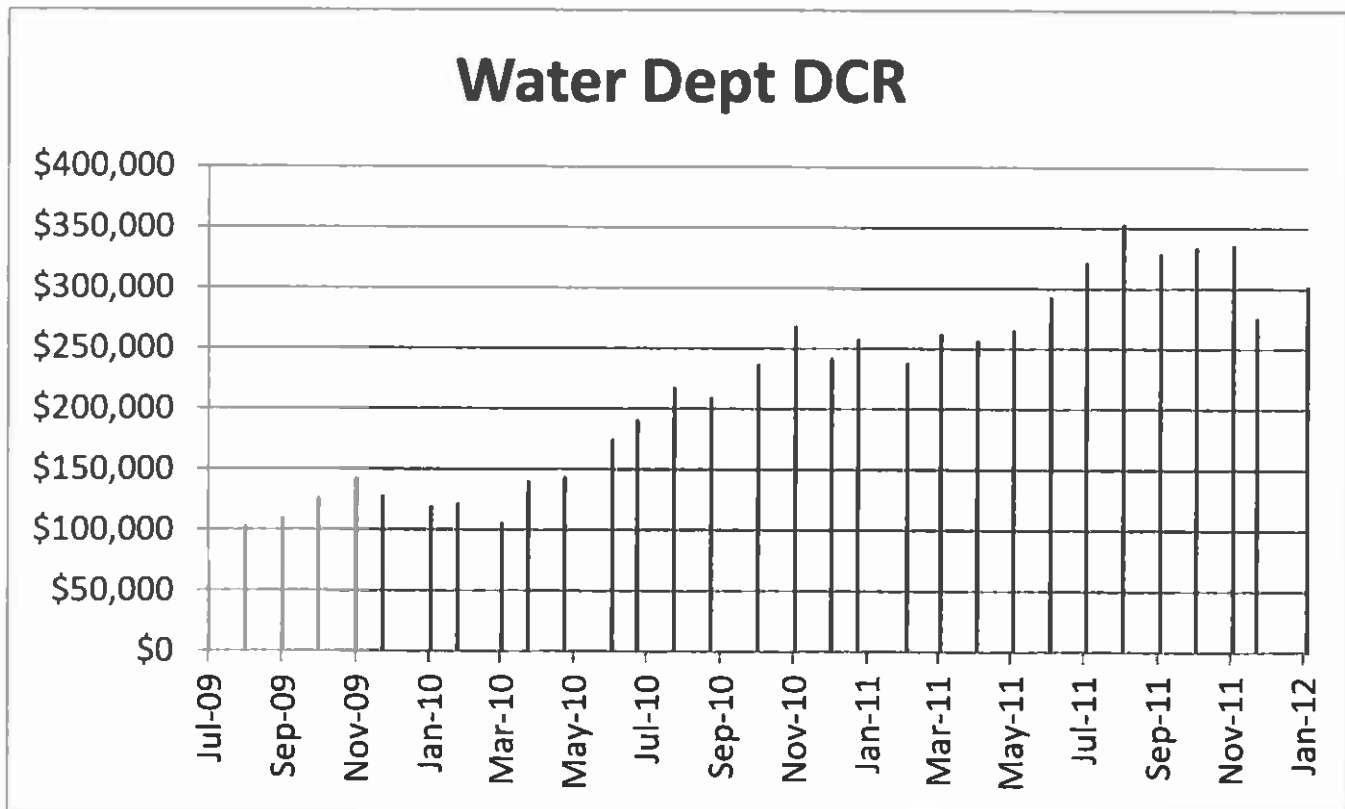
Water Department Cash Carryover



### Discretionary Cash Reserve Benchmark

The Discretionary Cash Reserve (DCR) is always less than the Cash Carryover from the Auditor's Report. Cash Reserves are necessary in any well run business in order to smooth the normal ebb and flow of revenues and expenditures, to meet extraordinary one time requirements, and to provide time for adjustment to new and unanticipated operating conditions. Due to the unpredictable nature of utility costs, regulatory requirements, and potential water system damage, and the need for improvements, establishing an adequate Discretionary Cash Reserve benchmark, as well as a mechanism to achieve that goal, is important to a water utility. Three of the factors considered in establishing the minimum Discretionary Cash Benchmark are, (1) the extent to which a utility self-insures its assets, (2) the probable cost of rebuilding recovering after a catastrophic event, and (3) the cost of periodic water system improvements and maintenance. In 2004, staff reviewed the various risk factors involved in operating our electric utility, and recommend that a minimum Discretionary Cash benchmark be established at \$400,000. We are currently below that recommended benchmark. However, the water rate increase went into effect 1-1-2010 is working to correct this deficiency.

The following chart trends Water Department's share of the various unrestricted cash and investment accounts that the City of Mulvane maintains. At its lowest point in 2011 the DCR was \$237,460.95, considerably less than the recommended benchmark of \$400,000.



At the beginning of 2010, a rate increase started generating the additional revenue needed to build the Discretionary Cash Reserve to achieve the \$400,000 benchmark. The DCR experienced a gain of \$43,960 during 2011. Good preformance considering that \$67,200 was spent to bring Wells #4 And #5 on line as an emergency water supply.

## 2011 Utility Department Year-End Report

### Revenue Line Item Summary Table

Constructing tables of the revenue and expense line items that are the most variable from year to year is a useful tool for understanding how the many different circumstances that are unique to each year affect Water Department profitability.

File: WaterFinance2011SplitRevenues

YEAR	Sales To Customers	Connects Disconnects	Construction Charges	Interest on Investments	Penalties	Tower Antenna Lease	Other Revenues	Total Revenues	Billed to Customers 1000 Gal.	Cost Per Kgal
1999	612,781	2,285	35,900	12,010	6,677	6,050	1,251	676,955	149,965	\$ 4.086
2000	684,164	3,873	25,475	10,462	7,472	6,000	4,581	742,026	169,464	\$ 4.037
2001	678,256	3,325	37,200	20,217	7,209	6,600	2,265	755,073	167,142	\$ 4.058
2002	682,839	2,768	23,400	15,704	477	6,600	1,586	733,373	161,604	\$ 4.225
2003	718,206	3,083	25,400	2,888	-	6,600	2,039	758,217	165,370	\$ 4.343
2004	691,276	4,353	24,600	2,221	7,427	6,600	888	737,364	157,764	\$ 4.382
2005	780,737	5,170	33,600	2,744	10,304	6,600	1,209	840,365	162,217	\$ 4.813
2006	850,602	5,310	27,600	8,049	12,434	7,260	667	911,923	170,858	\$ 4.978
2007	809,742	5,003	4,500	10,031	10,712	7,260	9,733	856,982	162,534	\$ 4.982
2008	766,035	4,843	4,500	7,590	10,279	7,260	(59)	800,447	153,633	\$ 4.986
2009	766,884	6,438	4,200	2,534	10,403	7,260	74,889	872,608	155,036	\$ 4.946
2010	918,420	5,760	1,200	1,072	11,495	7,260	1,314	946,520	160,009	\$ 5.740
2011	952,048	3,413	28,196	1,059	11,523	7986	6,150	1,010,374	162,675	\$ 5.852



Mild summer weather experienced in 2009 made it unnecessary for most of our customers to irrigate their yards and shrubs. In 2011 the combination of hot weather and drought produced a high demand for water. Water use restrictions were imposed in July which moderated the demand for water.



New home construction had almost ceased in 2007. In 2011 the Homestead Addition added 41 meters to our water system.



Early in 2002, Penalties for late payment were misallocated to the Electric Department. Proper allocation was restored in 2004.



The Water Tower Painting Project was financed with a transfer of \$72,573 accounting for most of this classification in 2009.



In March of 2005 the first 2.5% water rate increase of a two step 5% increase was implemented. The remaining 2.5% was implemented with the March 2006 billing. In January of 2010, a rate increase was implemented.

## 2011 Utility Department Year-End Report

### Expense Line Item Summary Table

File: WaterFinance2011SplitRevenues

This spreadsheet was compiled from data from the city's monthly revenue and expenditure reports.

YEAR	Revenues	Water Cost	Personnel Services	Clean Water Fee	New Equip.	Line Expense	Other Expenses	Utility Plant Addition	Water Bond	Utility Expense	Total Expenses	Profit/Loss
1999	676,955	263,322	184,273		1,633	7,584	29,150	78,411	95,701	32,381	692,455	(15,500)
2000	742,026	299,203	183,349		1,534	13,321	23,374	45,194	95,086	30,242	691,303	50,723
2001	755,073	278,443	204,865		6,748	3,241	25,631	49,351	100,725	28,744	697,748	57,325
2002	733,373	253,848	297,075	3,696	27,241	19,485	28,071	48,230	96,102	22,627	796,375	(63,002)
2003	758,217	289,834	305,321	4,565	18,959	8,609	47,741	25,720	94,978	21,165	816,892	(58,675)
2004	737,364	280,783	293,300	4,707	19,873	19,518	54,803	1,592	106,061	21,039	801,676	(64,313)
2005	840,365	289,176	252,873	4,869	621	12,889	51,566	24,005	105,142	24,704	765,845	74,520
2006	911,923	309,217	327,240	5,115	4,667	12,003	72,527	41,866	106,140	26,246	905,021	6,902
2007	856,982	297,271	347,079	3,604	2,794	15,450	57,584	52,258	85,295	27,768	889,103	(32,121)
2008	800,447	287,195	282,208	5,814	2,688	22,037	54,982	32,618	86,075	45,738	819,355	(18,908)
2009	886,879	282,327	299,492	4,621	337	92,175	67,982	7,023	82,048	33,909	869,914	16,965
2010	946,520	269,956	309,801	4,803	24,446	21,282	70,841	5,508	82,924	32,774	822,336	124,185
2011	1,010,374	318,675	326,138	4,941	4,676	27,692	88,299	85,258	82,539	32,714	970,933	39,441

The increase in Revenues in 2010 was largely due to a rate increase that started in 2010. The record rainfall we experienced in 2008 made it unnecessary for most of our customers to irrigate their yards and shrubs. The low water consumption produced lower than expected water sales revenue. 2011 was a hot, dry year, creating a high demand for water.

The reduction in Personnel Services in 2008 was the result of transferring some of the General Fund wage subsidy from the Water Department to the Wastewater Department. Since the new treatment plant came on line in 2006, the Wastewater Dept. has become larger than the Water Department, and more capable of carrying an equal portion of the General Fund wage subsidy.

The cost of \$72,573 for painting the water tower was classified to this line item in 2009.

...In 2010 the Water department contributed 21,000 to a Administration Dept. computer Upgrade

The large expenditures in this line item from 1999 to 2002 were largely due to the rapid growth in new customers. In 2007, \$38,000 was spent on water tower improvements. In 2008, \$18,000 in improvements were made to the pumps and telemetry sys. In 2011, \$67,200 was spent on the Well#4&5 Emergency Water Supply Proj.

It cost more for the electricity required to pump water in 2008. Water was pumped into our distribution system continually while the telemetry system was rebuilt. The cost of electricity was at record levels during the first 8 months of the 2008.

The gain in cash carry over that was experienced in 2010 was largely due to a rate increase that took effect in January of 2010, and also higher water consumption due to the dry & hot weather conditions in 2010

The reduction in Personnel Services in 2008 was the result of transferring some of the General Fund wage subsidy from the Water Department to the Wastewater Department. Since the new treatment plant came on line in 2006, the Wastewater Department has become larger than the Water Department, and more capable of carrying an equal portion of the General Fund wage subsidy. The large expenditures in the Utility Plant Addition line item from 1999 to 2002 were largely due to the rapid growth in new customers. New water meters, and materials for services are contained in this line item. In 2007, \$38,000 was spent on water tower improvements. In 2008, \$18,000 in repairs and additions were made to the pumps, telemetry system and a new water level monitoring & alarm system. In 2011, 67,200 was spent to bring an emergency water supply using wells #4, & #5. There were also expenses incurred from the development of the Homestead Addition.

- The Utility Expense line item is mostly the cost of the electricity required to pump water into the distribution system with the three 100 horsepower pumps. It cost more for the electricity required to pump water in 2008. Water was pumped into our distribution system continually in January while the telemetry system was rebuilt. Also, the cost of electricity was at record levels during the first 8 months of 2008 when the cost of natural gas was at record levels for that time of year.

### Emergency Water Supply-Wells #4 & #5

The severe drought of 2011 resulted in water supply problems for the City of Augusta's water utility. After Augusta imposed water restrictions on 7-12-11, staff has been working on a project to return two of our wells to service to act as an emergency water supply to prevent water outages on the Mulvane distribution system.



*Above---View looking east from Well #5*

Prior to 1992, Mulvane's water supply was served from five wells. These wells pumped water at low pressure through two collection lines into a 500 MG reservoir located at the north end of Boxelder Street. At that location three high service pumps were used to pressurize the distribution system. The well pumps were designed to pump a high volume of water at a pressure of around 20 psi.

Part of the design of the current water system was the provisions to convert the well water collection water lines to part of our water distribution system. Now these water lines are pressurized to around 100 psi. It was not possible for any of the old well pumps to pump water against that much pressure.

At the city council meeting held on 8-1-2011, the council authorized modifying Wells #4 & #5 for use as an emergency water supply. A total expenditure of \$95,000 was approved at that meeting for that purpose. A total of \$67,200 was spent on this project in 2011.

New pumps were installed that will pump under those conditions. The water rights associated with these two wells permit the diversion of nearly 60 million gallons of water per year at a rate of 1000 gpm. That is sufficient to supply our city's full current requirements for four months. The downside of using this source is that the water is about 2 ½ times harder than the water from Augusta. A plan is being developed to soften the well water to make it equivalent, to the water that we currently receive from Augusta.

## 2011 WATER DEPARTMENT INFRASTRUCTURE REPORT

### Overview

During the past four years, the Utility Department has been busy responding to the inquiries of several developers who desired to build and operate a casino near exit 33 of I35. We have gone to considerable effort to develop principals and guidelines designed to protect the interests of our utility and rate payers. This may be the single biggest development in the history of Sumner County. It is by far the biggest Utility Department project undertaken by our small community. We are operating in uncharted territory. The decisions we make over the next few months will have consequences to our city for many years to come. Great care and diligence must be taken to assure this project delivers its promise of lower taxes and utilities for Mulvane citizens.

### Suggested principals for providing Utilities to Casino Development

Early in 2008, the following principals for providing Utilities and other services to the Casino Development were suggested to guide our actions through upcoming complicated process.

1. The Development will be served by City-owned water and wastewater utilities. The City shall determine in its discretion whether to provide electricity to the Development. Property within the City limits is generally required to utilize City utilities, if available.
2. Existing Utility customers shall not bear any cost of Utility extension, capacity enlargement, or connection costs necessitated by the Development.
3. All Utility infrastructure and extension shall be owned by the City and built to appropriate standards, capacities (including electrical generation capacity, if deemed appropriate) and utilize processes, determined appropriate by the City in its discretion.
4. Costs for extension, necessary capacity enlargement, and connection to Utilities will be paid by the Development, either (i) directly by Development, (ii) from special assessment bonds payable from assessments against the Development that are additionally secured by a letter of credit acceptable to the City, or (iii) by other means, in each and every case suitable to the City and Development.
5. Rates and charges for Utilities will remain uniform throughout the City.
6. All engineers and contractors for Utilities will be subject to approval by the City and construction will be subject to inspection and approval by the City Engineer.
7. Emergency, fire, and routine police protection provided by the City in its discretion during construction and prior to the realization of anticipated property tax receipts from the completed Development will be paid by the Development.



## Summary

Generally, water customers expect their water utility to provide reliable water service in the quantities they desire, and at a quality level that meets or exceeds both customer and regulatory standards. They expect responsible stewardship of the public's water infrastructure, fiscal, and natural resources. They also expect their utility managers to use their best efforts keep the cost of water low as possible while achieving those goals. In addition to the needs and expectations of individual customers, the community needs a water supply that will support its continued growth, development and prosperity.

**Additional Elevated Water Storage**—A water tower in close proximity to the casino development is necessary to provide the level of redundancy that a customer of that size and importance should expect.

**Additional water supplies are necessary to serve the needs of our community.**

Our current water supply resources and water distribution system will not meet the needs of our customers in the very near future. Water demand projections suggest that the city's customers' water usage will exceed the limit of our current contract with the City of Augusta by the end of 2012. Projections indicate that the Mulvane water utility should be prepared to provide the following additional quantities beyond the Augusta contract for 200 million gallons per year.

**Table of Projected Water Use in Excess of the 200,000,000 Gallons per year Supplied by Augusta**

Year	Gallons
2012	3,102,000
2013	25,709,000
2014	34,824,000
2015	50,051,000
2016	60,619,000

Three potential sources of the additional water needed to the projected requirements of our water system have been identified including, The City of Augusta, The City of Wichita, and The City of Mulvane's Well System. All of these potential sources present challenges.

**City of Augusta**—Some technical problems would have to be overcome for Augusta to be a reliable source of additional water. The delivery rate that Mulvane receives water through the eighteen mile long pipeline that delivers treated water to Mulvane's 111<sup>th</sup> Street Reservoir would have to be increased. Augusta would have to make a commitment to assist Mulvane in managing nitrification problems that our system experiences from time to time. The reliability would have to be improved. Mulvane would have to provide an emergency backup water system of sufficient capacity and water quality to satisfy the needs of our water customers.

**City of Derby- City of Wichita**—There have been very preliminary discussions with the Cities of Derby and Wichita regarding constructing a pipeline along Rock Road to connect the Mulvane water distribution system to the Derby water distribution system. There are legal and political issues that would have to be resolved for Derby, or Wichita to supply part of Mulvane's water requirement.

**Mulvane's Well System**—Mulvane has sufficient water rights to satisfy the projected needs of its customers for many years. Our well water contains problem levels of manganese that accumulate in the water mains in an insoluble form that will periodically cause "black water" episodes, resulting in stained laundry. Also, it is about three times hard as the current water supplied by Augusta. Water treatment technologies exist that are capable of removing all of the objectionable qualities of our well water.



## 2011 Utility Department Year-End Report

### Funding Improvements to Mulvane's Water System---

FILE 2011 WATER DEPARTMENT INFRASTRUCTURE AND FINANCE REPORT.xlsx								
Summary of Changes Affecting Water Department Finances Relative to 2010								
Ongoing Changes	2012		2013		2014		2015	
	Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive
2010 Gain From Operations		\$ 124,185						
Discontinue GF Subsidies		\$ 98,000						
Projected Casino Water Revenue		\$ 83,000		\$ 86,000		\$ 31,000		\$ 53,000
500 Kgal Water Tower (1.5M @ 3% x 20yrs)			\$ 101,000					
Treatment Plant Phase 1-50MGY (1.8 M)					\$ 121,000			
DCR Recovery (30,000 X 2 Years)	\$ 30,000					\$ 30,000		\$ 30,000
2012 Water Study	\$ 44,000							
Additional Water Dept. Employee	\$ 46,414							
Inflation	\$ 20,000		\$ 20,000		\$ 20,000		\$ 20,000	
Subtotals	\$ 140,414	\$ 305,185	\$ 121,000	\$ 86,000	\$ 141,000	\$ 61,000	\$ 20,000	\$ 83,000
Available to fund Capital Cost of Infrastructure		\$ 164,771		\$ 129,771		\$ 49,771		\$ 112,771

### Important Water Utility Issues

#### Elevated Water Storage Necessary to Provide Additional Water Storage and to provide water supply redundancy to the Casino Development

Mulvane's water distribution is classified as a loop fed system. In this type of system there is more than one pathway that the water can flow to most consumers. Looped systems provide a high degree of reliability when major leaks occur. The section of water main that needs repair can be valved off, while the flow to the customer continues through another water main in the looped system. The casino development is not looped. When the water line serving the casino must be taken out of service, the water service to the casino development will be disrupted.

Constructing a 500,000 gallon water tower in close proximity to the casino development would provide over 24 hours to complete repairs without disrupting water service to those customers. To provide complete redundancy, a second water main would have to be constructed from the water tower to the development's water distribution system in such a manner as to permit shutting down any segment of the system without disrupting service.

#### Redundancy for Current Elevated Water Tower

Every water storage facility constructed of steel must be taken out of service from time to time for maintenance. A three to five year interval for comprehensive inspections is required by KDHE. The tower is drained down and inspected inside and outside. Generally, towers require painting at fifteen-year intervals. It is common to have a water tower out of service for two months for blast cleaning and painting. Operating without an elevated storage results in an increased risk of a water outage. Pumps must operate continuously with some provision to bypass of waste water to prevent excess pressure from



## 2011 Utility Department Year-End Report

damaging the utility's, and the customer's pipes and appliances. Having two water towers allows normal operation of the water system while towers are taken out of service.

### **Nitrification**

The negative aspect of having additional water is that the longer detention time will aggravate the nitrification problems that our system experiences from time to time.

Nitrification is the natural biological process where highly specialized types of bacteria utilize ammonia as a food source and produce byproducts of nitrite and nitrate. This is the same biological process that removes ammonia from the wastewater processed by our wastewater treatment plant.

Nitrification has been a common problem in our water distribution system since the addition of ammonia by Augusta began in the 1990's. It occurs most years, sometimes twice a year.

The principal factors that encourage nitrification are;

1. Free available ammonia (FAA). At the point of entry to our system, our daily tests results are almost always in excess of 1.0 ppm. Some sources recommend 0.1ppm of FAA.
2. The age of the water in the system. The age in days since the water left the treatment has proven to be a significant factor. A study published by the AWWA indicated that problems were most prevalent in water with an age in excess of 4 ½ days. Since Sedgwick County Rural Water District #3 quit taking water from the pipe that serves Mulvane, the age of the water has increased an additional day to 2 ½ days before it gets to Mulvane. On average, it takes another three days to travel through the Mulvane system. Since the Mulvane distribution system has the oldest water, nitrification will occur in the Mulvane system before it occurs in the Augusta distribution system.
3. Warm water---Generally, the warmer the water in the distribution system, the more susceptible to nitrification. The water in our system typically exceeds 80 Deg F. during the summer. Nitrification can and does occur in cold water systems. It just propagates through the system more slowly.

### **Problems created by Nitrification**

1. Nitrification creates two problems in distribution systems. It becomes impossible to maintain acceptable chlorine residuals throughout the system. Nitrites exert a strong chlorine demand. The bacteria consume the ammonia creating nitrites. The nitrites interact with the chlorine, leaving little or no chlorine residual.
2. Another problem is that when nitrification is not addressed, it is only a matter of time before the KDHE required biological samples will check positive for heterotrophic plate count bacteria and non-fecal coliforms.

### **Controlling Nitrification**

One common method to mitigate the symptoms of the early stages of nitrification is to flush the affected areas frequently. Flushing consumes a lot of water. We have been flushing some to maintain chlorine residuals in as much of the distribution system as practical.

Once nitrification is in progress, the only method of control is to stop feeding ammonia into the system and flush the system in order to establish and maintain free chlorine residual throughout the distribution system. It is important to address nitrification as soon as it is detected. Once it has a foothold, it progresses through the system exponentially. The next division of the bacteria will result in twice as many organisms in the system.

Minimizing free ammonia is the most effective method of preventing nitrification.

### **Additional Water Supplies Necessary to Serve the Casino Development**

Water demand projections suggest that the city's customers' combined water usage will exceed the limit of our current contract with the City of Augusta by the end of 2012. Projections indicate that the

## 2011 Utility Department Year-End Report

Mulvane water utility should be prepared to provide the following additional quantities beyond the Augusta contract for 200 million gallons per year.

Table of Projected Water Use in Excess of the 200,000,000 Gallons per year Supplied by Augusta

Year	Gallons
2012	3,102,000
2013	25,709,000
2014	34,824,000
2015	50,051,000
2016	60,619,000

### Potential Sources of Additional Water Supplies

Although our contract volume with the City of Augusta is projected to be exceeded in 2012 or 2013, we have not identified a source for the additional water. Some possibilities have been identified. None have been thoroughly investigated.

**City of Augusta---**There have been some discussions with the City of Augusta over the past few years regarding contracting for an additional increment from that source. One of Augusta's wholesale customers, Sedgwick County Rural Water District #3, quit taking water from Augusta on 1-1-2011. The rural water district had been taking around 150,000,000 gallons per year, freeing up an equivalent treatment capacity that Augusta could market to Mulvane. Earlier this year we received some talking points from Augusta outlining how such a contract could be structured.

Two technical problems have surfaced over the past year that would have to be overcome for Augusta to be a reliable source of additional water. During drought conditions, like those we are currently experiencing, two of the three lakes that supply raw water to the Augusta Water Treatment Plant are unreliable. Currently, the water level has fallen to the point that only insignificant volumes of water can be taken from these two lakes. The third lake, El Dorado Lake, has ample water; however operating restrictions on the pressure that can be applied to the pipeline from that lake restrict the volume from that source. Under those operating restrictions, the flow of water is not adequate to serve Augusta's current obligations without imposing water use restrictions. It is my understanding that upgrading that pipeline is considered too costly to be practical.

Another technical problem is the delivery rate that Mulvane receives water through the eighteen mile long pipeline that delivers treated water to Mulvane's 111<sup>th</sup> Street Reservoir and pumping station. This spring Augusta installed variable frequency drives, and a new process control system that is designed to reduce the pressure on that pipeline. Under the previous pumping control system water was delivered at the rate of 1,200 gpm, and the tank maintained a serviceable volume of 410,000 to 460,000 gallons. Under the current pumping control system water is delivered at a maximum rate of 650 gpm. That flow rate is less than the flow rate required to serve our current customers during system peak demand conditions.

In addition to those technical problems, the pipeline that delivers water to Mulvane has been unreliable. We have had two complete water outages, and several near misses.

The Kansas Star Casino has signed a developer's agreement obligating the Kansas Star Casino to pay any additional cost of water from Augusta above the current wholesale cost should the cost of procuring water from that source result in a higher per gallon cost to our water utility.

**City of Derby- City of Wichita---**There have been very preliminary discussions with the Cities of Derby and Wichita regarding constructing a pipeline along Rock Road to connect the

## 2011 Utility Department Year-End Report

Mulvane water distribution system to the Derby water distribution system. The installation of around 10,000 feet of pipeline and a pumping station would be necessary. As Mulvane eventually grows to the north, most of the required pipeline will be necessary to serve new customers in that area.

There are legal and political issues that would have to be resolved to for Derby or Wichita to supply part of Mulvane's water requirement. Mulvane's wholesale water supply contract with the City of Augusta contains limitations that require Mulvane to serve its customers exclusively using the Augusta source up to a defined volume.

**Mulvane's Well System---** Prior to 1992, Mulvane's water supply was served from five wells. These wells pumped water at low pressure through two collection lines into a 500 MG reservoir located at the north end of Boxelder Street. At that location three high service pumps were used to pressurize the distribution system. The well pumps were designed to pump 500 gallons per minute of water at a pressure of around 20 psi. The primary reason that Mulvane opted to contract with the City of Augusta as a wholesale water customer was that our customers were dissatisfied with the quality of the well water. It contained problem levels of manganese that would accumulate in the water mains in an insoluble form that would periodically cause "black water" episodes, resulting in stained laundry. Also, it was about three times hard as the current water supplied by Augusta.

Since the possibility of serving a casino development with water presented itself several years ago, we have had the occasional inquiry by interested parties regarding the status of Mulvane's water rights. After Mulvane started receiving its full water requirement from the City of Augusta on May 10, 1992, we took the necessary action to protect water rights for future use. In July of 2007, we requested that the Kansas Rule Water Association perform a comprehensive water right review. The following table summarizes the individual and total rates and quantities available under the City of Mulvane's municipal water rights. Recent inquiries to the Kansas Board of Water confirm that our water rights are in good standing.

File:Water Right Summary.xls

File Number	Rate GPM	Quantity MGY	Add. Quantity MGY	Notes
2724	500	96.387	96.387	Well 1
2724	250	96.387	54.042	Well 2
SU 002	552	55.000	55.000	Well 3
31869	500	29.095	0.001	Well 4
31869	500	29.635	0	Well 5
<b>Totals</b>	<b>2302</b>		<b>205.430</b>	

There are water treatment methods that can eliminate the objectionable qualities in the well water. Manganese can be oxidized and removed with pressure filters. Hardness can be reduced by ion exchange systems. The Reverse Osmosis (RO) method of water treatment can also be used at a higher cost to achieve superior results.

On 8-1-11, Mulvane City Council gave authorization to pursue a project to bring two of the five wells on line to provide an emergency supply of water to minimize the possibility of the city

## 2011 Utility Department Year-End Report

running out of water when deliveries from Augusta are inadequate sustain Mulvane's .water demand.

That project has progressed steadily. The first water was pumped from Well #4 at the end of November. The pumps were specified to have the capability sufficient for the installation of an iron and manganese removal process, should the city desire. The availability of these two wells will be an important resource for addressing many of the challenges facing our water system.

The combined pumping rate of the two wells is 1,000 gallons per minute, which is 35% higher than the current the rate that we receive water from Augusta. Fire flows to the casino development are greatly enhanced by this resource. When water is not available from Augusta, this source is capable of sustaining our customers until service from Augusta is restored. With treatment, this source can supply the additional water that our system requires beyond the purchasing limit provided by our wholesale contract with Augusta.

## Detail Section A

### Projecting the Annual Water Requirements of Mulvane's Water System.

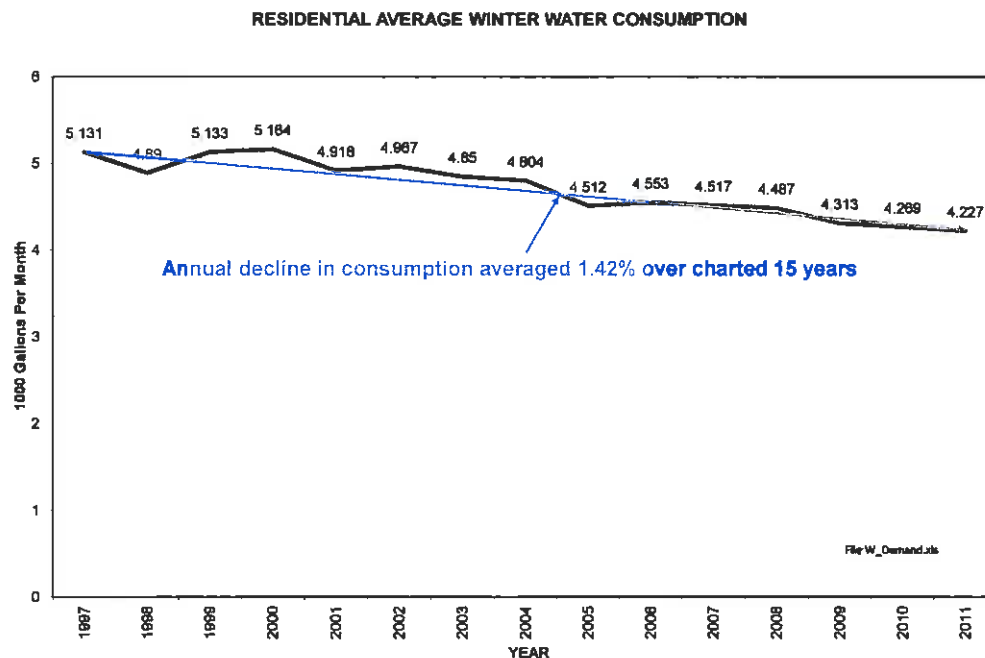
#### Factors Effecting Water Consumption

Several factors have been shown to affect the water consumption of our customers.

- Weather conditions, primarily heat and rainfall. Most “discretionary water” is consumed in the summertime to keep lawns and other desirable plant life alive and green. Extreme heat dries out the soil faster. Low rainfall periods must be augmented by increased watering. Frequent, high winds also have a drying effect on vegetation.
- Rate increases generally result in a short-lived reduction in water consumption. Customers usually return to their previous consumption habits within a year.
- Adverse economic conditions. Recessions that result in a significant number of layoffs result in a reduction of discretionary water consumption, usually the domestic uses are largely unaffected.

#### Average Residential Winter Consumption

Examining the winter consumption of customers is a valuable method of determining the efficiency of water use. Outside uses of water are highly volatile due to the influence of weather conditions on irrigation requirements. Very little water is used outside of the home during the winter months. The chart below compares the water usage of our residential customers for the months of December, January, and February since 1997.



Over the past several years, water efficiency gains have been made in several areas. Modern toilets require less water. Water-Saver shower heads are the norm. Many new washing machines and dish washers use less water. As our city grew rapidly from 1997 to 2005, the ratio of new homes, which are equipped with more water saving features, to old homes increased.

Economic conditions must have some effect on the consumption of water however; it is not obvious or quantifiable by observing winter domestic consumption.. For example one would expect the recession of 2002 to produce a decline in usage in 2002. Our customers used slightly more that year. Also one would have expected less usage in 2006, following the rate increases of March, 2005. Again,

## 2011 Utility Department Year-End Report

a slight increase occurred. However, the total annual usage in those years did decline. Apparently, domestic indoor uses of water are not substantially affected by economic conditions, while outdoor discretionary uses may be affected. Overall, the average decline of residential winter consumption has averaged 1.53% over the past 14 years. The trend toward water conservation has led to a loss in water revenue, and is one factor that has created the need for rate increases in many water utilities.

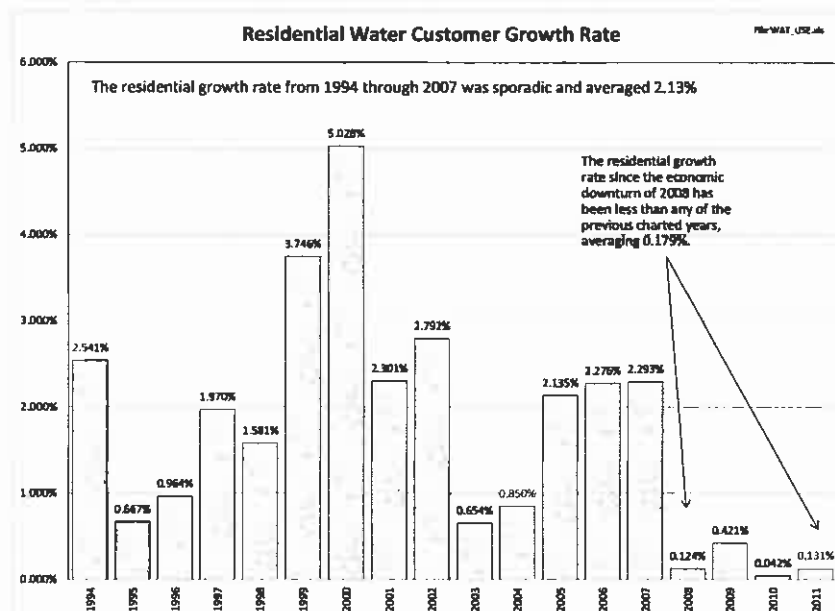
### Water Losses

In every water system water is lost to leaks, intentional flushing, theft, and other unmetered uses. In 2011 our water losses were only 9.09%. This is very a low number, indicative of a tight, well-maintained system. Many water distribution systems lose 20%. Some lose as much as 50%.

Water System Losses	File:Yr_End11.xls-Water
Water From all Sources	180,816,000
Billing Total	164,387,000
Total Water Lost	16,429,000
Water loss %	9.09%

### Customer Growth Rate

The Following chart was compiled from “customer counts” using our utility billing records. Mulvane’s residential growth rate has been sporadic. Several factors influence the growth of a community. Proximity to jobs, quality & availability of educational opportunities, availability of developable land, cost of building, esthetics of the community, and amenities available are a few.

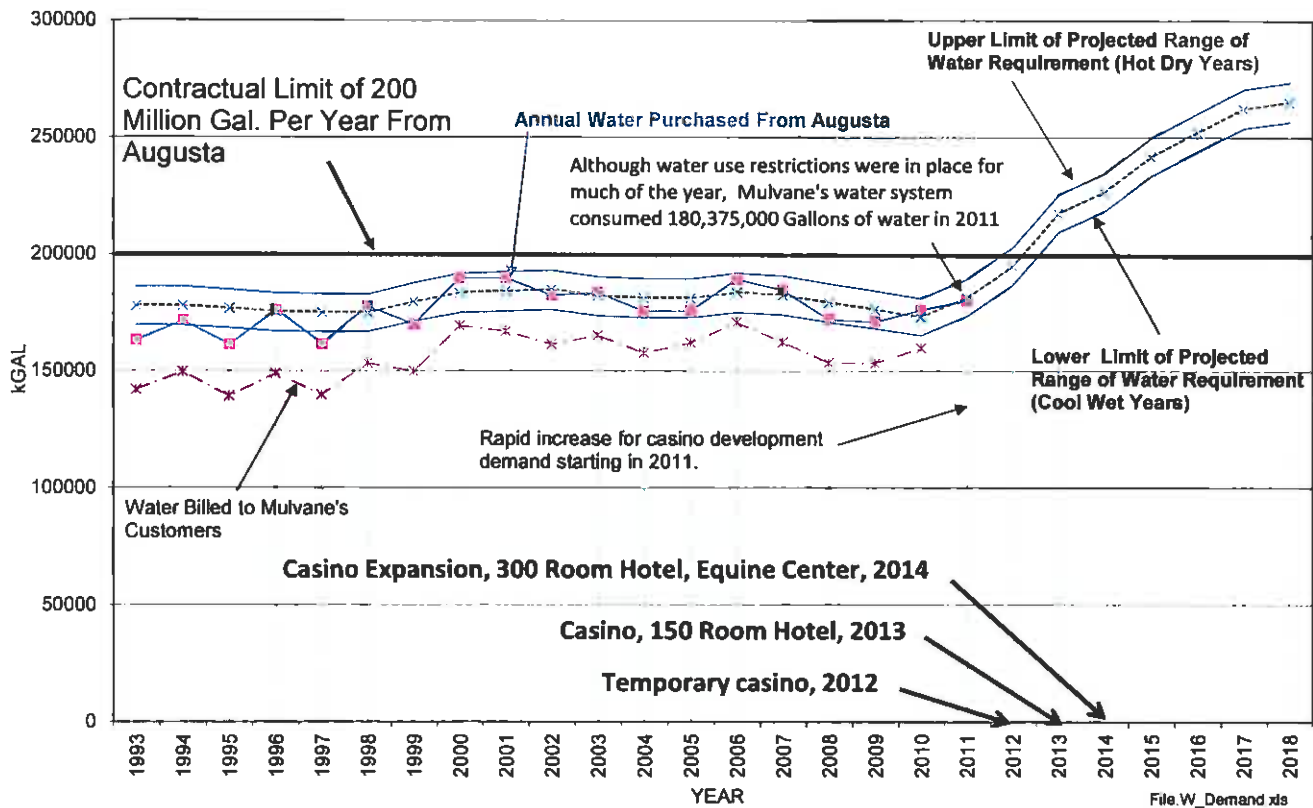


1999 and 2000 are two years that experienced the highest growth rate of the charted years. The Country Walk Apartments were under development during those years, and was a significant factor in the city’s utility customer growth rate.

Although Mulvane’s growth rate has been stagnant for the past four years, the forty unit Homestead Retirement Housing development is nearly complete. Recently, we have had inquiries from a developer considering an eighty unit apartment complex along 111<sup>th</sup> St. A forty unit apartment complex is planned, and designed, but was put on hold a few years ago. Also, we are currently fielding questions from a developer desiring to develop 15 acres in the vicinity of the casino site.

## Projected Annual Water Demand Summary Chart

PROJECTED WATER REQUIREMENT WITH PROJECTED CASINO REQUIREMENT INCLUDED



From 2001 to 2010 there was a general trend of declining water demand. This trend has been the result of slow customer growth and the greater use of water saving appliances. The projected growth of water consumption with a casino development will exceed Mulvane's current contractual limit of 200,000,000 gallons per year from Augusta as soon as 2012, more likely 2013.

### Assumptions for projecting Mulvane's annual water demand.

1. Annual customer growth rate of 1.8%.
2. The annual reduction in residential water use attributed to low water consumption household appliances will gradually decrease and cease in the year 2020.
3. No water use restrictions will be imposed on customers.
4. No commercial development in addition to the Kansas Star Casino is included.
5. The casino developer's water requirement projections are as follows:
  - 2012---20,940,000 Gallons
  - 2013---42,540,000 Gallons
  - 2014---50,270,000 Gallons
  - 2015---63,725,000 Gallons
  - 2016---72,125,000 Gallons
  - 2017---79,825,000. Gallons

## Detail Section B

### Financing Additional Water Department Infrastructure

On 1-10-2008 a special meeting of the City Council was held to discuss the implications of having a casino in our city. At that meeting there was an apparent consensus that the casino would provide an opportunity to roll back, or eliminate General Fund subsidizes and lower utility rates to all our customers. This project has the potential to lower the property taxes, and lower the utility rates paid by the citizens of Mulvane, with sufficient resources leftover to dramatically increase the scope of services that are offered to our community.

#### Potential Sources of Additional Water Department Revenue to Fund System Improvements

**Water Rate Increases**—Mulvane's current water rates are among the highest in the area. Early on in the casino project, we communicated to our citizens that a casino would result in lower utility rates for residential rate payers. It would be politically undesirable to not deliver on that promise.

**Revenue Generated from Increased Water Sales**—The following projected increases in water sales will generate additional revenue.

FILE:2011 WATER DEPARTMENT INFRASTRUCTURE AND FINANCE REPORT					
Year	Projected Casino Usage		Current Augusta Cost	Rate	Sales - Cost Margin
2012	20,940	Kgal.	1.62	4.75	\$ 65,542
2013	42,540	Kgal.	1.62	4.75	\$ 133,150
2014	50,270	Kgal.	1.62	4.75	\$ 157,345
2015	63,725	Kgal.	1.62	4.75	\$ 199,459
2016	72,125	Kgal.	1.62	4.75	\$ 225,751
2017	79,825	Kgal.	1.62	4.75	\$ 249,852

**Reducing General fund Subsidies**—The following list of expenses can be viewed as General Fund subsidies;

1. A percentage of the wages and benefits for 6 Administrative employees are expensed to the Water Department, totaling \$80,228.25 in the 2012 Budget;
2. On average, there are 12 water customers that are classified as Municipal Customers that pay for water at a rate that is less than the cost to deliver the water to them. Nearly \$9,000 would be generated if those customers paid the commercial water rate;
3. Scheduled transfers from the Water Department to the General Fund was \$9,000 in 2010, which was increased to \$30,000 for 2011;

Reducing Water Department subsidies to the General Fund would require new sources of offsetting revenues flowing into the General Fund from the Casino. Projections have been submitted from studies funded by the State of Kansas, and the Kansas Star Casino. Those projections are summarized in the following table.



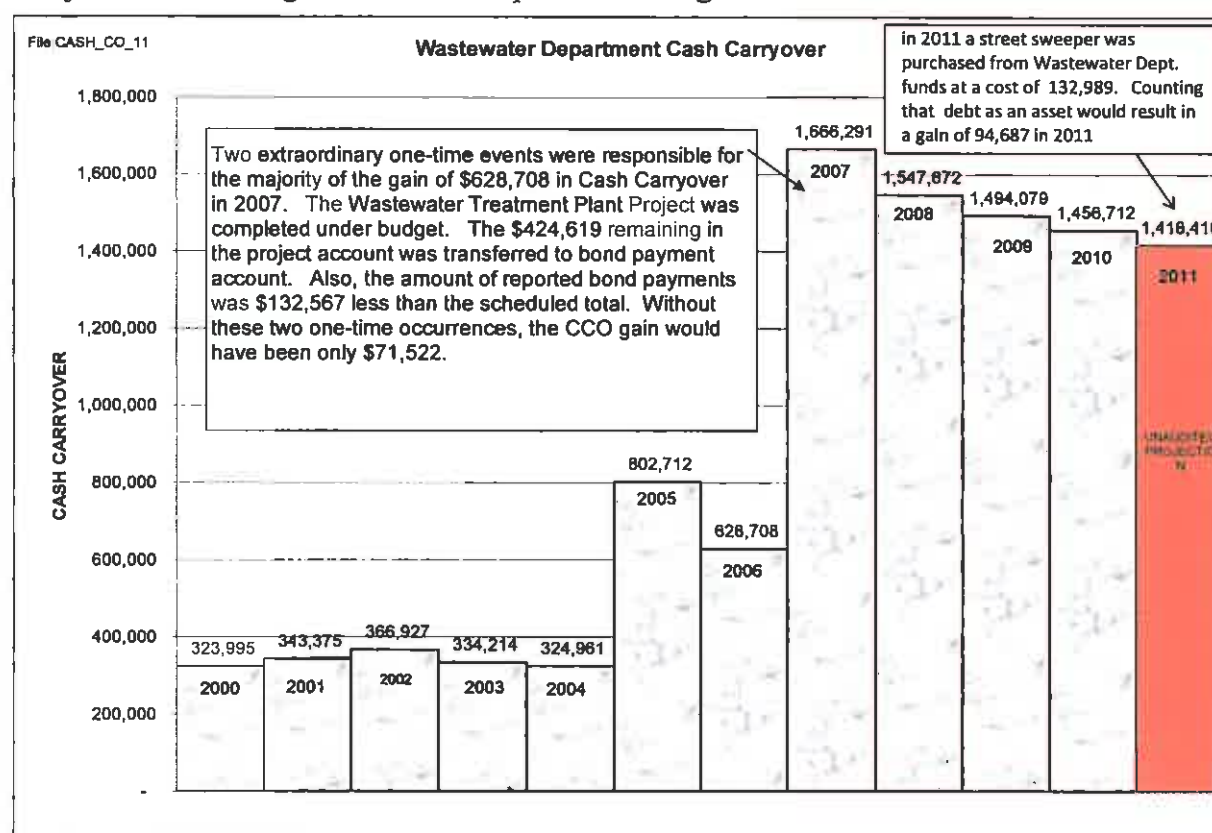
## WASTEWATER DEPARTMENT

### Wastewater Department Financial Condition

#### Cash Carryovers

Cash Reserves are necessary in any well run business in order to smooth the normal ebb and flow of revenues and expenditures, to meet extraordinary one time requirements, and to provide time for adjustment to new and unanticipated operating conditions. The Wastewater Department is less susceptible to extraordinary expenses than the Electric Department.

Cash carryovers are one of many indicators of the financial stability of a utility. A utility is in good financial condition if the annual cash carryover is increasing at or above the rate of inflation, and adequate to cover the utility's unanticipated emergency expenditures in addition to unbonded capital improvements. When cash carryovers show a continuing downward trend, it's only a matter of time before adjustments to bring revenues and expenses into alignment must be made.



From 1995 to 1997 Wastewater Department cash carryovers were declining. A new sewer tap permit fee of \$900 was implemented, stabilizing the cash carryovers until 2005.

In anticipation of the financial impact of building a new Wastewater Treatment Plant (WWTP), the Council approved a three step rate increase designed to match revenues to the projected cost of owning and operating the new wastewater treatment facility. The third rate increase was rescinded by the City Council at the recommendation of staff. We decided to give some of the leftover project funds, that were earned by completing the new Wastewater Treatment Plant Project under budget, back to our rate payers. We can accomplish that by operating at a loss for a few years before implementing the final rate increase associated with the WWTP project. The new Wastewater Treatment Plant was financed by two separate bond issues. The first bond issue was in 2005. The second bond issue was in early 2006. The full effect of these increased bond payment was scheduled to begin in 2007.

## 2011 Utility Department Year-End Report

Two extraordinary one-time events were responsible for the majority of the gain of \$628,708 in Cash Carryover in 2007. The Wastewater Treatment Plant Project was completed under budget. The \$424,619 remaining in the project account was transferred to bond payment account. Also, the amount of reported bond payments was \$132,567 less than the scheduled total. Without these three one-time occurrences, the CCO gain would have been only \$71,522.

### Wastewater Utility Fund Activity Summary

#### Wastewater Utility Fund Activity Summary

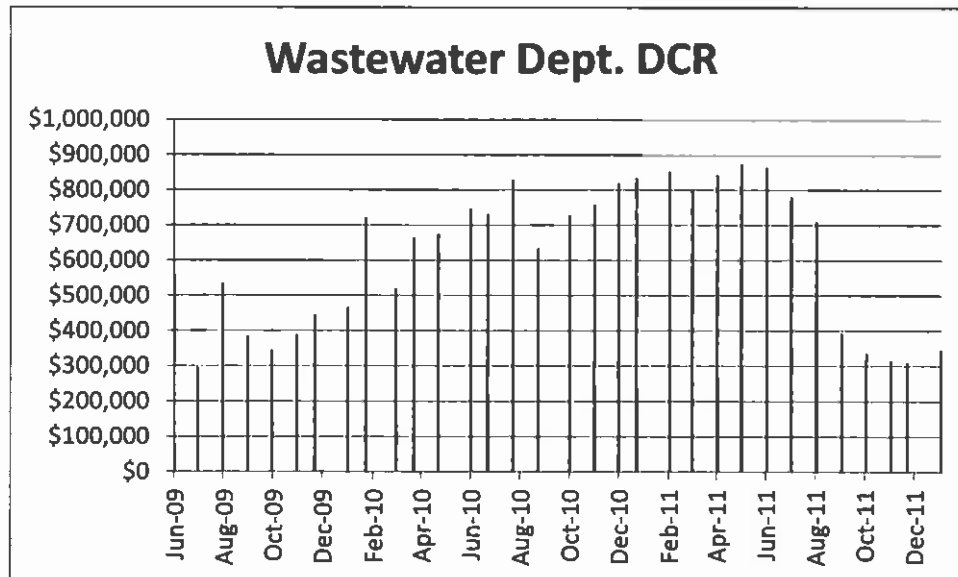
<b>2011 Revenue (from all activities)</b>	<b>\$ 1,376,027</b>
<b><u>2011 Expenditures</u></b>	<b><u>\$ 1,414,329</u></b>
<b>Cash Carryover Loss Accumulated in 2011</b>	<b>\$ 38,302</b>

On July 6, 2011, the City Council approved financing the purchase of a 2011 Elgin Pelican NP Street Sweeper for the Street department, using \$132,989.00 of Wastewater Department funds. This Loan is scheduled to be paid over a five year period. For the purpose of evaluating the financial performance of the Wastewater Department, it is reasonable to offset the loss experienced in 2011 with the \$132,989 non-departmental expense. The result is a gain from 2011 Wastewater Department activity of \$94,687. The 2010 rate increase was successful in stabilizing Wastewater fund balances.

### Discretionary Cash Reserve Benchmark

The Discretionary Cash Reserve is always less than the Cash Carryover from the Auditor's Report. Staff has reviewed the various risk factors involved in operating our wastewater utility, and recommend that a minimum Discretionary Cash benchmark be established at \$400,000.

The following table represents a snap shot of the Wastewater Department's share of the various cash and investment accounts that the City of Mulvane maintains as of December 31, 2011.



For the purpose of issuing bonds, the three Utility Department divisions were combined several years ago. This combining made it possible to reserve funds in any ratio between the three utility divisions as long as the total was adequate. Before 2011, the Electric Department carried more than its share of bond reserves. The Wastewater department carried less than its share. In 2011 some Revenue Bonds were refunded into General Obligation Bonds. After corrections were made, an additional bond

## 2011 Utility Department Year-End Report

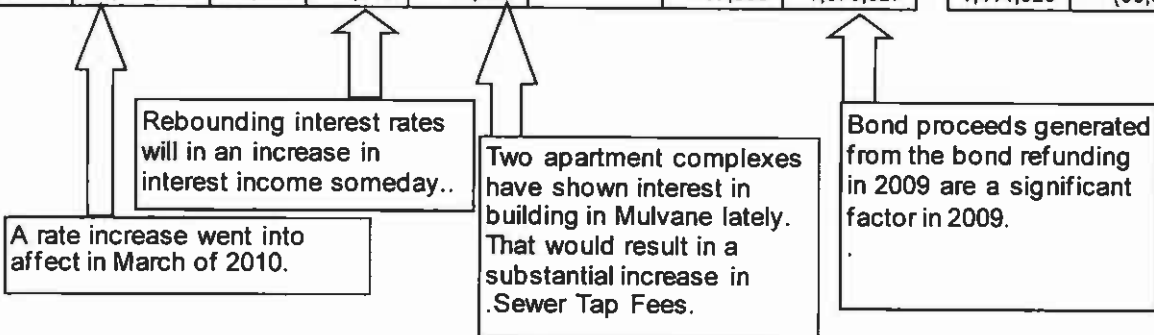
reserve of \$93,496 was required. Other factors leading to the decline in DCR were the street sweeper purchase of \$132,989 and a \$71,661 increase in bond payment accounts.

### Summary of Revenue Line Items

Some of the significant revenue line items for the Wastewater Department are summarized in the following table.

File:WastewalerFinance2011 This spreadsheet was compiled from data from the city's monthly revenue and expenditure reports

Total Sales to							Total Revenues From Oper.	Total Expenses	Profit
YEAR	Cust.	Penalties	Interest	Sewer Tap Fees	Bond Proceeds	Other Revenues			
1997	322,912	3,372	14,253	2,900		14,721	358,158	379,142	(20,984)
1998	369,948	3,847	12,794	52,200		(1)	438,788	408,621	30,167
1999	410,252	4,456	13,500	63,900		(91)	492,017	460,183	31,834
2000	435,073	4,939	13,814	37,800		36	491,662	494,581	(2,919)
2001	430,197	4,729	10,518	51,400		523	497,367	481,371	15,996
2002	444,210	338	11,460	32,600		(33)	488,575	418,165	70,410
2003	439,415	-	8,504	35,100		-	483,019	511,376	(28,357)
2004	443,776	6,313	2,154	35,200		3,682	491,124	505,769	(14,645)
2005	716,718	8,760	8,966	47,700		(0)	782,144	550,123	232,021
2006	1,084,284	10,635	35,524	38,000		133,901	1,302,344	972,085	330,259
2007	1,155,228	12,347	47,676	4,500		424,621	1,644,372	1,149,893	494,479
2008	1,140,147	12,093	48,126	4,500		(62)	1,204,804	1,323,431	(118,627)
2009	1,127,686	12,239	15,477	7,200	805,156	2,955	1,970,713	2,024,306	(53,593)
2010	1,284,280	13,502	5,322	3,600		1,970	1,308,675	1,395,496	(86,821)
2011	1,326,656	13,556	4,619	13,500		17,696	1,376,027	1,414,329	(38,302)



Although a loss of \$38,302 occurred in 2011, the current rates should be adequate to support the Wastewater department for the next few years considering the following factors.

1. The participation charges that the Kansas Star Casino will compensate the Wastewater Department for some expenses.
2. Bond payments will be less in 2012
3. The loan of \$132,989 for the street sweeper will be paid back over the next five years.

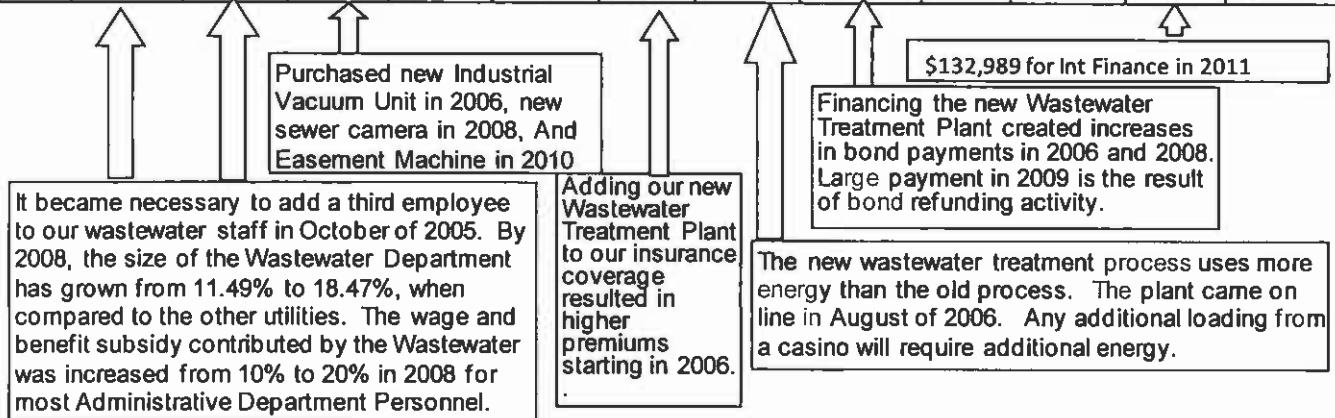
## 2011 Utility Department Year-End Report

### Summary of Expenditure Line Items

Some of the significant Expense line items for the Wastewater Department are summarized in the following table.

File: WaslewerFinance2011 This spreadsheet was compiled from data from the city's monthly revenue and expenditure reports.

YEAR	Salaries	Payroll Tax	New Equip.	Plant Addition	Line Expense	Insurance	Utility Expense	Bond Payment	Eng. Sevc	Cost of Issuance	Other Expenses	Total Expenses
1997	147,527	39,919	26,035	3,104	5,395	2,826	23,740	73,298	355		56,943	379,142
1998	146,714	40,195	5,917	5,630	5,189	2,456	23,900	117,382	-		61,238	408,621
1999	160,084	37,674	3,755	6,340	40,468	3,824	24,373	115,428	3,600		64,637	460,183
2000	179,776	43,508	4,257	13,842	18,027	3,849	24,868	113,901	32,113		60,440	494,581
2001	171,784	43,625	37,558	16,875	8,002	4,312	24,860	113,901	-		60,454	481,371
2002	158,556	39,628	(8,239)	5,796	20,218	4,531	25,246	113,901	600		57,928	418,165
2003	184,442	44,174	23,283	11,863	8,867	8,181	25,858	113,901	5,995		84,812	511,378
2004	161,928	50,396	6,086	2,478	7,593	9,232	26,598	126,684	480		114,292	505,789
2005	167,754	51,930	7,068	60,505	9,544	10,236	32,551	124,716	5,477		80,343	550,123
2006	204,883	65,088	38,011	6,082	10,773	15,069	39,969	455,978	-		136,232	972,085
2007	223,496	72,358	10,686	2,774	41,911	11,208	77,690	483,353	-		226,417	1,149,893
2008	296,702	94,721	61,468	5,081	42,979	15,617	87,261	615,388	-		104,214	1,323,431
2009	316,631	100,085	2,230	4,370	6,609	15,779	77,668	1,404,736	-	11,506	84,692	2,024,306
2010	321,839	105,525	46,938	13,290	47,112	17,064	79,032	615,016	-	47,197	102,484	1,395,496
2011	340,534	108,603	1,899	6,357	14,930	16,791	78,994	615,100	-		231,120	1,414,329



## WASTEWATER PLANT ACTIVITY



### Wastewater Treatment Plant

In 2011, most of our focus and efforts were directed toward the successful completion of converting to a different wastewater treatment process that is designed handle the waste from the Kansas Star Casino. Casino wastewater has much higher concentrations of nitrogen pollutants compared to normal domestic wastewater. The new additions to our treatment plant that were completed in 2011 include the following;

- A Head Works Building that removes debris and grease from the casino wastewater.
- An Equalization Basin to store the casino wastewater flow so that can be discharged into the treatment process at an even rate. Weekend and holiday casino flows are much higher than typical weekday flows.
- An Anoxic Basin that provides the biological conditions necessary to remove the high concentrations of nitrates.

### Plant Performance

Our Wastewater Treatment Plant processed 138,171,000 gallons of wastewater in 2011. The performance of the new plant has been excellent. All performance requirements were met by a comfortable margin in 2011.

### Equipment Building

A new equipment building was completed in 2007. This provided the Wastewater Department the ability to store all of their equipment at the treatment plant site, and relieve overcrowding at the Public Works Building located at 410 West Bridge Street. In 2007 we relocated the trailer mounted jetter, sludge truck, Kubota tractor, trailer mounted vacuum unit, camera unit, hose reel irrigation equipment, and Wastewater Department truck to the new equipment building. To make the most efficient use of labor, the slow moving equipment must be stored as close to the point of use as possible. Having the employee parking, the time clock, and the Equipment Building in close proximity was an important consideration to improve efficiency. On site storage of equipment also minimized the risk of traffic accidents associated with traveling on K53 unnecessarily.

## **Equipment Purchase History**

In 2010 an easement machine was purchased for \$46,000. Easement machines extend the capabilities of high pressure hydraulic sewer cleaners by allowing access to areas that are inaccessible to our trailer mounted sewer jetter. These areas include hillsides, creek beds, wooded areas, and fenced areas behind homes and businesses. There are many areas of Mulvane where it is not practical to park the sewer cleaning machine close to the manhole. Under those conditions the heavy hose must be drug by hand from the street to the alley or easement behind the property. It is a physically demanding task. We used to borrow two to three additional employees from other divisions to help with the task. Using this type equipment greatly reduces the need for exposing employees to the risk of back and leg injuries due to hose drags. Easement machines also provide the operator with the versatility of a hydraulically operated hose reel adjacent to the manhole where the operator can observe the action of the cleaning equipment and have accurate indication of the distance from the manhole to the cutting head. We used this machine in 2010. We are very pleased with its performance.

In 2008, the Wastewater Department purchased a new video inspection system. This system has proven itself to be a valuable upgrade for the city. We now have the ability to camera sewer mains quickly, with far less labor than the old unit required. A large percentage of the roots that obstruct our sewer mains find their way there through the customer's service lines. We are currently in the process of compiling the information learned from the camera inspection project into a Microsoft Access database. This database will help focus our collection system maintenance efforts in the areas that have the greatest need.

In 2006 a trailer mounted industrial vacuum unit was added to our fleet of equipment. Industrial vacuums have sufficient vacuum to lift heavy debris several feet. Utilities use industrial vacuum units in a variety of ways. Cleaning the grit from the manholes in our sewer collection system and removing the grease that accumulates in lift stations has been the primary use. We avoided spending several thousand dollars each year by using the vac-unit to remove lift station grease instead of using the expensive chemicals that we used in prior years. Using this equipment greatly reduces the need for exposing employees to the risk of confined space entries. The potential for lethal gases makes entering a manhole the most dangerous job that our city has.

Another use that is rapidly gaining popularity is excavating. Using this method avoids damage to underground pipes and wires. The type vac-unit that we purchased is equipped with 4,000 PSI water pressure tools that rapidly dislodge dirt while the vacuum hose deposits the dirt in the 500 gallon spoils tank that is easily dumped at the location of our choosing. Our Vac-Unit has proven to be a valuable asset to the Water Department and Electric Department as well as the Wastewater Department.

In 2001, a new jet rodder was purchased and put in service. This equipment is capable of doing a very good job of clearing sewer mains and removing roots. In 2009, around a third of our collection system was cleaned. We clean most lines on three year intervals and some problem lines on 90 day intervals.

## **WASTEWATER DEPARTMENT COLLECTION SYSTEM ACTIVITY**

### **Sewer Main Rehabilitation Projects.**

Much of our sewer system was constructed around 100 years ago. At that time, the common method of sewer construction incorporated clay tile pipe. The fact that it has lasted this long is a testament to its durability. However, clay tile pipe has some significant shortcomings compared to the modern PVC plastic pipe used today. The joints don't seal very well, leading to ground water inflow

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when the water table is high, as well as root intrusion. It's prone to cracking. Sometimes chunks of pipe will fall out, leaving exposed earth.

Over the past thirty years, trenchless techniques for sewer main repair have been perfected. The rehabilitation process, known as Cured In Place Pipe (CIPP) or Deform-Reform, is accomplished by inserting a resin-impregnated flexible felt tube into the existing sewer main. This tube is inflated with compressed air and cured with steam, or hot water to form a monolithic, structural-grade lining inside the existing pipe. This new lining seals out tree roots and groundwater infiltration. This process reduces maintenance requirements and extends the useful life of the sewer main. After the new lining is in place, a robotic camera and router is used to cut new openings for the customer's service lines.

Much of our 100 year old system is in remarkably good condition. We have identified and prioritized a few areas of our system that need repair. In 2007, we completed our first CIPP project. The sewer main that was rehabilitated was about 1,300 feet in length, and located between Main Street and Mulvane Street, east of Olive Street. That project cost \$37,050.00.

In 2009, a section of sewer main 1,234 feet in length was rehabilitated. It is located between Main Street and Mulvane Street, west of Olive Street extending to Central Street. That project cost \$34,798.80, and was encumbered in the 2008 budget.

We intend to use our best efforts select a few areas that are in need of rehabilitation each year, and gradually improve Mulvane's Wastewater Collection System to preserve its condition for future Mulvane residents..

In 2010, two sewer main sections totaling 1,728 ft. in length were contracted for CIPP renovation at a total cost of \$38,707.20. Those sections are located between Edgewood and Edgemoor streets, and between First and Edgewood streets.