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**The Report of the  
Twenty-first Annual Actuarial Valuation  
of the Retiree Health Benefits  
Provided by  
St. Clair County Employees Retirement System  
December 31, 2005**

**Submitted To  
The Retirement Board  
St. Clair County Employees Retirement System  
Port Huron, Michigan**

**GRS**

Gabriel Roeder Smith & Company

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September 8, 2006

The Retirement Board  
St. Clair County Employees  
Retirement System  
Port Huron, Michigan

Dear Board Members:

**Submitted in this report** are the results of the Twenty-first Annual Actuarial Valuation of the assets, benefit values and contribution requirements associated with the retiree health benefits provided by the St. Clair County Employees Retirement System. The results of the valuation of the basic retirement benefits provided by the Retirement System are the subject of a separate report.

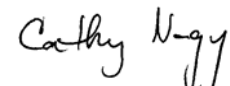
**The actuarial calculations** were prepared at the request of the Retirement Board. This valuation was prepared for the purpose of calculating a contribution rate that would fund the program on an actuarial basis.

**The valuation was based upon information**, furnished by your Secretary, concerning Retirement System benefits, financial transactions, and individual members, terminated members, retirees and beneficiaries. Data was checked for internal consistency but was not otherwise audited. This information is summarized in Section E.

**Valuation methods** and assumptions are summarized in Section F.

The valuation was performed by or under the supervision of a Member of the American Academy of Actuaries with substantial experience valuing public employee retirement plans. The valuation uses generally accepted actuarial principles and is in accordance with the standards of practice prescribed by the Actuarial Standards Board. To the best of our knowledge, this report is complete and accurate and the methods and assumptions employed produce results which are reasonable.

Respectfully submitted,



Cathy Nagy, FSA, MAAA



W. James Koss, ASA, MAAA



Hu Zhi, FSA, MAAA

CN/WJK/HZ:dm

# **SECTION A**

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## **EXECUTIVE SUMMARY**

# RETIREE HEALTH BENEFITS

## 1. Required Contributions - Fiscal Year Beginning January 1, 2007

The computed contribution rates are shown in the following table:

<u>Division</u>	<u>Employer Contribution Rate</u>	<u>Dollar Contribution</u>
General	17.11 %	\$3,400,590
Mental Health	11.68	1,027,433
Road Commission	26.69	1,528,622
Sheriff	16.21	1,333,146
Total	17.11 %	\$7,289,791

For detail please see page B-2.

## 2. Contribution Rate Comparison

The following table shows a comparison of the average computed contribution rate from last year to this year.

<u>December 2004</u>	<u>December 2005</u>
17.84%	17.11%

## 3. Reasons for Change

There are 3 general reasons why contribution rates change from one valuation to the next. The first is a change in the benefits or eligibility conditions of the plan. The second is a change in the valuation assumptions or methods used to predict future occurrences. The third is the difference during the year between the plan's actual experience and what the assumptions predicted.

There were no changes in plan provisions. There were changes in the assumptions and methods used in this valuation as a result of a recent experience analysis. These assumptions and methods were adopted by the Retirement Board.

In addition, during the 2005 plan year, the retiree health plan received lower contributions than the recommended amount. When the plan receives less than the recommended amount in contributions during a given year, it increases the need for the future contributions, resulting in a higher future contribution rate.

#### ***4. Year 2005 Experience Gain (Loss)***

One way the plan's experience influences costs is the effect it has on the unfunded accrued liability. This is referred to as the experience gain or loss for the year. There was a gain from all causes of \$3,137,732 during 2005. This represents 2.6% of the 2004 accrued liabilities. The gain (loss) development is shown on page B-5.

The year 2005 experience for the retiree health plan was the result of losses from investment earnings and gains from lower than assumed rates of health inflation.

Gain (loss) on investment income	\$(2,131,551)
Remaining gains (losses)	<u>5,269,283</u>
Total gain (loss)	\$ 3,137,732

#### ***5. Effect of County Contributions***

A computed contribution rate will remain level from year to year if experience matches the assumptions and if the plan receives contributions in accordance with the computed contribution rate from the prior valuation. This year the plan received less in contributions than developed in the 2003 valuation.

12/2003 computed contribution rate	19.24%
actual 2005 payroll	\$42,622,922
implied contributions	8,200,650
actual contributions	<u>2,648,857</u>
shortfall	\$ 5,551,793

#### ***6. 2005 Funding Position***

Funding for retiree health benefits began 20 years ago. This year, valuation assets represent 30.8% of accrued liabilities; last year the ratio was 29.5%.

## **7. Context**

Contributing on the basis of valuation results allows the County to level out somewhat the cost of retiree health benefits. *However, due to the volatility of health care inflation, the results of the retiree health valuation are likely to fluctuate more from year to year than the results of the basic benefits valuation. The Sensitivity Tests in Section D demonstrate how these costs may vary depending upon future experience.*

## **8. Conclusions**

As long as contributions are made at the recommended level, experience matches the assumptions and there are no changes in benefits, the contribution rate should remain close to the percent of payroll shown in this report. The key assumption is the future rate of increase in per capita health expenditures. If the rate of increase does not moderate from recent levels, it will place all health benefit plans in jeopardy, whether funded or unfunded.

## **9. Recommendation**

For several years we have discussed with the Board the regulatory issues involved in funding retiree health benefits in a qualified pension plan. We believe these issues to be very important and of current concern. The Internal Revenue Code limits the dollar amounts that can be contributed to a 401(h) account on behalf of retiree health benefits. Gabriel, Roeder, Smith & Company has not been retained to do an analysis if the 401(h) rules are met. It is our understanding that the Board and the County has been working with legal counsel to address this issue.

## **10. GASB Statements No. 43 and No. 45**

The Governmental Accounting Standards Board (GASB) issued Statement No. 43, Financial Reporting for Post-Employment Benefit Plans Other than Pension Plans. Statement No. 43 sets the accounting standards applicable to plans providing “other post employment benefits” (OPEB), including retiree health care. GASB also issued Statement No. 45, setting the accounting standards applicable to the employers sponsoring OPEB plans.

Government entities will have to comply with the new GASB standards according to the following schedule:

<b>Total Annual Revenue in Fiscal Year Ending June 15, 1999</b>	<b>Effective for Fiscal Years Beginning After:</b>	
	<b>OPEB Sponsor</b>	<b>OPEB Plan</b>
\$100 MM or more	12/15/2006	12/15/2005
\$10 MM - \$100 MM	12/15/2007	12/15/2006
Less than \$10 MM	12/15/2008	12/15/2007

Please note that Statements No. 43 and No. 45 are accounting standards, not funding requirements. However, to the extent that St. Clair County contributes less than the Annual Required Contribution (ARC) as required by the GASB standard, an accrued liability will be shown on the County's financial statement. In addition, if the County contributes less than the ARC, a lower interest rate will be used in the calculations, significantly increasing the reported liability and ARC.

GRS has discussed the GASB Statements No. 43 and No. 45 with the Board and the County as they relate to this retiree health care plan. We summarized all the potential issues in a letter dated June 14, 2006. We recommend the Board and the County continue these discussions with the auditors and legal counsel so all the issues are resolved in a timely manner before the County and the plan have to comply with these statements.

### ***11. Medicare Part D***

The impact of the Federal legislation creating a prescription drug benefit under Medicare has not been reflected in this report.



## **SECTION B**

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### **VALUATION RESULTS COMMENTS**

## **FINANCIAL OBJECTIVE**

The financial objective of the Retiree Health Care Plan is to establish and receive contributions, expressed as a percentage of active member payroll, which will permit the accumulation of assets to pay for these retirement benefit promises.

Your annual retiree health benefit valuations determine how well the objective is being met.

## **CONTRIBUTION RATES**

The Retirement System health benefits are supported by contributions from the County and by the investment income earned on System health assets.

County contributions cover both (i) normal cost, and (ii) the financing of the unfunded accrued liability over a period of future years. The normal cost is the portion of System costs allocated to the current year by the valuation method described in Section F. The unfunded accrued liability is the portion of System costs not covered by present System assets and future normal costs.

The contribution requirements for retiree health benefits for the fiscal year beginning January 1, 2007 are presented on page B-2. We have developed and shown in a separate report the costs of basic retirement benefits.

**CONTRIBUTIONS TO PROVIDE RETIREE HEALTH BENEFITS  
DECEMBER 31, 2005 VALUATION**

<b>Contributions for</b>	<b>% of Active Payroll</b>				<b>Total</b>
	<b>General</b>	<b>Mental Health</b>	<b>Road Commission</b>	<b>Sheriff</b>	
Normal cost of benefits:					
Age & service	5.10%	4.73%	7.93%	7.88%	5.95%
Disability	0.18%	0.19%	0.29%	0.21%	0.20%
Death before retirement	0.14%	0.13%	0.21%	0.16%	0.15%
Total	<u>5.42%</u>	<u>5.05%</u>	<u>8.43%</u>	<u>8.25%</u>	<u>6.30%</u>
Unfunded accrued liability	<u>11.69%</u>	<u>6.63%</u>	<u>18.26%</u>	<u>7.96%</u>	<u>10.81%</u>
Computed Employer Rate	<u><u>17.11%</u></u>	<u><u>11.68%</u></u>	<u><u>26.69%</u></u>	<u><u>16.21%</u></u>	<u><u>17.11%</u></u>

Unfunded actuarial accrued liabilities were financed as a level percent of member payroll over a closed period of 24 years.

*The procedure for determining dollar contribution amounts* is shown on page B-3.

Page B-4 displays the unfunded accrued liabilities that are amortized by the contribution rate shown above.

## **CONVERTING CONTRIBUTION RATES TO DOLLAR AMOUNTS**

For any period of time, the percent-of-payroll contribution rate needs to be converted to dollar amounts. We recommend one of the following procedures.

- (1) Contribute dollar amounts for a period which are equal to the computed percent-of-payroll contribution requirement multiplied by the covered active member payroll for the period. Since pay data used is submitted for the retirement system valuation, the contribution percentages developed refer to payroll as defined for Retirement System benefits.
- (2) Contribute \$7,289,791. This amount is based on the submitted payroll information without adjustment for expected pay increases after year 2005. It would be appropriate to adjust this dollar amount for changes in the payroll after December 31, 2005.

## **TIMING OF CONTRIBUTION PAYMENTS**

The contributions in this report anticipate regular payments throughout the year. Examples would be at each payroll date or in 12 monthly installments. If the employer contribution pattern is significantly different, an adjustment to the costs may be appropriate. For example, a lump sum contribution at the beginning of the year is available for investment throughout the year and, therefore, ought to be somewhat smaller than 12 monthly payments. Similarly, a lump sum contribution at the end of the year will not generate any investment income that year and so must be greater than 12 monthly payments.

**DETERMINATION OF UNFUNDED ACCRUED LIABILITY  
RETIREE HEALTH BENEFITS  
DECEMBER 31, 2005 VALUATION**

	<u>General</u>	<u>Mental Health</u>	<u>Road Commission</u>	<u>Sheriff</u>	<u>Total</u>
A. Accrued Liability					
1. For retirees and beneficiaries	\$29,929,139	\$ 4,111,513	\$17,109,654	\$ 6,937,109	\$ 58,087,415
2. For vested terminated members	7,729,563	4,080,365	1,055,755	927,839	13,793,522
3. For present active members					
a. Value of expected future benefit payments	35,202,585	12,373,644	14,697,559	17,906,284	80,180,072
b. Value of future normal costs	11,304,840	5,099,611	5,138,123	8,413,102	29,955,676
c. Active member liability: (a) - (b)	<u>23,897,745</u>	<u>7,274,033</u>	<u>9,559,436</u>	<u>9,493,182</u>	<u>50,224,396</u>
4. Total	61,556,447	15,465,911	27,724,845	17,358,130	122,105,333
B. Valuation Assets	<u>18,957,716</u>	<u>4,763,081</u>	<u>8,538,500</u>	<u>5,345,833</u>	<u>37,605,130</u>
C. Unfunded Accrued Liability: (A.4) - (B)	<u>42,598,731</u>	<u>10,702,830</u>	<u>19,186,345</u>	<u>12,012,297</u>	<u>84,500,203</u>

**DEVELOPMENT OF 2005 EXPERIENCE GAIN (LOSS)  
RETIREE HEALTH BENEFITS**

Actual experience will never (except by coincidence) exactly match assumed experience. It is hoped that gains and losses will cancel each other over a period of years, but sizable year to year fluctuations are common. Detail on the derivation of the experience gain (loss) is shown below.

	<u>2004</u>	<u>2005</u>
(1) UAAL* at start of year	\$89,945,736	\$84,925,857
(2) Normal cost from last year	2,665,736	2,621,310
(3) Actual employer contributions	3,793,162	2,648,857
(4) Net interest accrual on (1), (2) and (3)	6,704,161	6,368,419
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	95,522,471	91,266,729
(6) Changes from amendments	0	0
(7) Change from revised assumptions/methods	0	(3,628,794)
(8) Expected UAAL after changes: (5) + (6) + (7)	95,522,471	87,637,935
(9) Actual UAAL at end of year	84,925,857	84,500,203
(10) Gain (Loss) (8) - (9)	10,596,614	3,137,732
(11) Gain (Loss) as percent of actuarial accrued liabilities at start of year	8.51 %	2.60 %
(12) Total Gain (Loss)	10,596,614	3,137,732

\* *Unfunded actuarial accrued liabilities.*

**DEVELOPMENT OF VALUATION INVESTMENT GAIN (LOSS)  
YEAR ENDED DECEMBER 31, 2005**

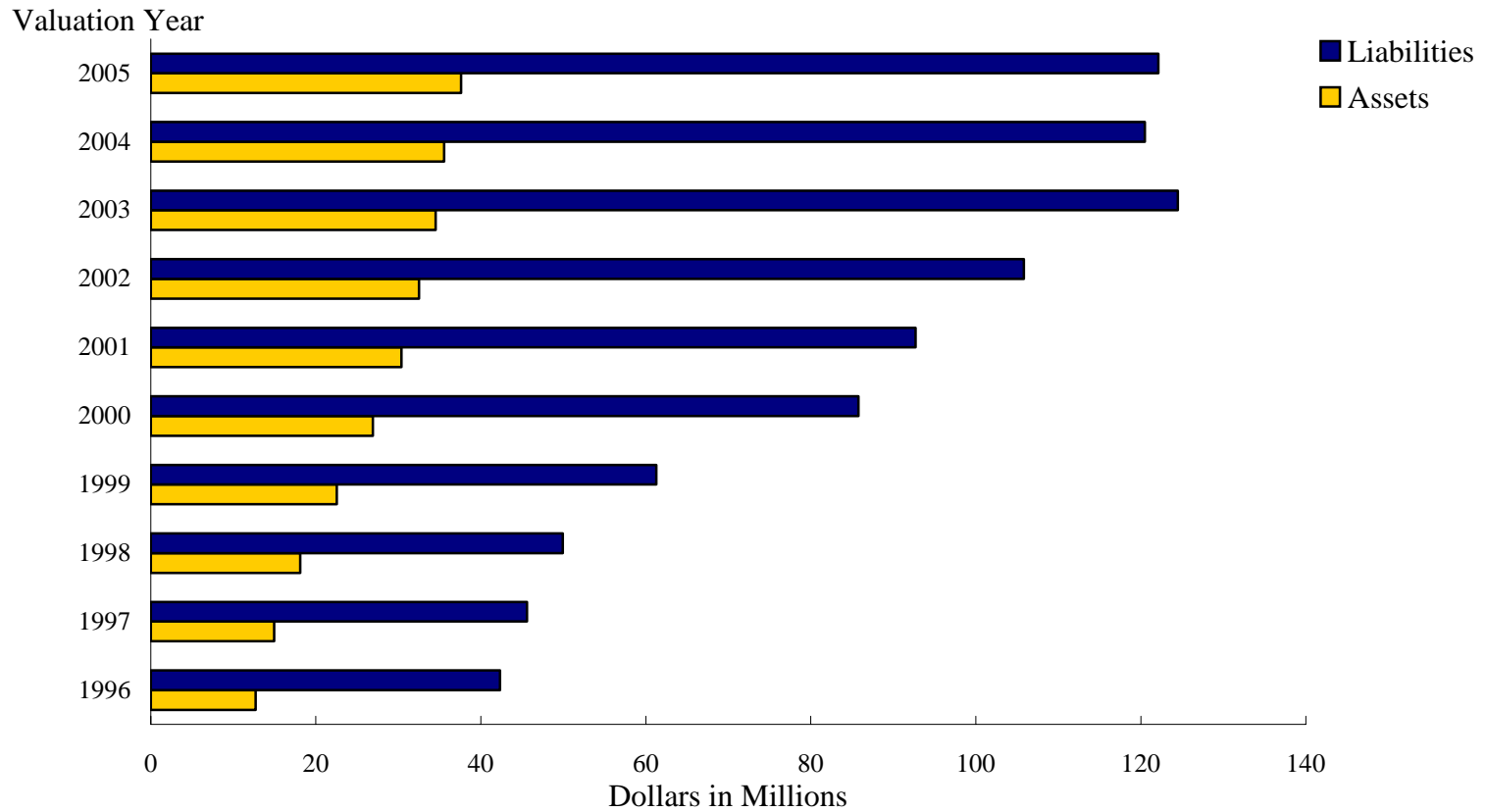
The 2005 valuation assumed an average 7.5% return on valuation assets. Net investment return in excess of 7.5% represents a gain. If net investment return falls short of 7.5%, the difference between an income of 7.5% and the net return represents a loss.

(1) Net interest and dividends during 2005	\$ 3,953,573
(2) 2005 market value adjustment (see page E-4)	<u>(1,351,594)</u>
(3) Total 2005 valuation investment income: (1) + (2)	2,601,979
(4) Average Valuation Assets	178,622,520
(5) Expected investment income: (.075) x (4)	13,396,689
(6) Gain (Loss): (3) - (5)	(10,794,710)
(7) Portion of System assets for retiree health	0.197463
(8) Gain (loss) attributable to retiree health assets: (6) x (7)	(2,131,551)
(9) Valuation rate of return for 2005: (3) / (4)	1.46%

Please note that this analysis uses asset values and investment income as defined for the actuarial valuation. It is not, therefore, appropriate as a measure of manager performance.

**During 2005 the approximate market value rate of return was 4.27%.**

## Assets & Accrued Liabilities Retiree Health Benefits



1996 assets equaled 30.0% of accrued liabilities.  
 2005 assets equaled 30.8% of accrued liabilities.



**COMPUTED EMPLOYER CONTRIBUTIONS  
RETIREE HEALTH BENEFITS  
COMPARATIVE STATEMENT**

Valuation Date	Covered Active Members				Covered Retirees & Beneficiaries	Computed Employer Contributions as Percent of Covered Payroll <sup>^</sup>				
	No.	Total	Average	% Incr.		General	Mental Health	Road Commission	Sheriff	Total
12/31/1991@#	763	\$21,859,213	\$28,649	4.1	317					15.12 %
12/31/1992	723*	22,118,037	30,592	6.8	325					15.03
12/31/1993	732	23,711,156	32,392	5.9	335					12.17
12/31/1994	747	24,769,097	33,158	2.4	347					10.97
12/31/1995#	766	25,861,302	33,761	1.8	361					10.61
12/31/1996#	783	27,934,157	35,676	5.7	375					11.77
12/31/1997	791	28,402,628	35,907	0.6	376					12.59
12/31/1998	798	29,161,115	36,543	1.8	394					13.41
12/31/1999	827	31,051,406	37,547	2.7	406					16.14
12/31/2000@	825	32,044,333	38,842	3.4	410					24.39
12/31/2001	833	32,744,255	39,309	1.2	426					26.49
12/31/2002	883	35,716,619	40,449	2.9	435					28.96
12/31/2003**	914	38,047,803	41,628	3.0	455					19.24
12/31/2004	924	39,609,752	42,868	3.0	462					17.84
12/31/2005@ <sup>^</sup>	996	42,622,922	42,794	(0.2)	462	17.11 %	11.68 %	26.69 %	16.21 %	17.11

@ Revised actuarial assumptions.

<sup>^</sup> Separated by division from 2005 forward.

# Retirement System Amended.

\* Medical Care Facility closed.

\*\* Amortization period changed.

## **RETIREE PREMIUM RATE DEVELOPMENT**

The retired employees of St. Clair County are provided medical and prescription drug benefits through the County's self-insured program administered by BCBS. Age graded and sex distinct premiums are utilized by this valuation and developed for two classes of retirees (pre-65 and post-65).

The initial premiums developed are appropriate for the unique age and sex distribution currently existing. Over the future years covered by this valuation, the age and sex distribution will most likely change. Therefore, our process "distributes" the average premium over all age/sex combinations and assigns a unique premium for each combination. The age/sex specific costs more accurately reflect the health care utilization and cost at that age.

The initial premiums are calculated based on the group's own experience. Historical claim experience for calendar years 2003, 2004, and 2005 were projected to the valuation period (i.e., January 1, 2006 to December 31, 2006) on an incurred claim basis and adjusted for plan design changes, trend, and loaded for administrative expenses. Since the claims provided was combined for the pre-65 and post-65 participants, the data was split to appropriately reflect the impact of the Medicare on post-65 participants and the different utilization level between the two groups. A per member weighted average cost based on the projected experience was developed as the initial medical premium to be used in the valuation.

The following are the monthly one-person premiums used in this valuation at select ages:

<b>NOT ELIGIBLE FOR MEDICARE</b>		
<b>AGE</b>	<b>MALE</b>	<b>FEMALE</b>
40	\$ 176.57	\$ 276.64
50	324.56	367.75
60	532.92	512.25
64	620.29	574.95

<b>ELIGIBLE FOR MEDICARE</b>		
<b>AGE</b>	<b>MALE</b>	<b>FEMALE</b>
65	\$ 366.29	\$ 337.30
75	469.06	416.28
85	523.04	459.20

## RETIREE HEALTH BENEFITS COMMENTS

**Comment A:** As requested by the Board and the County beginning with the December 31, 2005 actuarial valuation, we calculated the contribution rates separately for the following divisions: General, Mental Health, Road Commission and Sheriff. Our calculations were based on the demographics of each group and the benefit provisions of each group. The assets were allocated in proportion to the liabilities so each division has the same funded ratio as of December 31, 2005. In future years, we suggest segregating the assets for purposes of calculating the contributions so that each division's assets properly reflect the contributions and benefits for that division. The assets remain commingled for investment purposes.

**Comment B:** Providing health care benefits to retired employees involves significant additional risks when compared to providing pensions to retired employees. The additional risks include the rate at which current medical costs will increase, or decrease in the future, changes in utilization and changes in Medicare. As a result contributions for a retiree health plan are more volatile. This volatility is shown in Section D of this report.

**Comment C:** If the contribution rate and unfunded liabilities in this report seem large, this is due to the nature of the benefits promised and the economic forces affecting the cost of providing these benefits. It is also due to the fact that funding for these benefits is still relatively low. To illustrate this, the chart below compares the computed employer contribution requirement to a situation in which the plan would have present assets equal to 50% or 100% of its present accrued liabilities.

### Contribution Requirements

Cost	Present Assets	Assets Fund 50% of Liabilities	Liabilities Fully Funded
Normal Cost	6.30%	6.30%	6.30%
Accrued liability	\$122,105,333	\$122,105,333	\$122,105,333
Assets	37,605,130	61,052,667	122,105,333
Unfunded liability	84,500,203	61,052,666	0
Amortization payment	10.81%	7.81%	0.00%
Required contribution	17.11%	14.11%	6.30%

## **RETIREE HEALTH BENEFITS COMMENTS (CONTINUED)**

**Comment D:** This valuation allows the County to level out the cost of retiree health benefits somewhat. Even though the contribution rate may not remain as level as pension contribution rates, this program of pre-funding will help the County avoid much of the increasing cost that results from a pay-as-you-go approach. This valuation also helps in understanding the very substantial value of retiree health benefits.

**Comment E:** In order for a contribution requirement to remain level from one valuation to the next, experience must be similar to the valuation assumptions, and the plan must receive contributions at the rate computed in the valuation. If the plan receives contributions at a lower level, (i) funding will be slowed down and (ii) the need for future contributions will increase. Moreover, the valuations anticipate that contributions, as they are received, will be available for investment. While budgetary constraints may argue for a reduced level of current funding, it should be understood that the "cost" of reducing contributions is not only an increased need for County contributions in the future to make up for the contributions that the plan is not receiving currently, but also an increased need for County contributions in the future to make up for the investment return the plan would have realized on these missed contributions.

## **SECTION C**

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### **CASH FLOW PROJECTIONS**

## **BACKGROUND**

Until a retirement program reaches a mature state, the number of members receiving benefits will continue to increase, with commensurate increases in the amount of benefit disbursements. When the retirement benefits being paid are health benefits, health costs can be expected to increase as the result of medical care inflation, changes in utilization and Medicare cost shifting. When both of these reasons for increased disbursements apply, as they do for the St. Clair County Retiree Health Program, it is reasonable to expect that the amount of the System's annual health disbursements will increase for years to come.

We have projected the System's health disbursements over the next 20 years. The projections are based upon the same assumptions as were used for the valuation of System costs. The schedule on the next page displays the anticipated disbursements.

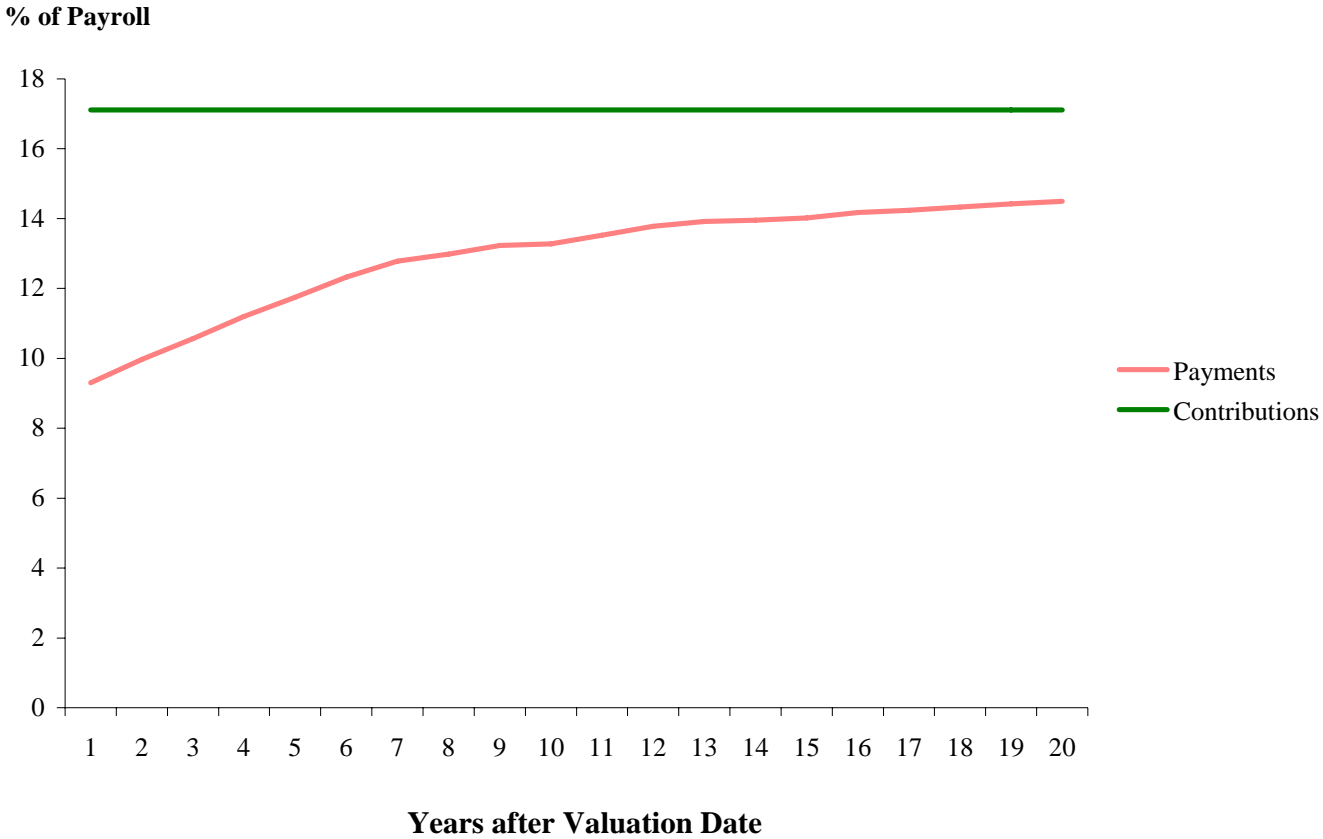
*Please note that these projections anticipate that the System will receive contribution income equal to the computed cost requirements.*

## 20 YEAR PROJECTION OF BENEFIT DISBURSEMENTS

Year	Retiree Health Payments on Behalf of Present				Benefit Disbursements As a % of Payroll
	Retirees	Employees	Inactives	Total	
2006	\$3,820,700	\$ 82,300	\$ 59,600	\$ 3,962,600	9.30%
2007	4,063,500	258,000	138,400	4,459,900	9.97%
2008	4,275,300	464,500	228,200	4,968,000	10.57%
2009	4,485,300	728,800	312,900	5,527,000	11.20%
2010	4,661,800	1,049,400	377,700	6,088,900	11.75%
2011	4,862,000	1,409,600	428,900	6,700,500	12.32%
2012	4,985,100	1,790,200	527,200	7,302,500	12.78%
2013	5,045,800	2,186,700	554,100	7,786,600	12.98%
2014	5,069,600	2,592,900	666,400	8,328,900	13.23%
2015	5,062,900	3,023,200	695,400	8,781,500	13.28%
2016	5,060,100	3,477,100	849,300	9,386,500	13.52%
2017	5,039,200	3,940,200	1,065,100	10,044,500	13.78%
2018	5,016,800	4,417,300	1,220,100	10,654,200	13.92%
2019	4,983,900	4,912,800	1,317,100	11,213,800	13.95%
2020	4,958,600	5,467,100	1,406,800	11,832,500	14.02%
2021	4,933,100	6,076,800	1,547,000	12,556,900	14.17%
2022	4,893,600	6,700,300	1,652,200	13,246,100	14.24%
2023	4,838,700	7,418,500	1,745,500	14,002,700	14.33%
2024	4,771,000	8,232,300	1,793,200	14,796,500	14.42%
2025	4,683,500	9,029,200	1,897,600	15,610,300	14.49%

This is a closed group projection assuming no new entrants into the plan over the projection period. Benefit payments are projected based on the per-person health care costs developed as a result of our claims analysis, and will be different from the actual benefits paid from the plan.

**RETIREE HEALTH BENEFITS  
PROJECTED PAYMENTS AND CONTRIBUTIONS (PERCENTS OF PAYROLL)**





## **SECTION D**

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### **SENSITIVITY TESTS**

## **BACKGROUND**

Actuarial valuations deal with the cost of benefits to be paid in the future. The payments considered will range from one month in the future to decades from the valuation date (for a young, newly hired employee who may retire many years from now and live many years after that). In order to establish a present day cost for these future benefit obligations, the actuary bases the valuation on a number of assumptions about future occurrences. The occurrences that must be considered include employee turnover, pay increases, disablements, retirements, deaths and investment income on plan assets.

When the benefits being valued are health benefits, a key factor is the future cost of the goods and services being promised. This is projected using the current cost of the health benefits and assumed rates of future health cost increases. The final cost of providing retiree health benefits will depend upon how the charges for medical services actually increase in the future.

In order to demonstrate how the computed cost of these benefits can vary depending upon future health care inflation, we have performed additional valuations based upon alternative health care inflation assumptions. The schedules on pages D-2 through D-5 compare (i) the computed cost of the retiree health benefits using the valuation assumptions to (ii) results of alternate valuations. One of the alternate valuations is based upon a more optimistic health cost increase assumption than was used for the valuation. The other valuation is based upon a pessimistic health cost increase assumption.

The schedule on page D-6 illustrates health cost increase assumptions used in each of the valuations.

**RETIREE HEALTH BENEFITS  
SENSITIVITY TESTS - MEDICAL INFLATION  
GENERAL**

<b>Computed Cost</b>	<b>Future Medical Inflation</b>		
	<b>Valuation Assumption</b>	<b>Optimistic Assumption</b>	<b>Pessimistic Assumption</b>
Normal cost	5.42%	4.64%	6.12%
Accrued liability	61,556,447	53,708,174	68,312,009
Valuation assets	18,957,716	18,957,716	18,957,716
Unfunded liability	42,598,731	34,750,458	49,354,293
Amortization payment*	11.69%	9.53%	13.54%
Contribution rate	17.11%	14.17%	19.66%

\* *Unfunded actuarial accrued liabilities were financed as a level percent of member payroll over a period of 24 years.*

*%'s refer to costs as a percentage of covered member payroll.*

**RETIREE HEALTH BENEFITS  
SENSITIVITY TESTS - MEDICAL INFLATION  
MENTAL HEALTH**

<u>Computed Cost</u>	<u>Future Medical Inflation</u>		
	<u>Valuation Assumption</u>	<u>Optimistic Assumption</u>	<u>Pessimistic Assumption</u>
Normal cost	5.05%	4.32%	5.70%
Accrued liability	15,465,911	13,346,887	17,284,701
Valuation assets	4,763,081	4,763,081	4,763,081
Unfunded liability	10,702,830	8,583,806	12,521,620
Amortization payment*	6.63%	5.32%	7.76%
Contribution rate	11.68%	9.64%	13.46%

\* *Unfunded actuarial accrued liabilities were financed as a level percent of member payroll over a period of 24 years.*

*%'s refer to costs as a percentage of covered member payroll.*

**RETIREE HEALTH BENEFITS  
SENSITIVITY TESTS - MEDICAL INFLATION  
ROAD COMMISSION**

<u>Computed Cost</u>	<u>Future Medical Inflation</u>		
	<u>Valuation Assumption</u>	<u>Optimistic Assumption</u>	<u>Pessimistic Assumption</u>
Normal cost	8.43%	7.20%	9.49%
Accrued liability	27,724,845	24,298,899	30,677,292
Valuation assets	8,538,500	8,538,500	8,538,500
Unfunded liability	19,186,345	15,760,399	22,138,792
Amortization payment*	18.26%	15.00%	21.08%
Contribution rate	26.69%	22.20%	30.57%

\* *Unfunded actuarial accrued liabilities were financed as a level percent of member payroll over a period of 24 years.*

*%'s refer to costs as a percentage of covered member payroll.*

**RETIREE HEALTH BENEFITS  
SENSITIVITY TESTS - MEDICAL INFLATION  
SHERIFF'S DEPARTMENT**

<u>Computed Cost</u>	<u>Future Medical Inflation</u>		
	<u>Valuation Assumption</u>	<u>Optimistic Assumption</u>	<u>Pessimistic Assumption</u>
Normal cost	8.25%	7.05%	9.30%
Accrued liability	17,358,130	15,058,977	19,334,564
Valuation assets	5,345,833	5,345,833	5,345,833
Unfunded liability	12,012,297	9,713,144	13,988,731
Amortization payment*	7.96%	6.44%	9.27%
Contribution rate	16.21%	13.49%	18.57%

\* *Unfunded actuarial accrued liabilities were financed as a level percent of member payroll over a period of 24 years.*

*%'s refer to costs as a percentage of covered member payroll.*

**RETIREE HEALTH BENEFITS**  
**SENSITIVITY TESTS - HEALTH COST INCREASE ASSUMPTION**

<b>Year</b>	<b>Assumed Rate of Medical Inflation</b>		
	<b>Valuation</b>	<b>Optimistic</b>	<b>Pessimistic</b>
2006	10.00 %	8.00 %	13.00 %
2007	9.50	7.00	12.00
2008	9.00	6.00	11.00
2009	8.50	5.00	10.00
2010	8.00	5.00	9.00
2011	7.00	5.00	8.00
2012	6.00	5.00	7.00
2013	5.00	5.00	6.00
2014	5.00	5.00	5.00
2015	5.00	5.00	5.00

## **SECTION E**

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### **SUMMARY OF BENEFIT PROVISIONS VALUATION DATA**



**BRIEF SUMMARY OF RETIREE HEALTH ELIGIBILITY  
DECEMBER 31, 2005**

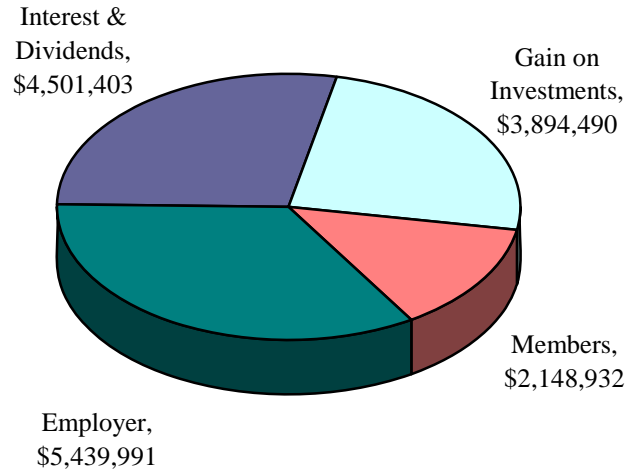
Covered Person	Group	Eligibility Conditions
Retired Member	Modified plan member	Age 55 (age 50 for Sheriff Dept.) with 25 years of service or age 60 with 20 years of service. After 25 years when age plus service equals 80.
	Original plan member	Age 55 (age 50 for Sheriff Dept.) with 25 years of service or age 60 with 8 years of service. After 25 years when age plus service equals 80.
Spouse of Retiree	Any	Retiree alive and covered, or spouse receiving continuation of deceased retiree's pension.
Spouse of Deceased Employee	Any	Spouse receives a survivor pension.

All new hires are expected to be covered by the modified plan. Members are not currently required to contribute to the health care plan.

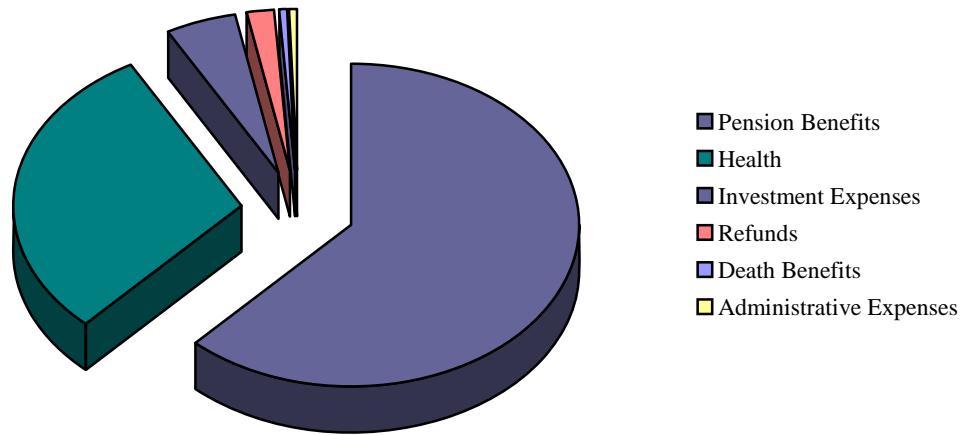
Members of the Sheriff's Department, who retire prior to age 50, pay the cost of coverage until attainment of age 50.

Members who retire as a result of a disability, terminated vested members and survivors of members who die while actively employed receive health care coverage.

**INCOME AND DISBURSEMENTS**  
**During Year Ended December 31, 2005**  
**(Total System – Market Value)**



**Source of \$15,984,816 in Income**



Disbursements of \$10,866,330  
by Type

**Disbursements by Type**

**REPORTED FINANCIAL INFORMATION AT MARKET VALUE  
YEAR ENDED DECEMBER 31, 2005  
TOTAL SYSTEM ASSETS**

**Revenues and Disbursements**

**Revenues:**

a. Member contributions	\$ 2,148,932
b. Employer contributions	5,439,991
c. Interest and dividends	4,501,403
d. Gain on investments	3,894,490
e. Total	<u>\$15,984,816</u>

**Disbursements:**

a. Refunds of member contributions	\$ 220,986
b. Pensions paid	6,722,641
c. Death benefits paid	52,179
d. Health benefits	3,258,728
e. Investment expenses	547,830
f. Administrative expenses	63,966
	<u>\$10,866,330</u>

**Reserve Increase:**

Total revenues minus total disbursements	<u>\$ 5,118,486</u>
--	---------------------

**Assets**

a. Cash and equivalents*	\$ 6,413,700
b. Stocks	76,593,927
c. Corporate Bonds	83,611,164
d. U.S. government securities	<u>23,870,205</u>
Total	<u>\$190,488,996</u>

\* Adjusted for accruals and receivables, net of payables.

**REPORTED FINANCIAL INFORMATION AT MARKET VALUE**  
**YEAR ENDED DECEMBER 31, 2005**  
**TOTAL SYSTEM ASSETS**

<b>Year Ended December 31:</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
A. Funding Value Beginning of Year	\$179,987,308				
B. Market Value End of Year	190,488,996				
C. Market Value Beginning of Year	185,370,510				
D. Non-Investment Net Cash Flow	(2,729,577)				
E. Investment Income					
E1. Market Total: B - C - D	7,848,063				
E2. Amount for Immediate Recognition (7.5%)	13,396,689				
E3. Amount for Phased-In Recognition E1-E2	(5,548,626)				
F. Phased-In Recognition of Investment Income					
F1. Current Year: 0.2 x E3	(\$1,109,725)				
F2. First Prior Year	0	\$(1,109,725)			
F3. Second Prior Year	0	0	\$(1,109,725)		
F4. Third Prior Year	0	0	0	\$(1,109,725)	
F5. Fourth Prior Year	0	0	0	0	\$(1,109,726)
F6. Start-up Phase In	1,076,640	1,076,640	1,076,640	1,076,640	1,076,642
G. Total	(33,085)	(33,085)	(33,085)	(33,085)	(33,084)
H. Funding Value End of Year: A + D + E2 + G	190,621,335				
I. Difference between Market & Funding Value	(132,339)	(99,254)	(66,169)	(33,084)	0
J. Recognized Rate of Return - Funding Value Basis	7.48%				
K. Recognized Rate of Return - Market Value Basis	4.27%				

**RETIREE HEALTH BENEFITS  
RETIREES AND BENEFICIARIES - DECEMBER 31, 2005  
TABULATED BY ATTAINED AGE**

Attained Ages	General		Mental Health		Road Commission		Sheriff		Total	
	No. of Retirees*	No. Covered Per Retiree	No. of Retirees*	No. Covered Per Retiree	No. of Retirees*	No. Covered Per Retiree	No. of Retirees*	No. Covered Per Retiree	No. of Retirees*	No. Covered Per Retiree
35-39	1	2							1	2
40-44	1	1							1	1
45-49							1	1	1	1
50-54	7	13	1	2	5	9	6	6	19	30
55-59	32	50	5	6	10	18	13	17	60	91
60-64	44	63	13	17	25	43	12	20	94	143
65-69	43	63	7	10	17	28	3	4	70	105
70-74	32	51	4	7	18	26	6	9	60	93
75-79	42	54	2	1	28	40	5	9	77	104
80	8	10			8	14	1	2	17	26
81	3	2			5	8			8	10
82	9	11			4	7	1	1	14	19
83	6	7			5	7			11	14
84	5	6			6	6			11	12
85	9	12			1	1			10	13
86	5	7							5	7
87	6	7			3	4			9	11
88	2	3			1	1			3	4
89	6	5			2	2			8	7
90 and Over	15	16			3	3			18	19
<b>Totals</b>	<b>276</b>	<b>383</b>	<b>32</b>	<b>43</b>	<b>141</b>	<b>217</b>	<b>48</b>	<b>69</b>	<b>497</b>	<b>712</b>
<b>Average</b>		<b>1.4</b>		<b>1.3</b>		<b>1.5</b>		<b>1.4</b>		<b>1.4</b>

\* Actual number of retirees, including those that do not have retiree health care coverage.

**RETIREE HEALTH BENEFITS  
RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS  
COMPARATIVE STATEMENT**

<b>Year Ended December 31</b>	<b>Added to Rolls@</b>	<b>Removed from Rolls</b>	<b>Rolls End of Year</b>	<b>Present Value of Health Benefits</b>
1987	26	12	286	\$ 3,444,302
1988	21	9	298	4,907,357
1989	17	10	305	6,316,089
1990	17	10	312	9,630,842
1991	18	13	317	11,724,732
1992	18	10	325	12,872,407
1993	20	10	335	11,984,980
1994	24	12	347	11,361,828
1995	33	19	361	12,523,024
1996	15	1	375	14,524,383
1997	30	29	376	16,413,460
1998	30	12	394	19,258,663
1999	28	16	406	25,109,990
2000	22	18	410	33,481,392
2001	34	18	426	38,921,495
2002	33	24	435	45,665,396
2003	36	16	455	55,715,393
2004	37	30	462	55,663,190
2005	51	16	497	58,087,415

@ Includes survivors of deceased retirees.

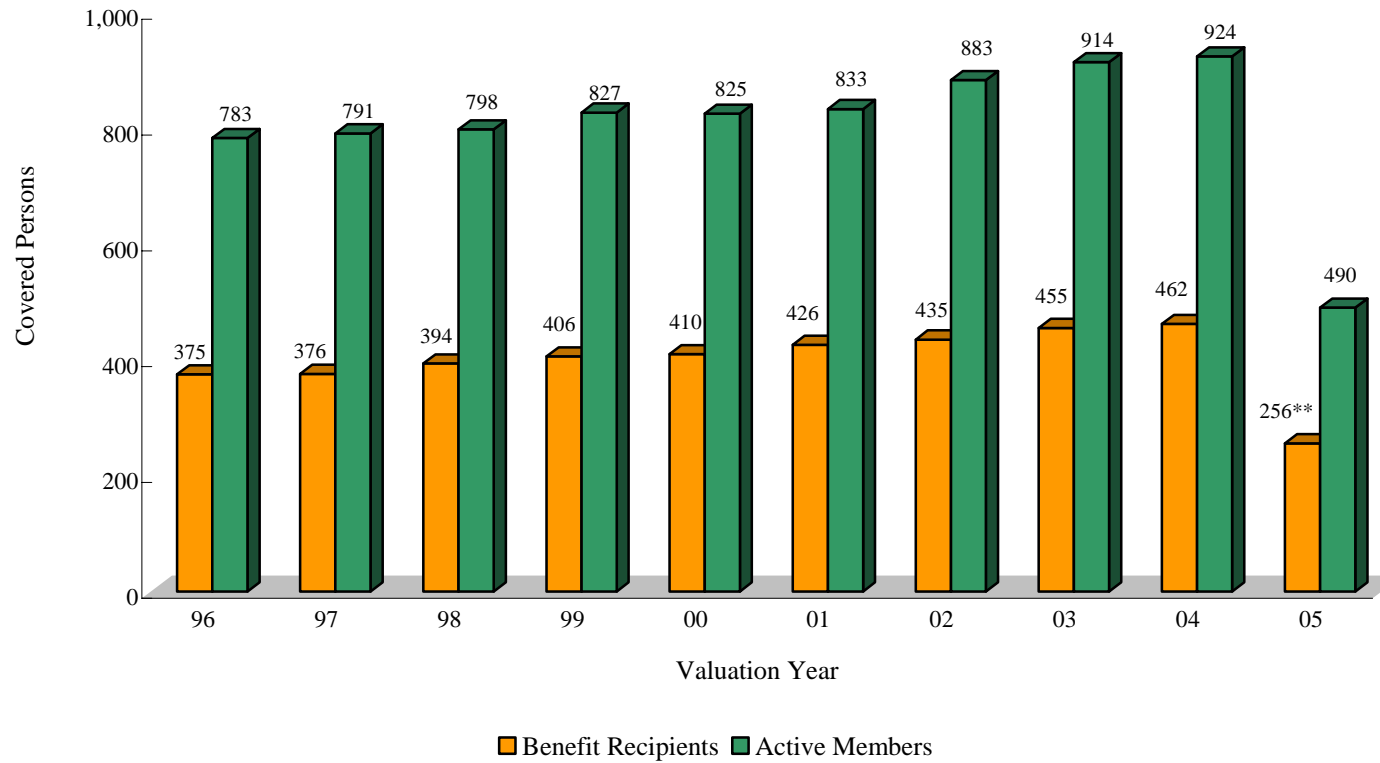
## INACTIVE MEMBER DATA

There were 93 inactive members as of December 31, 2005. An inactive member is a person who has left County employment with entitlement to a benefit after attainment of his voluntary retirement age.

### Inactive Members December 31, 2005 Tabulated by Attained Age

<u>Attained Ages</u>	<u>General County No.</u>	<u>Mental Health No.</u>	<u>Road Comission No.</u>	<u>Sheriff No.</u>	<u>Total No.</u>
28	1				1
34	1				1
37	1	1			2
38		1			1
39	1				1
40	2				2
41	1				1
42		1			1
43	1	3			4
44	3	1			4
45	3	2			5
46	2				2
47	3	1	1	1	6
48	2	1	1		4
49	5	3		2	10
50	3	1	1	1	6
51	1				1
52	2	3	1		6
53		1	1		2
54	1	3			4
56	3	1			4
57	6	1			7
58	3	3			6
59	4		1		5
60				1	1
64	1				1
65	1				1
67	1				1
<b>Totals</b>	<b>53</b>	<b>28</b>	<b>6</b>	<b>6</b>	<b>93</b>

## GENERAL ACTIVE MEMBERS & BENEFIT RECIPIENTS\*

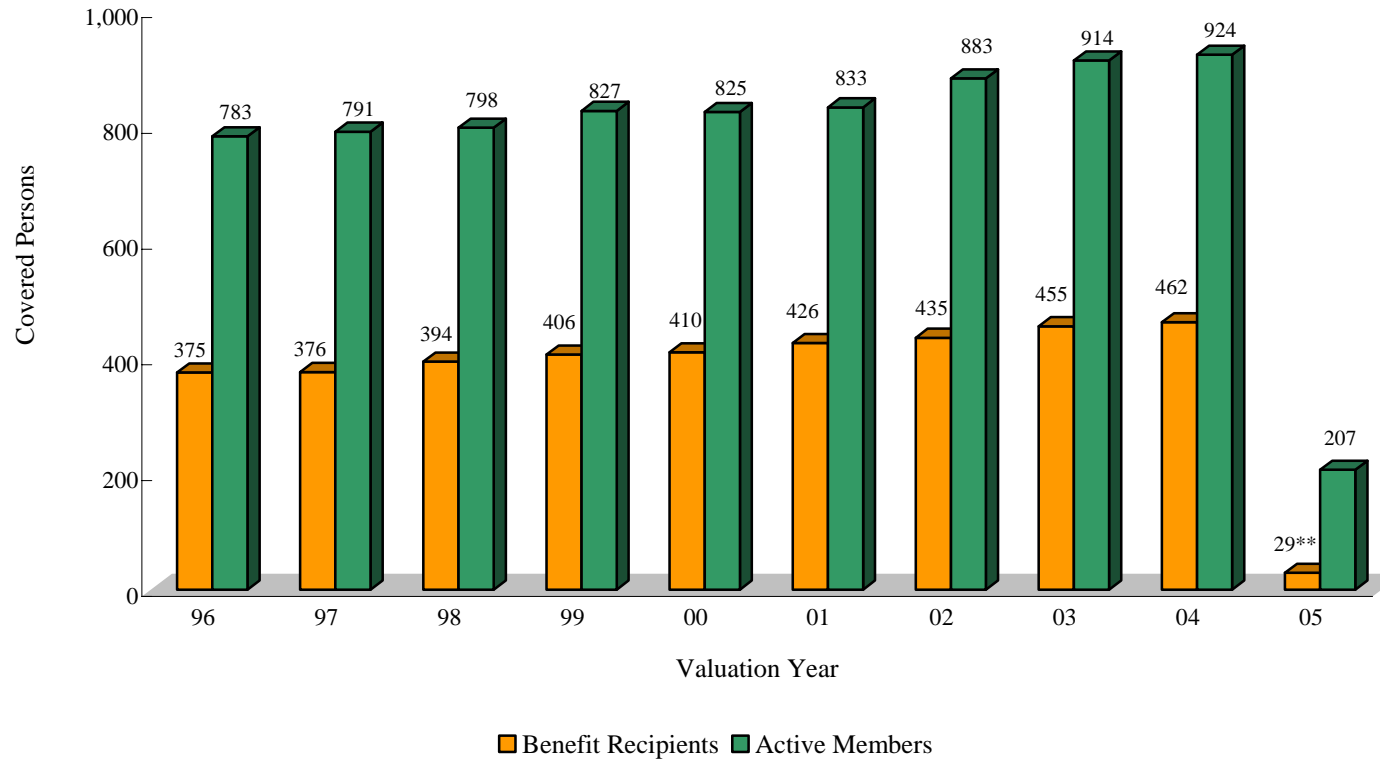


\* For years prior to 2005, the numbers include all active and retired members for all divisions.

\*\* Excludes retirees who do not receive health care benefits.



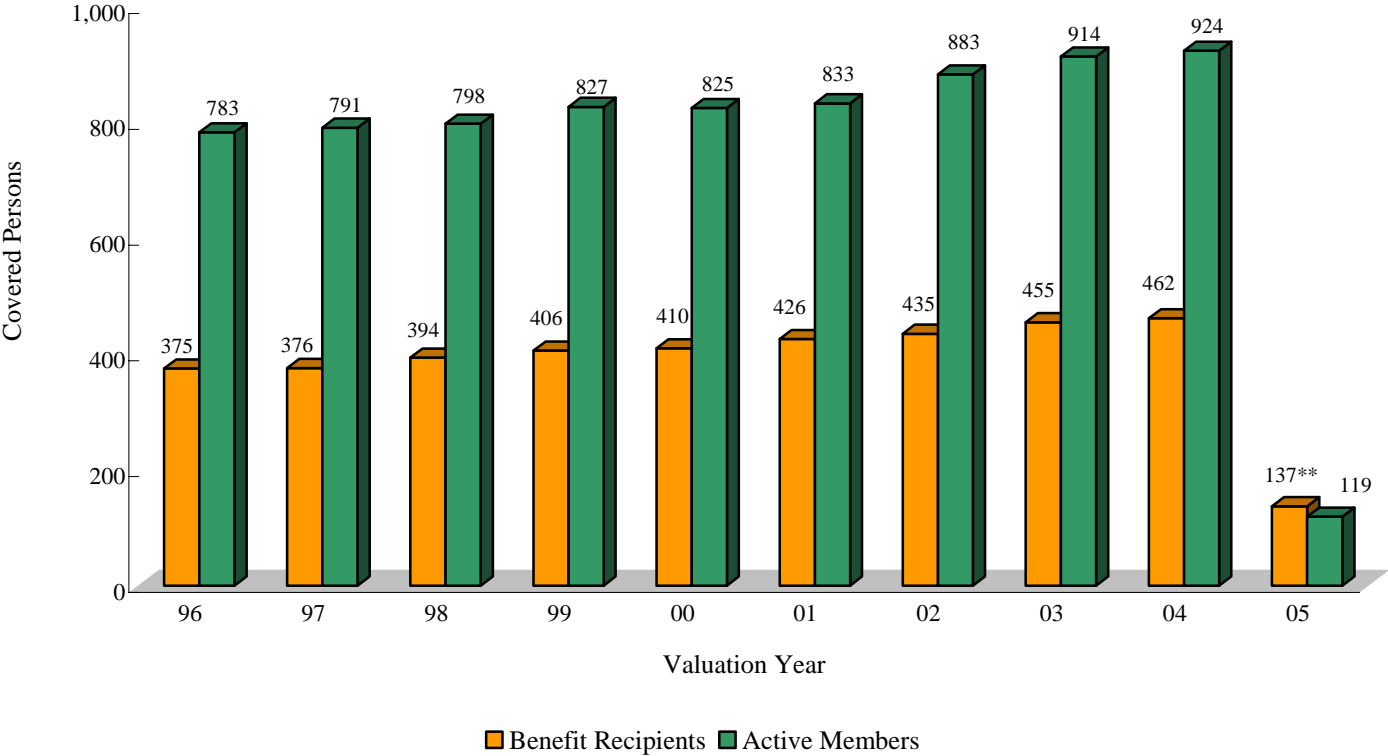
## MENTAL HEALTH ACTIVE MEMBERS & BENEFIT RECIPIENTS\*



\* For years prior to 2005, the numbers include all active and retired members for all divisions.

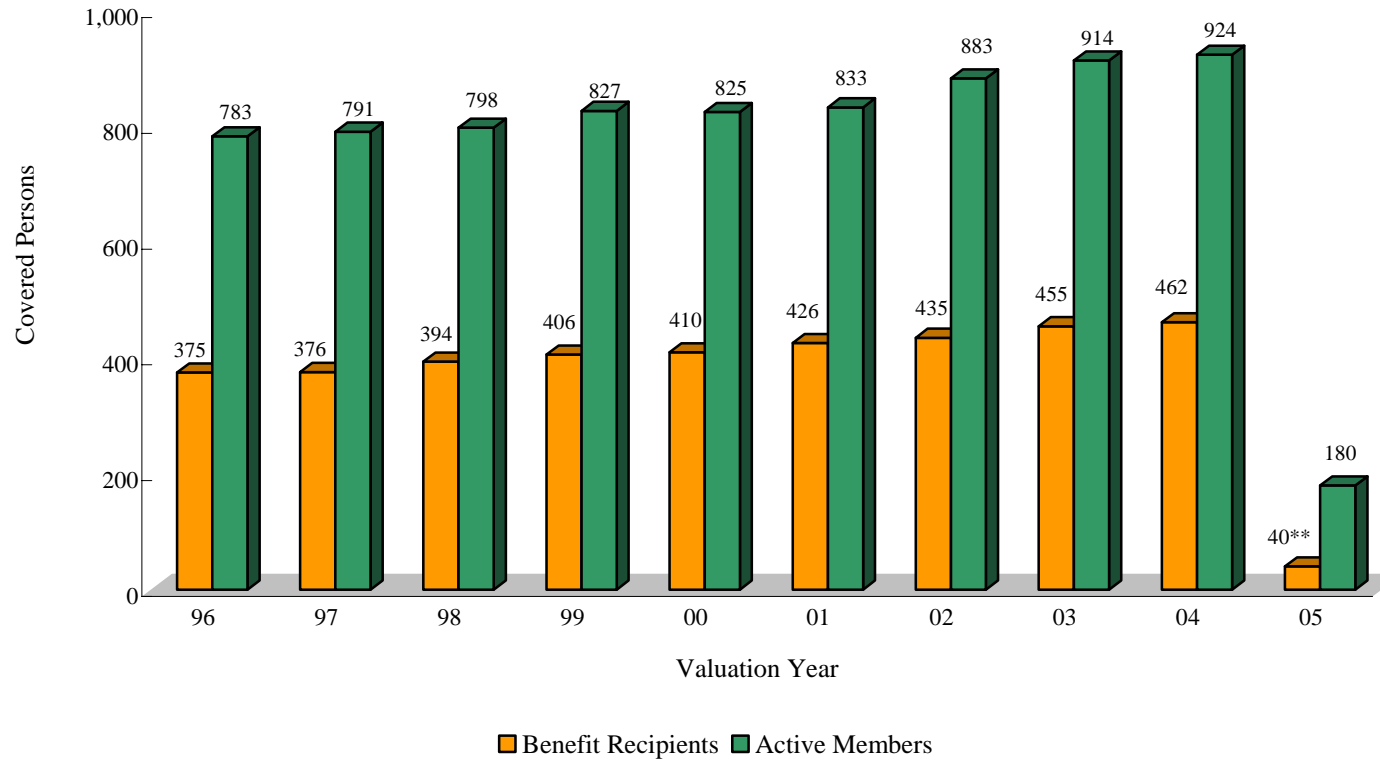
\*\* Excludes retirees who do not receive health care benefits.

# ROAD COMMISSION ACTIVE MEMBERS & BENEFIT RECIPIENTS\*



\* For years prior to 2005, the numbers include all active and retired members for all divisions.  
 \*\* Excludes retirees who do not receive health care benefits.

## SHERIFF ACTIVE MEMBERS & BENEFIT RECIPIENTS\*



\* For years prior to 2005, the numbers include all active and retired members for all divisions.

\*\* Excludes retirees who do not receive health care benefits.

**ACTIVE MEMBERS  
COMPARATIVE SCHEDULE**

Valuation Date December 31	Active Members	Valuation Payroll	Average			
			Age	Service	Pay	% Inc.
1991	763	\$21,859,213	43.0	10.1	\$28,649	4.1 %
1992	723	22,118,037	43.5	10.8	30,592	6.8
1993	732	23,711,156	43.5	11.3	32,392	5.9
1994	747	24,769,097	43.6	11.4	33,158	2.4
1995	766	25,861,302	43.6	11.2	33,761	1.8
1996	783	27,934,157 *	43.6	11.5	35,676	5.7
1997	791	28,402,628	43.7	11.5	35,907	0.6
1998	798	29,161,115	43.9	11.4	36,543	1.8
1999	827	31,051,406	44.1	11.2	37,547	2.7
2000	825	32,044,333	44.3	11.5	38,842	3.4
2001	833	32,744,255	44.6	11.4	39,309	1.2
2002	883	35,716,619	44.6	11.0	40,449	2.9
2003	914	38,047,803	44.5	10.7	41,628	2.9
2004	924	39,609,752	44.6	10.8	42,868	3.0
2005	996	42,622,922	44.1	10.0	42,794	(0.2)

\* Reduced for effect of retroactive pay during 1996.

**ACTIVE MEMBERS ADDED TO AND REMOVED FROM ROLLS**

Year Ended December 31	Number Added During Year	Terminations During Year					Active Members End of Year
		Normal Retirement	Disability Retirement	Died-in Service	Vested Term.	Other	
1991	39	13	1	1	3	23	763
1992	40	11	1		10	58	723
1993	51	14	1	2	9	16	732
1994	59	15	1		9	19	747
1995	72	21	3	1	5	23	766
1996	62	13		1	12	19	783
1997	62	23	1	2	5	23	791
1998	77	20	1	1	15	33	798
1999	91	18	0	2	12	30	827
2000	52	11	1	0	11	31	825
2001	78	21	1	0	11	37	833
2002	94	16		2	10	16	883
2003	96	25			12	28	914
2004	71	21	1		6	33	924
2005	134	29	1		7	25	996

**GENERAL ACTIVE MEMBERS AS OF DECEMBER 31, 2005  
BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Age	Years of Service to Valuation Date							No.	Totals
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus		Valuation Payroll
20-24	11							11	\$ 354,436
25-29	34	2						36	1,263,562
30-34	22	11	1					34	1,337,037
35-39	30	18	9	3				60	2,554,926
40-44	24	20	7	9	6			66	2,577,945
45-49	26	13	3	15	12	8		77	3,192,196
50-54	19	19	15	11	5	17	5	91	3,685,869
55-59	17	14	11	10	14	4	9	79	3,336,253
60	2	4	1		1	2	1	11	515,344
61		1	1	1	1	1	2	7	334,570
62		2	2			1	1	6	269,197
63		1		1				2	60,101
64		1						1	33,403
65	1		2					3	64,319
66	1			2				3	160,763
69			1					1	45,724
71							1	1	36,337
79							1	1	52,887
<b>Totals</b>	<b>187</b>	<b>106</b>	<b>53</b>	<b>52</b>	<b>39</b>	<b>33</b>	<b>20</b>	<b>490</b>	<b>\$19,874,869</b>

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 45.7 years  
Service: 10.5 years  
Annual Pay: \$40,561

**MENTAL HEALTH ACTIVE MEMBERS AS OF DECEMBER 31, 2005**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Age	Years of Service to Valuation Date							No.	Totals
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus		Valuation Payroll
20-24	3							3	\$ 92,137
25-29	17							17	643,901
30-34	16	10	2					28	1,121,466
35-39	18	6	8					32	1,434,720
40-44	8	13	4	1	3			29	1,264,650
45-49	13	10	3	3	7	1		37	1,628,730
50-54	8	7	1	2	4	5		27	1,166,415
55-59	5	4	5	2	6	1	1	24	1,004,770
60		1	1				1	3	135,946
61				1		1		2	77,704
62	1		1					2	91,763
63		1	1					2	91,763
64		1						1	42,549
<b>Totals</b>	<b>89</b>	<b>53</b>	<b>26</b>	<b>9</b>	<b>20</b>	<b>8</b>	<b>2</b>	<b>207</b>	<b>\$8,796,514</b>

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 43.3 years  
Service: 8.5 years  
Annual Pay: \$42,495

**ROAD COMMISSION ACTIVE MEMBERS AS OF DECEMBER 31, 2005  
BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Age	Years of Service to Valuation Date							No.	Totals
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus		Valuation Payroll
20-24	2							2	\$ 73,069
25-29	4	1						5	247,604
30-34	6	4	3					13	547,506
35-39	4	4	4	1				13	625,267
40-44	4	7	7	2	1			21	1,073,525
45-49	5	2	3	9	3			22	1,083,298
50-54		5	3	4	2	2		16	763,331
55-59	1	1	1	7	5	2	1	18	869,342
60		1			1		1	3	201,807
61					2		1	3	128,012
62							1	1	63,075
63				1				1	44,682
65		1						1	6,803
<b>Totals</b>	<b>26</b>	<b>26</b>	<b>21</b>	<b>24</b>	<b>14</b>	<b>4</b>	<b>4</b>	<b>119</b>	<b>\$5,727,321</b>

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 45.4 years  
Service: 12.6 years  
Annual Pay: \$48,129

**SHERIFF ACTIVE MEMBERS AS OF DECEMBER 31, 2005  
BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Age	Years of Service to Valuation Date							No.	Totals
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus		Valuation Payroll
20-24	12							12	\$ 386,124
25-29	24	3						27	998,066
30-34	12	13	2					27	1,273,388
35-39	15	9	3	3				30	1,369,599
40-44	8	5	3	6	4			26	1,302,633
45-49	7	2	1	4	4	2		20	972,496
50-54	3	3	4	3	1	1	2	17	887,661
55-59	3		1	2	4	3	1	14	714,306
60					1			1	41,838
61				2				2	89,270
62			1					1	39,756
63							1	1	60,182
64			1					1	51,635
65				1				1	37,264
66									
<b>Totals</b>	<b>84</b>	<b>35</b>	<b>16</b>	<b>21</b>	<b>14</b>	<b>6</b>	<b>4</b>	<b>180</b>	<b>\$8,224,218</b>

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 39.6 years  
Service: 8.7 years  
Annual Pay: \$45,690



## **SECTION F**

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**ACTUARIAL COST METHODS  
ACTUARIAL ASSUMPTIONS  
GLOSSARY**

## VALUATION METHODS

*The normal cost* was computed as follows:

The series of contributions necessary to accumulate the present value at time of retirement of a member's health care benefits was computed so that each contribution in the series, from date of hire to retirement, was a constant percentage of the member's year by year projected covered compensation. This is referred to as the individual entry age actuarial cost method.

*The accrued liability* was computed and financed as follows:

Retirees and Beneficiaries: The discounted value of health benefits likely to be paid to eligible retirees and beneficiaries was computed using the investment return, health cost increase and mortality assumptions. This amount was financed by applicable accrued assets, to the extent available.

*Active and Inactive Members.* The discounted value of health benefits likely to be paid eligible active and inactive members was computed using the assumptions outlined on the following pages and was reduced by the value of normal costs to be paid for service after the valuation date.

*Asset valuation method.* The actuarial value equals:

- (a) Actuarial value of assets from the previous valuation, plus
- (b) employer and member contributions since the last valuation, plus
- (c) benefit payments and refunds since the last valuation, plus
- (d) estimated investment income at the assumed investment return, plus
- (e) portion of gain/(loss) recognized in the current year.

For the above purposes, gain/(loss) is defined as the excess during the period of the investment return on the market value of assets over the expected investment income. 20% of the difference is recognized over a 5 year period in the actuarial value of assets. This method was first adopted for the December 31, 2005 actuarial valuation.

*Financing of Unfunded Actuarial Accrued Liabilities.* Unfunded actuarial accrued liabilities were amortized by level (principal & interest combined) percent-of-payroll contributions over 24 years. Active member payroll was assumed to increase 5% a year for the purpose of determining the level percent contributions.

## ECONOMIC AND RISK ASSUMPTIONS USED FOR THE VALUATION

The actuary calculates the contribution requirements and benefit values of the plan by applying economic and risk assumptions to the benefit provisions and people information furnished, using the valuation methods described on page F-1.

The principal areas of economic and risk assumptions are:

- (i) long-term rates of investment income likely to be generated by the assets of the Retirement System
- (ii) patterns of salary increases to be experienced by members
- (iii) rate of mortality among members, retirees and beneficiaries
- (iv) rates of withdrawal of active members
- (v) rates of disability among members and their subsequent rates of recovery
- (vi) probabilities of retirement at various ages after benefit eligibility

In making a valuation the actuary must project the monetary effect of each assumption, for each distinct experience group, for the next year and for each year over the next half-century or longer.

Once actual experience has occurred and been observed it will not coincide exactly with assumed experience, regardless of the skill of the actuary and the completeness of the data. Each valuation provides a complete recalculation of system costs based upon assumptions regarding future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of small adjustments of the computed contribution rate.

From time to time it becomes necessary to adjust the package of assumptions to reflect basic experience trends -- but not random year to year fluctuations. We will recommend changes whenever we feel they are appropriate.

## ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION

**Investment Return** (net of investment expenses). 2.5% per year in excess of pay inflation. If pay inflation matches the assumption of 5.0%, this implies a 7.5% rate of return.

This assumption is used to equate the value of payments due at different points in time and was first used for the December 31, 1991 valuation. Approximate rates of investment return, for the purpose of comparisons with assumed rates, are shown below. Actual increases in average active member pay are also shown for comparative purposes.

	Year Ended December 31					5 Year Average*
	2005 <sup>^</sup>	2004	2003	2002	2001	
Rate of Investment Return	1.5 %	0.6 %	1.1 %	0.8 %	5.6 %	1.9 %
Average Increase in Pay	3.0 %	4.9 %	4.7 %	5.6 %	2.7 %	4.2 %
Real Rate of Return	(1.5)%	(4.3)%	(3.6)%	(4.8)%	2.9 %	(2.3)%

<sup>^</sup> Before change in asset valuation method.

\* Compound rate of increase.

The nominal rate of return was computed using the approximate formula  $i = I$  divided by  $1/2 (A + B - I)$ , where  $I$  is actual investment income net of expenses,  $A$  is the beginning of year asset value, and  $B$  is the end of year asset value.

These rates of return should not be used for measurement of an investment advisor's performance or for comparisons with other systems.

**Pay Projections.** These assumptions are used to project current pays to those upon which benefits will be based. The assumptions were first used for the December 31, 2005 valuation.

Sample Service	Annual Rate of Pay Increase for Sample Ages						
	Base	Merit & Longevity			Total		
		General*	Road	Sheriff	General	Road	Sheriff
1	5.00%	3.50%	5.00%	6.00%	8.50%	10.00%	11.00%
2	5.00%	3.50%	5.00%	6.00%	8.50%	10.00%	11.00%
3	5.00%	3.00%	5.00%	6.00%	8.00%	10.00%	11.00%
4	5.00%	3.00%	5.00%	6.00%	8.00%	10.00%	11.00%
5	5.00%	1.00%	0.50%	6.00%	6.00%	5.50%	11.00%
6-19	5.00%	1.00%	0.50%	0.50%	6.00%	5.50%	5.50%
20 and over	5.00%	0.50%	0.50%	0.50%	5.50%	5.50%	5.50%

\* Includes Mental Health Authority.

If the number of active members remains constant, the total active member payroll is expected to increase 5.0% annually, the base portion of the individual pay increase assumptions. This increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities.

Average changes actually experienced in pay have been as follows:

Year Ended December 31					5 Year
2005	2004	2003	2002	2001	Average*
3.0 %	4.9 %	4.7 %	5.6 %	2.7 %	4.2 %

\* Compound rate of increase.

**Active Member Group Size:** The number of active members was assumed to remain constant.

**Mortality.** The 1994 Group Annuity Mortality Table was first used for the December 31, 2005 valuation. Sample values follow:

Sample Attained Ages	Single Life Retirement Values			
	Present Value of \$1 Monthly for Life		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	\$248.03	\$271.62	30.69	34.89
55	220.83	245.73	26.15	30.17
60	192.39	217.89	21.83	25.59
65	163.90	189.26	17.84	21.28
70	136.55	160.61	14.29	17.30
75	110.25	131.44	11.12	13.60

@ These values include 5% annual increases, but do not include the effect of temporarily high health inflation.

This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement.

Future disabled lives were valued using the above table set forward seven years.

**Rates of separation from active membership.** The rates do not apply to members eligible to retire and do not include separation on account of death or disability. This assumption measures the probabilities of members remaining in employment.

Sample Ages	Years of Service	% of Active Members Separating within Next Year		
		General	Road	Sheriff
ALL	0	10.00%	3.00%	5.00%
	1	9.00%	3.00%	5.00%
	2	7.00%	3.00%	5.00%
	3	6.00%	3.00%	5.00%
	4	6.00%	3.00%	5.00%
20	5 & Over	6.00%	3.00%	5.00%
25		6.00%	3.00%	5.00%
30		6.00%	3.00%	4.40%
35		4.80%	2.40%	2.80%
40		3.40%	1.40%	1.70%
45		3.00%	1.00%	1.20%
50		3.00%	1.00%	0.70%
55		3.00%	1.00%	0.50%
60		2.40%	1.00%	0.50%
65		2.00%	1.00%	0.50%

The rates were first used for the December 31, 2005 valuation.

**Rates of Disability.** These rates represent the probabilities of active members becoming disabled.

Sample Ages	Percent Becoming Disabled within Next Year
20	0.08%
25	0.08%
30	0.08%
35	0.08%
40	0.20%
45	0.26%
50	0.49%
55	0.89%
60	1.41%

These rates were first used for the December 31, 1985 valuation. For the Sheriff's Department, the disability assumption is split to reflect 75% as non-duty disability and 25% as duty disability.

**Rates of Retirement.** These rates are used to measure the probability of eligible members retiring during the next year.

<b>Percent of Active Members Retiring within Next Year</b>						
<b>Retirement Ages</b>	<b>General Original</b>	<b>General Modified</b>	<b>Road</b>	<b>Sheriff</b>	<b>Service</b>	<b>Sheriff</b>
50	5.0%	10.0%	25.0%		25	20.0%
51	5.0%	10.0%	25.0%		26	20.0%
52	5.0%	10.0%	25.0%		27	20.0%
53	5.0%	10.0%	25.0%		28	20.0%
54	5.0%	10.0%	25.0%		29	20.0%
55	5.0%	10.0%	25.0%		30	20.0%
56	10.0%	5.0%	25.0%		31	20.0%
57	10.0%	5.0%	25.0%		32	20.0%
58	10.0%	5.0%	25.0%		33	20.0%
59	10.0%	5.0%	25.0%		34	20.0%
60	20.0%	20.0%	25.0%	25.0%	35+	100.0%
61	20.0%	20.0%	10.0%	25.0%		
62	20.0%	20.0%	30.0%	25.0%		
63	20.0%	20.0%	20.0%	25.0%		
64	20.0%	20.0%	20.0%	25.0%		
65	40.0%	40.0%	100.0%	100.0%		
66	40.0%	40.0%	100.0%	100.0%		
67	40.0%	40.0%	100.0%	100.0%		
68	40.0%	40.0%	100.0%	100.0%		
69	40.0%	40.0%	100.0%	100.0%		
70+	100.0%	100.0%	100.0%	100.0%		

A member of the General or Road Divisions was understood to be eligible for retirement after attaining age 55 with 25 or more years of service or age 60 with 8 years of service. A member of the Sheriff’s Division was understood to be eligible for retirement upon completion of 25 years of service or at age 60 with 8 years of service. Members of groups with “Rule of 80” were understood to be eligible if the sum of their age plus years of service was greater than or equal to 80 and their years of service equaled 25 or more.

*The assumed rate of increase for health care costs* is the assumption used to predict the amount of benefit payments in future years. The assumed rates are shown in the table below:

<u>Year</u>	<u>Healthcare Trend</u>
2006	10.0%
2007	9.5%
2008	9.0%
2009	8.5%
2010	8.0%
2011	7.0%
2012	6.0%
2013 & after	5.0%

*Marital status* at retirement:

	<u>2 Person Coverage</u>	<u>Continuation Percentage</u>
Males	80%	100%
Females	50%	100%

*Medicare coverage* was assumed to be available for all covered members on attainment of age 65, or immediately if retired for disability.

*Non-investment administration expenses* - none.



## GLOSSARY

**Actuarial Accrued Liability.** The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as “accrued liability” or “past service liability.”

**Accrued Service.** The service credited under the plan which was rendered before the date of the actuarial valuation.

**Actuarial Assumptions.** Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

**Actuarial Cost Method.** A mathematical budgeting procedure for allocating the dollar amount of the “actuarial present value of future plan benefits” between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the “actuarial funding method.”

**Actuarial Equivalent.** A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

**Actuarial Present Value.** The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Amortization.** Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

**Experience Gain (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

**Normal Cost.** The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as “current service cost.” Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

***Plan Termination Liability.*** The actuarial present value of future plan benefits based on the assumption that there will be no further accruals for the future service and salary. The termination liability will generally be less than the liabilities computed on a “going concern” basis and is not normally determined in a routine actuarial valuation.

***Reserve Account.*** An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

***Unfunded Actuarial Accrued Liability.*** The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as “unfunded accrued liability.”

***Valuation Assets.*** The value of current plan assets recognized for valuation purposes. Generally based on book value plus a portion of unrealized appreciation or depreciation.