

### ST. CLAIR COUNTY EMPLOYEES RETIREMENT SYSTEM

FORTY-FIFTH ANNUAL ACTUARIAL VALUATION OF THE BASIC RETIREMENT BENEFITS DECEMBER 31, 2010

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September 13, 2011

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

Re: Actuarial Valuation as of December 31, 2010

Dear Board Members:

The results of the December 31, 2010 Annual Actuarial Valuation of the St. Clair County Employees Retirement System are presented in this report.

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board.

The purpose of the valuation is to measure the System's funding progress, to determine the employer contribution rate for the fiscal year ending December 31, 2012, and to determine the actuarial information for Governmental Accounting Standards Board (GASB) Statement No. 25.

Both of the undersigned actuaries are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Please see the following page for additional disclosures required by the Actuarial Standards of Practice.

To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the St. Clair County Employees Retirement System as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Respectfully submitted,

Cathy Nagy, FSA, M.

Actuary

W. James Koss, ASA, MAAA

Junk

Actuary

CN/WJK:sc

#### Additional Disclosures Required by Actuarial Standards of Practice

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements.

This report should not be relied on for any purpose other than the purpose described in the primary communication. Determinations of the financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results.

The signing actuaries are independent of the plan sponsor.

The valuation was based upon information furnished the County concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by the County.

The developed findings included in this report consider data or other information through December 31, 2010.

### SECTION A EXECUTIVE SUMMARY

#### **BASIC RETIREMENT BENEFITS**

#### 1. Required Employer Contributions - Fiscal Year Beginning January 1, 2012

The computed County contributions are shown in the following table:

	<b>Employer</b>	Contribution
Division	Contribution	Dollars
General County*		\$4,490,006
Mental Health	10.36%	1,297,534
Road Commission	18.90%	1,008,818
Total		\$6,796,358

<sup>\*</sup> General County includes the Sheriff division starting with the December 31, 2008 valuation.

The required contribution is equal to the normal cost (long-term cost of the benefits) plus the amortization of the unfunded accrued liability.

#### 2. Contribution Rate Comparison

The required contribution rates have changed as follows:

Division	December 31, 2010	<b>December 31, 2009</b>
General County*	\$4,490,006	\$4,664,029
Mental Health	10.36%	9.62%
Road Commission	18.90%	17.08%
Total	14.71%	14.12%

<sup>\*</sup> General County includes the Sheriff division starting with the December 31, 2008 valuation.

#### 3. Reasons for Change

There are three 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 used to predict future occurrences. The third is the difference during the year between the plan's actual experience and what the assumptions predicted.

Various union groups with General County/Sheriff are closed to new hires.

There were no changes in assumptions or methods.

#### 4. 2010 Plan Experience

Plan experience was unfavorable during 2010 resulting in a loss from all causes of \$1,784,903. This represents 0.9% of the 2009 accrued liabilities. The loss development is shown below.

Investment income for total System assets on a smoothed basis was less than the 7.5% assumed rate for 2010, resulting in an investment loss of \$7,856,984 for pension and health assets combined. The portion of the investment loss attributable to basic retirement benefit, is \$6,518,213. There was a gain from all other sources amounting to \$4,733,310.

Investment gain/(loss)	\$(6,518,213)
Gain/(loss) from all other sources	4,733,310
Gain/(loss) from all causes	\$(1,784,903)

#### 5. 2010 Funding Position

This year valuation assets represent 86.0% of total accrued liabilities; last year the ratio was 86.9%. The funded value decreased slightly as a result of unfavorable investment performance offset by demographic gains.

#### 6. Retiree Reserve Balance

This year the retiree accrued liability is larger than the reported retiree reserve balance. See Comment C in Section B.

#### 7. Comment on the Investment Markets

Investment markets have been very volatile, both preceding the December 31, 2010 valuation date and since that date. The actuarial value of assets (funding value), used to determine both the funded status and the required employer contribution, is based on a 5-year smoothed value of assets. This reduces the volatility of the valuation results.

As of December 31, 2010 the actuarial value of assets was 105% of market value. This means that meeting the actuarial assumption in the next few years will require average future market returns that exceed the 7.50% investment return assumption.

If the December 31, 2010 valuation results were based on the market value instead of smoothed funding value, the funded percent of the plan would be 81.0% (instead of 86.9%), and the total employer contribution requirement would be \$7,771,647 (instead of \$6,796,358). If the investment markets do not turn around, the funded percent and employer contribution requirement can be expected to head in that direction.

### **SECTION B**VALUATION RESULTS AND COMMENTS

#### FINANCIAL OBJECTIVE

The financial objective of the Retirement System is to establish and receive contributions, such that enough assets accumulate to pay the benefits promised.

Your annual actuarial valuations determine how well the objective is being met. This report covers the portion of the valuation dealing with basic retirement benefits.

The Board of Trustees of the St. Clair County Employees Retirement System confirms that the System provides for payment of the required employer contribution as described in Section 20m of Michigan Public Act No. 728.

#### **CONTRIBUTION RATES**

The Retirement System basic retirement benefits are supported by contributions from the County and active members and by the investment income earned on system assets. All members contribute 5% of their pay and the County provides an actuarially determined contribution, the remainder needed to meet the financial objective.

Member and 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 D. The unfunded accrued liability is the portion of system costs, if any, not covered by present system assets and future normal costs.

The contribution requirements for basic retirement benefits for the fiscal year beginning January 1, 2012 are presented on page B-2. We have developed and shown in a separate report the cost of the retiree health care benefits.

### CONTRIBUTIONS TO PROVIDE BASIC RETIREMENT BENEFITS MEMBER PORTION AND EMPLOYER PORTION FISCAL YEAR BEGINNING JANUARY 1, 2012

Contributions for	General County*	Mental Health	Road Commission
Normal cost of benefits:			
Age & service	\$3,531,949	11.14%	14.04%
Disability	158,739	0.51%	0.68%
Death before retirement	144,566	0.41%	0.67%
Total	3,835,254	12.06%	15.39%
Member contributions:			
Total	1,417,315	5.00%	5.00%
Future refunds	113,385	0.46%	0.19%
Available for pensions	1,303,930	4.54%	4.81%
Expense allowance	56,693	0.20%	0.20%
Employer normal cost	2,588,017	7.72%	10.78%
Amortization charges	1,901,989	2.64%	8.12%
COMPUTED EMPLOYER RATE	\$4,490,006	10.36%	18.90%

<sup>\*</sup> General County includes the Sheriff division starting with the December 31, 2008 valuation.

Mental Health and Road Commission unfunded liabilities were amortized as a level percent of payroll over an open 20 year period. Because most of the General County group is closed to new hires, we used a level dollar amortization method with the amortization period declining each year. The amortization period for the General group is 19 years in this valuation. This amortization method is appropriate for a closed group.

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

Page B-4 displays the unfunded accrued liability (or excess assets) that is 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 that are equal to the County's percent-of-payroll contribution requirement multiplied by the covered active member payroll for the period. Adjustments should be made as necessary to exclude items of pay that are not covered compensation for Retirement System benefits and to include non-payroll payments that are covered compensation.
- (2) Contribute \$6,796,358. This amount is based on the payroll information provided for the valuation adjusted for expected payroll growth from the valuation date to the fiscal year to which the contribution applies.

#### TIMING OF CONTRIBUTION PAYMENTS

The contribution requirements 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.

### DETERMINATION OF UNFUNDED ACCRUED LIABILITY BASIC RETIREMENT BENEFITS

	General County*	Mental Health	Road Commission	Total
A. Accrued Liability				
1. For retirees and beneficiaries	\$ 72,481,920	\$ 11,556,282	\$25,089,109	\$ 109,127,311
2. For vested terminated members	4,250,993	2,402,878	812,633	7,466,504
3. For present active members				
a. Value of expected future benefit payments	101,096,928	33,009,267	20,595,790	154,701,985
b. Value of future normal costs	39,854,311	14,720,455	7,341,649	61,916,415
c. Active member liability: (a) - (b)	61,242,617	18,288,812	13,254,141	92,785,570
4. Total	137,975,530	32,247,972	39,155,883	209,379,385
B. Valuation Assets	119,702,205	27,466,252	32,883,253	180,051,710
C. Unfunded Accrued Liability (Excess Assets): (A.4) - (B)	18,273,325	4,781,720	6,272,630	29,327,675
<b>D.</b> Funded Ratio: (B) ÷ (A.4)	86.8%	85.2%	84.0%	86.0%

<sup>\*</sup> General County includes the Sheriff division starting with the December 31, 2008 valuation.

#### **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. Beginning with the December 31, 2008 actuarial valuation, the contribution rate for the General County and the Sheriff are calculated jointly. Our calculations were based on the demographics of each group and the benefit provisions of each group. Starting with the December 31, 2008 actuarial valuation we are segregating the assets for purposes of calculating the contribution rates. The assets remain commingled for investment purposes. Beginning with the December 31, 2009 actuarial valuation, the General County division (including Sheriff) is financed using a method that is appropriate for a closed group. Most of the groups within the General County division are closed to new hires (i.e., new hires no longer participate in the defined benefit program). As a result, the unfunded actuarial accrued liability is amortized as a level dollar amount instead of a level percent of payroll. We recommend decreasing the amortization period each year by one for the General County division (including Sheriff).

**COMMENT B:** For illustrative purposes, we calculated the combined Fiscal Year 2012 employer contribution (for all three divisions) as a percent of projected Fiscal Year 2012 payroll to be 14.71%. The projected payroll reflects the fact that most of General County is closed to new hires. We recommend that for the General County division (including Sheriff), the County contribute the dollar amount shown in this report during the 2012 Fiscal Year. This approach is expected to properly fund the General County division, given that most of the division is closed to new hires. The other divisions, Mental Health and Road Commission, can continue making contributions based on a percent of payroll. In addition, for the General County division (including Sheriff), we recommend decreasing the amortization period each year by one because most of that division is closed to new hires.

**COMMENT C:** In each valuation, we develop the value of anticipated future benefit payments to retired members and their beneficiaries. We then compare this accrued liability to the reported balance of the Retirement Reserve Fund. The amounts of liability and the reported reserves are shown below.

Retiree Accrued Liability	\$109,127,311
Retiree Reserve	103,176,596
Unfunded Accrued Liability	\$ 5,950,715

The unfunded amount was assumed to be covered by a transfer from the Retirement System's employer reserves for future benefits, effective January 1, 2011.

**COMMENT D:** The cost of retiree health benefits is the subject of a separate valuation report. This report deals only with the basic retirement benefits provided by the Retirement System.

**COMMENT E:** The development of the experience loss for the basic retirement benefit portion of the Retirement System is shown following these Comments. During the year 2010 there was an aggregate loss of \$1,784,903.

# DEVELOPMENT OF EXPERIENCE GAIN (LOSS) BASIC RETIREMENT BENEFITS YEAR ENDED DECEMBER 31, 2010

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.

	2009	2010
(1) UAAL* at start of year	\$16,547,149	\$ 26,677,967
(2) Normal cost from last year	6,386,491	6,265,121
(3) Actual contributions	7,506,688	7,360,579
(4) Interest accrual	1,199,535	1,960,263
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	16,626,487	27,542,772
(6) Change from benefit increases	933,160	0
(7) Assumption and method changes	0	0
(8) Expected UAAL after changes: $(5) + (6) + (7)$	17,559,647	27,542,772
(9) Actual UAAL at end of year	26,677,967	29,327,675
(10) Gain (Loss): (8) - (9)	(9,118,320)	(1,784,903)
(11) Gain (Loss) as percent of actuarial accrued liabilities at start of year	(4.76)%	(0.88)%

<sup>\*</sup> Unfunded actuarial accrued liabilities.

### DEVELOPMENT OF VALUATION INVESTMENT GAIN (LOSS) YEAR ENDED DECEMBER 31, 2010

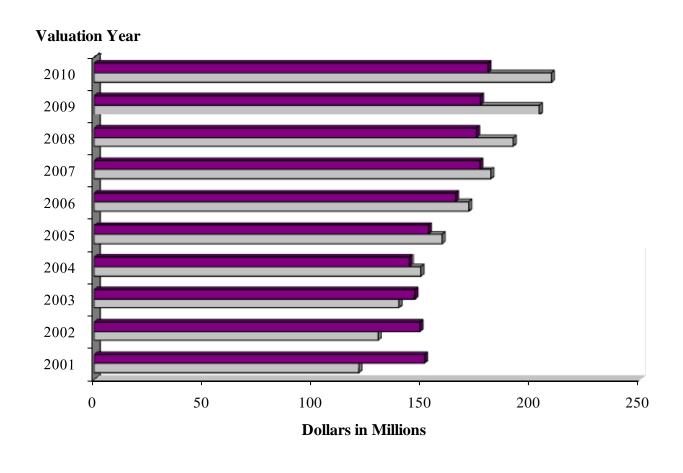
The valuation assumes an average 7.5% return on valuation assets. Net investment return in excess of 7.5% represents a gain. If net investment return falls short of 7.5%, this represents a loss.

(1) Total 2010 valuation investment income	\$ 7,979,845
(2) Average Valuation Assets (Pension & Health)	211,157,720
(3) Expected investment income: (.075) x (2)	15,836,829
(4) Gain (Loss): (1) - (3)	(7,856,984)
(5) Portion of System assets for pension benefits	0.829608
(6) Gain (loss) attributable to pension benefit assets: (4) x (5)	(6,518,213)
(7) Valuation rate of return for 2010: (1)/(2)	3.78%

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 2010 the approximate market value rate of return was 14.91%.

### ASSETS & ACCRUED LIABILITIES BASIC RETIREMENT BENEFITS



■ Assets ■ Accrued Liabilities

2001 assets equaled 124.7% of accrued liabilities 2010 assets equaled 86.0% of accrued liabilities

### COMPUTED EMPLOYER CONTRIBUTIONS COMPARATIVE STATEMENT

Valuation		Active Members				& Beneficiaries	Emplo	yer Contrib	utions As I	Payroll Percent	S
Date		Valu	Valuation Payroll		_	Annual		Mental		Road	
December 31	No.	Total	Average	% Incr.	No.	Benefits	General**	Health	Sheriff	Commission	Total
1991 #@	763	\$21,859,213	\$28,649	4.1 %	317	\$1,770,315					5.90%
1992	723	22,118,037	30,592	6.8 %	325	1,885,964					5.17%
1993	732	23,711,156	32,392	5.9 %	335	2,023,097					5.25%
1994 #	747	24,769,097	33,158	2.4 %	347	2,293,940					5.69%
1995 #	766	25,861,302	33,761	1.8 %	361	2,579,427					5.37%
1996 #@	783	27,934,157	35,676	5.7 %	375	2,773,904					5.62%
1997 #	791	28,402,628	35,907	0.6 %	376	3,147,564					4.70%
1998 #	798	29,161,115	36,543	1.8 %	394	3,536,917					2.49%
1999 @	827	31,051,407	37,547	2.7 %	406	3,903,154					-0.26%
2000 #@	825	32,044,333	38,842	3.4 %	410	4,262,752					(0.57%)
2001 #	833	32,744,255	39,309	1.2 %	426	4,811,025					(0.06%)
2002 #	883	35,716,619 *	40,449	2.9 %	435	5,120,757					3.52%
2003 #	914	38,047,803	41,628	2.9 %	455	5,741,297					6.67%
2004 #	924	39,609,752	42,868	3.0 %	462	6,393,450					9.50%
2005 #@	996	42,622,922	42,794	(0.2)%	482^	7,165,942^	8.38%	8.20%	11.28%	11.49%	9.33%
2006 #	985	44,015,666	44,686	4.4 %	507^	7,847,109^	8.77%	8.10%	11.59%	11.01%	9.48%
2007 #	986	44,600,186	45,233	1.2 %	537^	8,738,382^	8.63%	8.08%	11.56%	11.01%	9.38%
2008 #	986	45,511,253	46,157	2.0 %	555^	9,362,207^	11.33%	8.60%		14.36%	11.05%
2009 #	951	46,078,581	48,453	5.0 %	584^	10,136,190^	\$4,664,029	9.62%		17.08%	14.12%
2010 #	900	44,623,366	49,582	2.3 %	589^	10,448,473^	\$4,490,006	10.36%		18.90%	14.71%

<sup>#</sup> Retirement System amended.

<sup>@</sup> Revised actuarial assumptions or methods.

<sup>\*</sup> Reduced for the effect of retroactive pay during 1996.

<sup>^</sup> Includes DROP members.

<sup>\*\*</sup> Starting with the December 31, 2008 valuation the General County includes the Sheriff division.

### 13<sup>TH</sup> CHECK EXCESS RESERVE FUND

	(1)	(2)	(3)	<b>(4)</b>	(5) = (4)  times  (1)	<b>(6)</b>	<b>(7</b> )	(8)	(9)	(10) = (6) - (9)
	Assets Reserved		Excess	Half of	Amount		<b>Total Annual Pension</b>	COLA		Reserve after 13th
	for Retirees	Investment	Return	Excess	Reserved for	Cumulative	for Retirees	Adjustment for	13th Check	Check Payment
Year	as of 12/31	Return	over 7.5%	Return	13th Checks	Reserve	on the Rolls#	Active Employees	Payment	is Made
2006	\$42,437,356	8.83%	1.33%	0.665%	\$282,208	\$282,208	\$ 4,596,239	2.00%	\$ 91,925	\$190,283
2007	45,410,509	8.25%	0.75%	0.375%	170,289	360,572	4,912,172	2.00%	98,243	262,329
2008	50,260,629	0.69%	0.00%	0.000%	0	262,329	5,382,468	2.00%	107,649	154,680
2009	55,367,615 *	2.70%	0.00%	0.000%	0	154,680	5,873,978	2.00%	0	154,680
2010	59,359,356 *	* 3.78%	0.00%	0.000%	0	154,680	6,289,809	2.00%	0	154,680
2011						154,680				

<sup>#</sup> These are the annual pensions for retirees on the rolls as of December 31 who have been retired at least 5 years as of December 31.

<sup>\*</sup> This is the reserve for the 397 members who have retired at least 5 years ago as of December 31, 2009.

<sup>\*\*</sup> This is the reserve for the 408 members who have retired at least 5 years ago as of December 31, 2010.

### SECTION C

SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA

### BRIEF SUMMARY OF BASIC RETIREMENT BENEFITS (DECEMBER 31, 2010)

**Eligibility** Amount

#### REGULAR RETIREMENT

(no reduction factor for age)

Sheriffs - 25 years of service regardless of age.

Others - Age 55 with 25 years of service.

- Age 60 with 8 years of service. All

> - When age plus service equals 80 and service is at least 25 years.

For various union groups within General County/Sheriff, new hires are no longer covered by the defined benefit plan.

#### **Modified plan members:**

Final Average Compensation (FAC) multiplied by:

Years of Service	<u>e Annual Multiplier</u>
1-10	1.75%
11-19	2.00
20-24	2.00
25-29	2.40 (2.50 for Sheriff
	Department Supervisors)

Before 20 years of service, separate multipliers are used for the first 10 years of service and service over 10 years.

After 20 years of service, the multiplier will apply to all years of service. Maximum benefit: See Appendix

**Original plan members:** Total service times 2.0% of FAC. Maximum benefit: See Appendix

Type of FAC - Highest 3 years out of last 10 (highest 5 years out of last 10 for Mental Health and Friend of the Court). Base pay only for certain General County and Sheriff's Department members.

#### **DEFERRED RETIREMENT**

8 or more years of service, benefit begins at age Computed as a regular retirement but based upon 60. With 25 or more years of service, benefit service and final average compensation at begins at age 55.

termination date.

#### **DEATH IN SERVICE**

10 or more years of service.

Computed as a regular retirement but actuarially reduced in accordance with a 100% joint and survivor election. Payable to the spouse for life. If no eligible spouse, unmarried children under 18 receive equal shares of 50% of the benefit.

### BRIEF SUMMARY OF BASIC RETIREMENT BENEFITS (DECEMBER 31, 2010)

**Eligibility** Amount

#### NON-DUTY DISABILITY

10 or more years of service.

Computed as a regular retirement. Offsets apply.

#### **DUTY DISABILITY**

Sheriff's Department - 10 or more years of service.

50% of compensation at the time of disability. Offsets apply.

Others - No age or service requirements. Must be in receipt of Worker's Compensation payments.

Computed as a regular retirement. Upon termination of Worker's Compensation payments, additional service credit is granted and benefit is recomputed. Offsets apply.

#### **MEMBER CONTRIBUTIONS**

All members.

5% of annual compensation.

#### **COUNTY CONTRIBUTIONS**

Actuarially determined amounts which, together with member contributions, are sufficient to cover both (i) normal costs of the plan, and (ii) financing of unfunded accrued benefit values over a selected period of future years.

#### POST-RETIREMENT LIFE INSURANCE

The Retirement System provides \$3,500 of life insurance to retirees.

#### SUPPLEMENTAL PAYMENTS TO RETIREES AGE 65 AND OLDER

If a retiree had less than 20 years of service at retirement, an annual payment of \$14.00 per month will be made for the life of the retiree. For members with 20 or more years of service at retirement, an annual payment of \$16.00 per month.

# RETIREMENTS DURING 2010 GENERAL COUNTY TABULATED BY AGE NEAREST BIRTHDAY AT RETIREMENT

	Age & Service		D	Disability		urvivor		Totals		
		Annual		Annual		Annual		Annual		
Ages	No.	Benefits	No.	Benefits	No.	Benefits	No.	Benefits		
59	3	\$ 81,658					3	\$ 81,658		
60	4	61,946					4	61,946		
62	1	4,738					1	4,738		
63	2	30,897					2	30,897		
64	1	7,041					1	7,041		
Total	11	\$186,280					11	\$186,280		

# RETIREMENTS DURING 2010 MENTAL HEALTH AUTHORITY TABULATED BY AGE NEAREST BIRTHDAY AT RETIREMENT

	Age & Service		D	Disability		Survivor		Totals	
		Annual		Annual		Annual		Annual	
Ages	No.	Benefits	No.	Benefits	No.	Benefits	No.	Benefits	
53					1	\$ 23,990	1	\$ 23,990	
61	2	\$ 49,539					2	49,539	
63	1	8,864					1	8,864	
67	1	6,427					1	6,427	
Total	4	\$ 64,830			1	\$ 23,990	5	\$ 88,820	

# RETIREMENTS DURING 2010 SHERIFF'S DEPARTMENT TABULATED BY AGE NEAREST BIRTHDAY AT RETIREMENT

	Age & Service		D	Disability		Survivor		Totals	
		Annual		Annual		Annual		Annual	
Ages	No.	Benefits	No.	Benefits	No.	Benefits	No.	Benefits	
47	1	\$ 36,870					1	\$ 36,870	
51	1	28,877					1	28,877	
60	1	4,240					1	4,240	
65	1	14,622					1	14,622	
Total	4	\$ 84,609					4	\$ 84,609	

# RETIREMENTS DURING 2010 ROAD COMMISSION TABULATED BY AGE NEAREST BIRTHDAY AT RETIREMENT

	Age & Service		D	Disability		Survivor		Totals	
		Annual		Annual		Annual		Annual	
Ages	No.	Benefits	No.	Benefits	No.	Benefits	No.	Benefits	
53	2	\$ 74,889					2	\$ 74,889	
56	1	49,751					1	49,751	
60	1	22,855					1	22,855	
62	1	33,381					1	33,381	
Total	5	\$ 180,876					5	\$ 180,876	

# RETIREMENTS DURING 2010 GENERAL COUNTY TABULATED BY ANNUAL AMOUNT OF BENEFIT

Annual Amount	Age & Service	Disability	Survivor	Total
Under \$8,000	3			3
8,000 - 9,999	1			1
10,000 - 11,999	2			2
22,000 - 23,999	1			1
24,000 - 25,999	1			1
26,000 - 27,999	1			1
30,000 - 31,999	1			1
32,000 - 33,999	1			1
				44
Total	11			11

# RETIREMENTS DURING 2010 MENTAL HEALTH AUTHORITY TABULATED BY ANNUAL AMOUNT OF BENEFIT

Annual Amount	Age & Service	Disability	Survivor	Total
Under \$8,000	1			1
8,000 - 9,999	1			1
20,000 - 21,999	1			1
22,000 - 23,999			1	1
28,000 - 29,999	1			1
Total	4			5

## RETIREMENTS DURING 2010 SHERIFF'S DEPARTMENT TABULATED BY ANNUAL AMOUNT OF BENEFIT

Annual Amount	Age & Service	Disability	Survivor	Total
Under \$8,000	1			1
14,000 - 15,999	1			1
28,000 - 29,999	1			1
36,000 - 37,999	1			1
Total	4			4

## RETIREMENTS DURING 2010 ROAD COMMISSION TABULATED BY ANNUAL AMOUNT OF BENEFIT

Annual Amount	Age & Service	Disability	Survivor	Total
22,000 - 23,999	1			1
32,000 - 33,999 34,000 - 35,999	1 1			1 1
Over \$40,000	2			2
Total	5			5

### RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS GENERAL COUNTY, SHERIFF'S DEPT. & ROAD COMMISSION COMPARATIVE STATEMENT

Year	Added to Rolls@		Remove	Removed from Rolls		End of Year	% Incr. in		Discounted	
Ended		Annual		Annual		Annual	_ Annual	Average	Value of	
Dec. 31	No.	Pensions	No.	Pensions	No.	Pensions	Pensions	Pension	Pensions	
1001	4.0	d 45 5 5 6	10	h 50 <b>770</b>	245	<b>41.77</b> 0.217	<b>=</b> 0.04	<b>* * * * *</b>	<b>447</b> 0 <b>22</b> 024	
1991	18	\$ 176,569	13	\$ 60,572	317	\$1,770,315	7.0 %	\$ 5,585	\$17,932,086	
1992	18	154,549	10	38,900	325	1,885,964	6.5 %	5,803	18,941,923	
1993	20	167,008	10	29,876	335	2,023,096	7.3 %	6,039	20,221,782	
1994	24	332,827	12	61,983	347	2,293,940	13.4 %	6,611	22,722,069	
1995	33	403,798	19	118,311	361	2,579,427	12.4 %	7,145	25,646,941	
1996	15	196,935	1	2,458	375	2,773,904	7.5 %	7,397	27,290,541	
1997	30	526,598	29	152,938	376	3,147,564	13.5 %	8,371	31,918,402	
1998	30	472,504	12	83,151	394	3,536,917	12.4 %	8,977	35,901,730	
1999	28	519,307	16	153,070	406	3,903,156	10.4 %	9,614	39,614,504	
2000	24	478,805	20	119,209	410	4,262,752	9.2 %	10,397	43,250,186	
2001 #	29	532,778	29	219,904	410	4,575,626	7.3 %	11,160	45,164,629	
2002	26	387,767	23	172,053	413	4,791,340	4.7 %	11,601	48,841,993	
2003	35	767,072	16	177,315	432	5,381,097	12.3 %	12,456	55,100,488	
2004	33	777,439	30	193,358	435	5,965,178	10.9 %	13,713	61,571,588	
2005 ^	31	736,866	16	101,250	450	6,600,794	10.7 %	14,668	68,324,342	
2006 ^	40	715,898	19	125,875	471	7,190,817	8.9 %	15,267	74,477,562	
2007 ^	49	1,122,623	25	332,663	495	7,980,777	11.0 %	16,123	82,907,893	
2008 ^	34	861,849	21	358,410	508	8,484,216	6.3 %	16,701	88,342,047	
2009 ^	41	1,006,696	21	355,087	528	9,135,825	7.7 %	17,303	95,591,120	
2010 ^	24	546,752	24	325,063	528	9,357,514	2.4 %	17,723	97,571,029	

<sup>@</sup> Includes survivors of deceased retirees and post-retirement increases.

<sup>#</sup> General County and Mental Health Authority combined prior to 2001.

<sup>^</sup> Includes DROP members.

## RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS MENTAL HEALTH AUTHORITY COMPARATIVE STATEMENT

Year	Added to Rolls @ Removed from Rolls Rolls End of Year		End of Year	% Incr. in		Discounted			
Ended		Annual		Annual		Annual	_ Annual	Average	Value of
Dec. 31	No.	Pensions	No.	Pensions	No.	Pensions	Pensions	Pension	Pensions
1991	18	\$176,569	13	\$ 60,572	317	\$1,770,315	7.0 %	\$ 5,585	\$17,932,086
1992	18	154,549	10	38,900	325	1,885,964	6.5 %	5,803	18,941,923
1993	20	167,008	10	29,876	335	2,023,096	7.3 %	6,039	20,221,782
1994	24	332,827	12	61,983	347	2,293,940	13.4 %	6,611	22,722,069
1995	33	403,798	19	118,311	361	2,579,427	12.4 %	7,145	25,646,941
1996	15	196,935	1	2,458	375	2,773,904	7.5 %	7,397	27,290,541
1997	30	526,598	29	152,938	376	3,147,564	13.5 %	8,371	31,918,402
1998	30	472,504	12	83,151	394	3,536,917	12.4 %	8,977	35,901,730
1999	28	519,307	16	153,070	406	3,903,156	10.4 %	9,614	39,614,504
2000	24	478,805	20	119,209	410	4,262,752	9.2 %	10,397	43,250,186
2001 #	5	101,332	399	4,128,685	16	235,399	#	14,712	2,569,528
2002	7	101,709	1	7,687	22	329,421	39.9 %	14,974	3,659,388
2003	1	30,779	0	0	23	360,200	9.3 %	15,661	3,966,503
2004	4	68,072	0	0	27	428,272	18.9 %	15,862	4,670,991
2005	5	136,877	0	0	32	565,149	32.0 %	17,661	6,100,544
2006	4	91,144	0	0	36	656,292	16.1 %	18,230	7,110,400
2007	6	101,313	0	0	42	757,605	15.4 %	18,038	8,114,751
2008	5	120,386	0	0	47	877,991	15.9 %	18,681	9,430,082
2009	9	122,375	0	0	56	1,000,366	13.9 %	17,864	10,703,323
2010	6	114,583	1	23,990	61	1,090,959	9.1 %	17,885	11,556,282

<sup>@</sup> Includes survivors of deceased retirees and post-retirement increases.

<sup>#</sup> General County and Mental Health Authority combined prior to 2001.

## RETIREES AND BENEFICIARIES - DECEMBER 31, 2010 GENERAL COUNTY TABULATED BY ATTAINED AGE

	Age & Service		$\mathbf{D}$	Disability		Survivor		Totals
Attained		Annual		Annual		Annual		Annual
Age	No.	Benefits	No.	Benefits	No.	Benefits	No.	Benefits
40 - 44			1	\$ 5,790			1	\$ 5,790
45 - 49			1	1,114			1	1,114
50 - 54	7	\$ 184,114					7	184,114
55 - 59	24	682,818					24	682,818
60 - 64	83	1,553,551	1	7,341	1	\$ 15,657	85	1,576,549
65 - 69	50	759,239	3	26,001			53	785,240
70	10	162,150	1	5,393			11	167,543
71	11	153,379			1	16,659	12	170,038
72	9	100,985	1	2,587			10	103,572
73	3	28,843					3	28,843
74	5	81,462	1	10,702	1	36,183	7	128,347
75	5	81,274					5	81,274
76	8	73,617					8	73,617
77	8	113,900					8	113,900
78	4	40,438					4	40,438
79	6	58,691					6	58,691
80	7	92,777					7	92,777
81	10	97,173			1	7,727	11	104,900
82	2	7,021					2	7,021
83	6	30,271					6	30,271
84	7	61,209	1	2,474			8	63,683
85	4	29,543	1	8,552			5	38,095
86	3	45,315					3	45,315
87	4	30,620					4	30,620
89	2	13,402					2	13,402
90 & Over	18	68,128					18	68,128
Total	296	\$4,549,920	11	\$69,954	4	\$76,226	311	\$4,696,100

Average age at retirement: 59.6 years

Average age now: 70.7 years

## RETIREES AND BENEFICIARIES - DECEMBER 31, 2010 MENTAL HEALTH AUTHORITY TABULATED BY ATTAINED AGE

	Age & Service		D	Disability Sur		Survivor		Totals	
Attained		Annual		Annual		Annual		Annual	
Age	No.	Benefits	No.	Benefits	No.	Benefits	No.	Benefits	
50 - 54			1	\$ 23,990			1	\$ 23,990	
55 - 59	5	\$ 120,542					5	120,542	
60 - 64	22	445,412					22	445,412	
65 - 69	20	350,104					20	350,104	
70	3	22,041					3	22,041	
72	1	9,108					1	9,108	
73	2	39,150					2	39,150	
74	1	6,632					1	6,632	
76	4	60,939					4	60,939	
81	2	13,041					2	13,041	
Total	60	\$1,066,969	1	\$ 23,990			61	\$1,090,959	

Average age at retirement: 59.8 years Average age now: 66.3 years

### RETIREES AND BENEFICIARIES - DECEMBER 31, 2010 SHERIFF'S DEPARTMENT TABULATED BY ATTAINED AGE

	Age & Service		Disability		Survivor		Totals	
Attained		Annual		Annual		Annual		Annual
Age	No.	Benefits	No.	Benefits	No.	Benefits	No.	Benefits
45 - 49	1	\$ 36,870					1	\$ 36,870
50 - 54	5	212,844			1	\$ 8,939	6	221,783
55 - 59	13	461,524					13	461,524
60 - 64	20	726,529	1	\$ 15,530			21	742,059
65 - 69	20	470,308					20	470,308
71	1	24,042					1	24,042
76	3	87,213					3	87,213
77	1	22,264					1	22,264
80	2	27,282					2	27,282
81	1	4,049					1	4,049
84	2	41,870					2	41,870
88	1	19,553					1	19,553
89	1	12,285					1	12,285
Total	71	\$2,146,633	1	\$ 15,530	1	\$ 8,939	73	\$ 2,171,102

Average age at retirement: 56.1 years Average age now: 64.9 years

# RETIREES AND BENEFICIARIES - DECEMBER 31, 2010 ROAD COMMISSION TABULATED BY ATTAINED AGE

	Age & Service		I	Disability	\$	Survivor		Totals
Attained		Annual		Annual		Annual		Annual
Age	No.	Benefits	No.	Benefits	No.	Benefits	No.	Benefits
50 - 54	4	\$ 89,482					4	\$ 89,482
55 - 59	6	179,862	1	\$ 13,037	2	\$ 50,853	9	243,752
60 - 64	22	618,107	1	10,990	1	11,610	24	640,707
65 - 69	25	602,433	3	39,412	1	23,487	29	665,332
70	3	46,860					3	46,860
71	3	75,815					3	75,815
72	3	54,747					3	54,747
73	3	17,036			1	5,660	4	22,696
74	2	40,260			1	7,004	3	47,264
75	4	62,988					4	62,988
76	2	24,452					2	24,452
77	2	30,745					2	30,745
78	4	53,495					4	53,495
79	5	53,227					5	53,227
80	4	51,152					4	51,152
81	5	39,053			1	12,748	6	51,801
82	3	10,008					3	10,008
83	5	27,355					5	27,355
84	6	52,983					6	52,983
85	5	58,928			1	2,641	6	61,569
86	5	25,797					5	25,797
87	2	26,577					2	26,577
88	3	44,496					3	44,496
89	2	14,831					2	14,831
90 & Over	2	9,904			1	2,277	3	12,181
Total	130	\$2,310,593	5	\$ 63,439	9	\$116,280	144	\$2,490,312

Average age now: 57.0 years

Average age now: 73.0 years

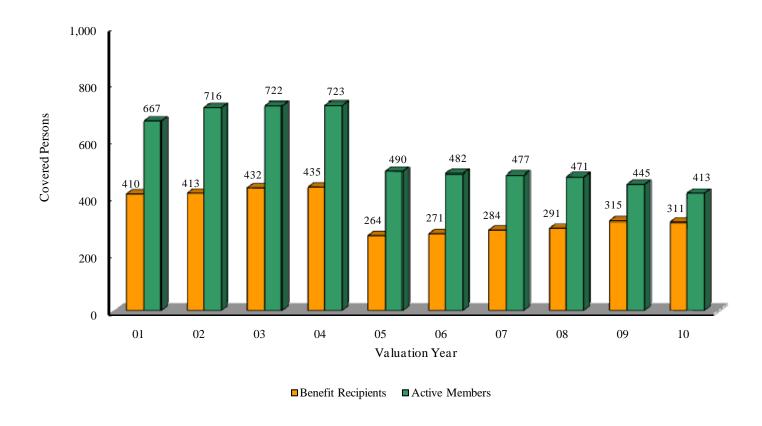
## **INACTIVE MEMBER DATA**

An inactive member is a person who has left County employment with entitlement to a pension after attainment of his voluntary retirement age.

Inactive Members December 31, 2010 Tabulated by Attained Age

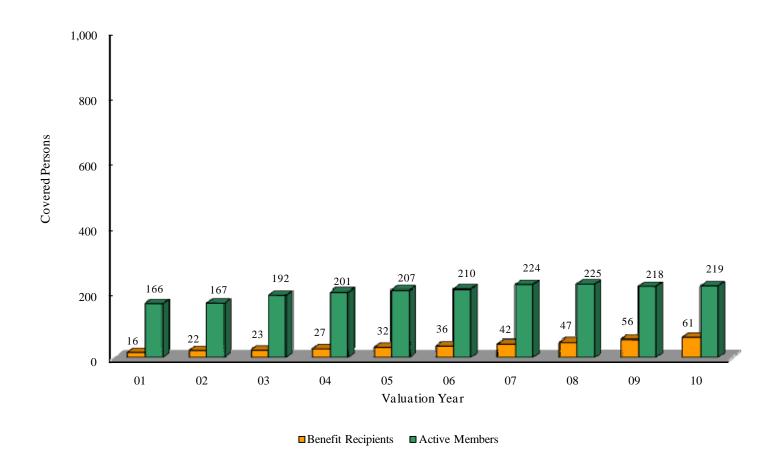
		General	Me	ental Health	Sheriff			Roads
Attained Ages	No.	Estimated Pensions	No.	Estimated Pensions	No.	Estimated Pensions	No.	Estimated Pensions
33	1	\$ 6,331						
36	1	10,879			1	\$ 8,920		
37	1	6,880			1	9,950	1	\$ 7,960
38	1	5,694	1	\$ 9,316	1	9,869		
39	1	4,603						
40	1	5,974					1	8,264
41			1	6,417				
42	1	5,808	1	8,764				
43	1	7,951						
44	2	10,739						
45	4	41,117						
46	2	17,496						
47	1	13,718	2	34,546				
48	2	25,281	4	30,335	2	51,351		
49	2	11,245	1	4,090				
50	2	11,858	2	23,753				
51	4	52,246						
52	2	10,056	2	15,072	1	4,501	1	23,204
53	2	14,364	1	6,491			1	14,694
54	6	62,188	3	42,361	2	37,263		
55	2	7,223	2	14,694	1	6,913	1	5,405
56	3	47,849			1	21,041		
57	2	35,043	3	40,366			1	18,080
58	1	12,517	2	17,586			2	16,624
59	1	7,822	4	43,354			1	18,686
60	1	5,240	2	17,460				
61	2	12,508	1	4,150				
62	1	26,048						
67			1	13,643				
69	1	20,857						
72	1	24,241						
Total	52	\$523,776	33	\$332,398	10	\$149,808	9	\$112,917

# ACTIVE MEMBERS AND BENEFIT RECIPIENTS GENERAL COUNTY

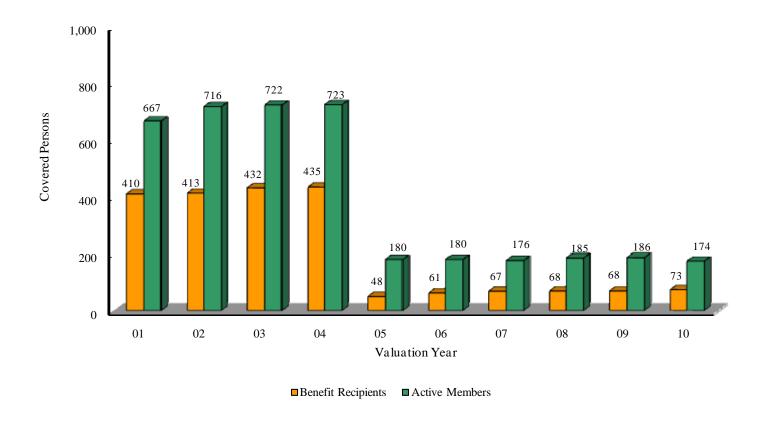


Note: General County, Sheriff's Department and Road Commission were combined prior to 2005.

# ACTIVE MEMBERS AND BENEFIT RECIPIENTS MENTAL HEALTH AUTHORITY

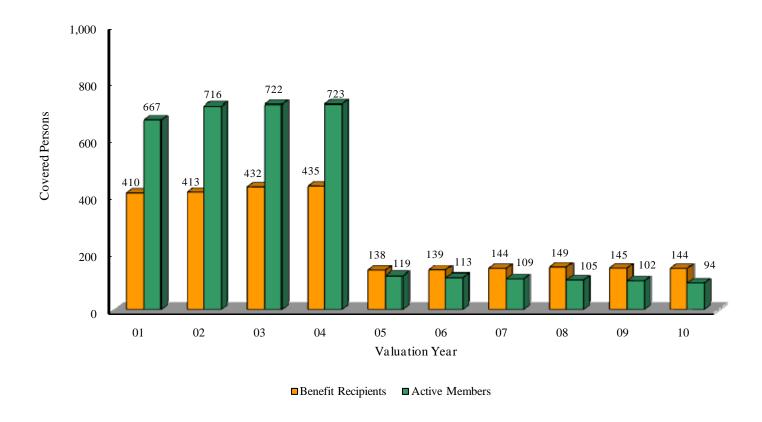


# ACTIVE MEMBERS AND BENEFIT RECIPIENTS SHERIFF'S DEPARTMENT



Note: General County, Sheriff's Department and Road Commission were combined prior to 2005.

# ACTIVE MEMBERS AND BENEFIT RECIPIENTS ROAD COMMISSION



Note: General County, Sheriff's Department and Road Commission were combined prior to 2005.

# **ACTIVE MEMBERS**

# **Comparative Schedule**

Valuation						
Date	Active	Valuation		Av	erage	
December 31	Members	Payroll	Age	Service	Pay	% Inc.
1996	783	\$27,934,157	43.6 yrs.	11.5 yrs.	\$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	31,051,407	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)%
2006	985	44,015,666	44.1	10.2	44,686	4.4 %
2007	986	44,600,186	44.2	10.2	45,233	1.2 %
2008	986	45,511,253	44.8	10.3	46,157	2.0 %
2009	951	46,078,581	45.0	10.6	48,453	5.0 %
2010	900	44,623,366	45.5	11.2	49,582	2.3 %

## **Active Members Added to and Removed from Rolls**

	Number						Active			
Year	Added		Terminations During Year							
<b>Ende d</b>	During	Normal	Disability	Died-in	Vested		End of			
December 31	Year	Retirement	Retirement	Service	Term.	Other	Year			
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		2	12	30	827			
2000	52	11	1		11	31	825			
2001	78	21	1		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			
2006	67	28		1	8	41	985			
2007	80	34	1		5	39	986			
2008	54	23	1	1	7	22	986			
2009	45	35		1	11	33	951			
2010	27	21		2	14	41	900			

# GENERAL ACTIVE MEMBERS AS OF DECEMBER 31, 2010 BY ATTAINED AGE AND YEARS OF SERVICE

Years of Service to Valuation Date Totals											
Attained									Valuation		
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Payroll		
20-24	1							1	\$ 35,956		
25-29	7	9						16	636,236		
30-34	12	26	2					40	1,849,203		
35-39	11	19	8					38	1,726,765		
40-44	7	20	18	10	4			59	2,971,203		
45-49	11	16	14	4	9	6		60	2,690,276		
50-54	10	21	14	3	14	8	5	75	3,465,029		
55-59	6	17	17	14	10	4	7	75	3,438,235		
60	1	4	2	1	3	1	1	13	648,610		
61		2	1	2	2		1	8	412,485		
62		3	1	2				6	269,534		
63	1	2	1	1	1	1		7	304,198		
64		2	1				1	4	161,767		
65		1	1					2	133,689		
66			1		1	1		3	141,701		
67				1				1	52,143		
69			1					1	39,882		
70		1		1				2	18,317		
71					1			1	5,488		
74				1				1	45,724		
Totals	67	143	82	40	45	21	15	413	\$19,046,441		

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

Age: 47.7 years Service: 12.1 years Annual Pay: \$46,117

# MENTAL HEALTH ACTIVE MEMBERS AS OF DECEMBER 31, 2010 BY ATTAINED AGE AND YEARS OF SERVICE

		Totals								
Attained									Valuation	
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Payroll	
20-24	1							1	\$ 32,124	
25-29	11	2						13	540,287	
30-34	9	12						21	1,036,425	
35-39	18	15	7	2				42	2,129,886	
40-44	15	12	5	10				42	2,216,120	
45-49	7	4	9	2	2	3		27	1,434,213	
50-54	8	8	8	3	3	6	1	37	1,967,586	
55-59	1	4	5	1	2	3	2	18	909,038	
60	3		1		2			6	295,465	
61	1	2				1		4	192,697	
62		3						3	295,577	
63			1	1				2	104,775	
64	1		1					2	110,397	
65	1							1	95,467	
Totals	76	62	37	19	9	13	3	219	\$11,360,057	

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

Age: 44.3 years Service: 9.4 years

Annual Pay: \$51,872

# SHERIFF ACTIVE MEMBERS AS OF DECEMBER 31, 2010 BY ATTAINED AGE AND YEARS OF SERVICE

		<b>Totals</b>							
Attained									Valuation
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Payroll
20-24	2							2	\$ 77,300
25-29	9	11						20	987,052
30-34	11	17	3					31	1,556,771
35-39	9	11	9	2				31	1,720,612
40-44	6	11	9	3	2			31	1,751,552
45-49	2	6	5	3	5	2		23	1,329,653
50-54		5	3	1	4	2		15	820,102
55-59	2	3	3	4	2			14	788,573
60		1			1	1		3	161,720
61					1			1	55,687
63		2		1				3	126,428
Totals	41	67	32	14	15	5		174	\$9,375,450

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

Age: 40.9 years Service: 9.7 years Annual Pay: \$53,882

# ROAD COMMISSION ACTIVE MEMBERS AS OF DECEMBER 31, 2010 BY ATTAINED AGE AND YEARS OF SERVICE

			Totals						
Attained									Valuation
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Payroll
20-24	1							1	\$ 48,120
25-29	1	2						3	141,732
30-34		2	1					3	150,652
35-39	2	5	3	3				13	664,931
40-44		4	3	4	1			12	638,714
45-49	2	4	7	7	2	1		23	1,272,623
50-54	1	2	2	3	9	1		18	938,724
55-59	1		4	2	4	2		13	656,552
60					1	2		3	119,216
61					1			1	86,533
62					1			1	62,441
63			1					1	45,323
64			1					1	8,643
70			1					1	7,214
Totals	8	19	23	19	19	6		94	\$4,841,418

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

Age: 47.2 years Service: 14.5 years Annual Pay: \$51,504

# REPORTED FINANCIAL INFORMATION AT MARKET VALUE YEAR ENDED DECEMBER 31, 2010 TOTAL SYSTEM ASSETS (INCLUDES HEALTH CARE TRUST)

### **Revenues and Disbursements**

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a.	Member contributions	\$ 2,838,298
b.	Employer contributions	8,098,607
c.	Interest and dividends	4,415,417
d.	Gain on investments (includes Medicare Part D)	23,673,258
e.	Total	\$39,025,580

#### **Disbursements:**

a. Refunds of member contributions	\$ 357,120
b. Pensions paid	10,351,447
c. Death benefits paid	63,000
d. Health benefits	6,044,047
e. Investment expenses	1,059,543
f. Administrative expenses	81,936
	\$17,957,093

#### **Reserve Increase:**

Total revenues minus total disbursements \$21,068,487

# **DERIVATION OF VALUATION ASSETS**

Year Ended December 31:	2009	2010	2011	2012	2013	2014
A. Funding Value Beginning of Year	\$213,588,184	\$214,138,042				
B. Market Value End of Year	184,214,533	205,283,020				
C. Market Value Beginning of Year	151,288,464	184,214,533				
D. Non-Investment Net Cash Flow	(5,147,690)	(5,960,645)				
E. Investment Income						
E1. Market Total: B - C - D	38,073,759	27,029,132				
E2. Amount for Immediate Recognition (7.5%)	15,826,075	15,836,829				
E3. Amount for Phased-In Recognition E1-E2	22,247,684	11,192,303				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.2 x E3	4,449,537	2,238,461				
F2. First Prior Year	(16,082,979)	4,449,537	\$ 2,238,461			
F3. Second Prior Year	(1,010,716)	(16,082,979)	4,449,537	\$ 2,238,461		
F4. Third Prior Year	2,548,715	(1,010,716)	(16,082,979)	4,449,537	\$ 2,238,461	
F5. Fourth Prior Year	(1,109,726)	2,548,713	(1,010,715)	(16,082,980)	4,449,536	\$ 2,238,459
F6. Start-up Phase In	1,076,642	0	0	0	0	0
G. Total	(10,128,527)	(7,856,984)	(10,405,696)	(9,394,982)	6,687,997	2,238,459
H. Funding Value End of Year: $A + D + E2 + G$	214,138,042	216,157,242				
I. Difference between Market & Funding Value	(29,923,509)	(10,874,222)	(468,526)	8,926,456	2,238,459	0
J. Recognized Rate of Return - Funding Value Basis	2.70%	3.78%				
K. Recognized Rate of Return - Market Value Basis	25.60%	14.91%				
Average Valuation Assets	211,014,339	211,157,720				

# SECTION D

SUMMARY OF VALUATION METHODS AND ASSUMPTIONS

#### **VALUATION METHODS**

#### **Normal Cost**

The series of contributions necessary to accumulate the present value at time of retirement of the portion of a member's pension was computed so that each contribution in the series 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.

#### **Accrued Liability**

**Retirees and Beneficiaries:** The discounted value of pensions likely to be paid retirees and beneficiaries was computed using the investment return and mortality assumptions. This amount was financed by applicable accrued assets.

Active and Inactive Members: The discounted value of benefits likely to be paid active and inactive members was computed using the assumptions outlined on the following pages. This amount was reduced by the present value of normal costs anticipated to be paid on behalf of the present active members. The unfunded accrued liability (difference between the accrued liability and valuation assets) was amortized over a period of years.

#### **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.

#### 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 D-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). 2.50% per year in excess of pay inflation. If pay inflation matches the assumption of 5.00%, 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 E	Inded Decei	mber 31		5 Year
	2010	2009	2008	2007	2006	^ Average*
Rate of Investment Return	3.8 %	2.7 %	0.7 %	8.3 %	8.8 %	4.8 %
Average Increase in Pay	2.5 %	2.0 %	2.9 %	2.8 %	5.9 %	3.2 %
Real Rate of Return	1.3 %	0.7 %	(2.2)%	5.5 %	2.9 %	1.6 %

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

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.

**Annual Rate of Pay Increase for Sample Ages** 

Sample		Mei	it & Longe	vity		Total	
Service	Base	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%

<sup>\*</sup> Includes the Mental Health Authority.

<sup>\*</sup> Compound rate of increase.

For Mental Health, Road Commission, and Sheriff, if the number of active members remains constant, the total active member payroll is expected to increase 5.00% annually, the base portion of the individual pay increase assumptions. This increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities for Mental Health and Road Commission.

Average changes actually experienced in pay have been as follows:

	Year E	Ended Dece	mber 31		5 Year
2010	2009	2008	2007	2006	Average*
2.5 %	2.0 %	2.9 %	2.8 %	5.9 %	3.2 %

<sup>\*</sup> Compound rate of increase.

Active Member Group Size: The number of active members was assumed to remain constant for all groups except General County.

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

		Single Life Ret	tirement Value	S
Sample	Present	Value of \$1	Futu	re Life
Attained	Month	ly for Life	Expectar	ıcy (years)
Ages	Men	Women	Men	Women
50	\$140.93	\$147.30	30.69	34.89
55	132.64	140.64	26.15	30.17
60	122.40	132.01	21.83	25.59
65	110.53	121.65	17.84	21.28
70	97.62	109.73	14.29	17.30
75	83.48	95.52	11.12	13.60
80	68.62	79.89	8.37	10.31

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.

Administration Expense: 0.20% of payroll.

*Effect of Lump Sum Payments:* Final Average Compensation was increased by 4% for certain groups of employees to reflect lump sum payments in FAC.

**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.

		% of	Active Mem	ıbers
Sample	Years of	Separati	ng within Ne	xt Year
Ages	Service	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%

<sup>\*</sup> Includes Mental Health Authority.

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	Percent Becoming Disabled
Ages	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.

Percent of
Active Members Retiring
within Next Year

		•				
Retirement	General	General				
Ages	Original*	Modified*	Road	Sheriff	Service	Sheriff
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%		

<sup>\*</sup> Includes Mental Health Authority.

A member of the General, Mental Health Authority, or Road Divisions was understood to be eligible for retirement after attaining age 60 with 8 years of service or after 25 years of service when age plus service totals 80 or more points. A member of the Sheriff's Department was understood to be eligible for retirement upon completion of 25 years of service regardless of age or at age 60 with 8 years of service.

#### MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

**Marriage Assumption:** 100% of males and 100% of females are assumed to be married for

purposes of death-in-service benefits. Male spouses are assumed

to be three years older than female spouses.

**Pay Increase Timing:** Six months after the valuation date.

**Decrement Timing:** Decrements of all other types are assumed to occur mid-year.

**Eligibility Testing:** Eligibility for benefits is determined based upon the age nearest

birthday and service nearest whole year on the date the decrement

is assumed to occur.

**Benefit Service:** Exact fractional service is used to determine the amount of benefit

payable.

**Decrement Relativity:** Decrement rates are used directly from the experience study,

without adjustment for multiple decrement table effects.

**Decrement Operation:** Disability and death-in-service decrements do not operate during

the first 5 years of service. Disability and withdrawal do not

operate during retirement eligibility.

**Normal Form of Benefit:** The assumed normal form of benefit is the straight life form.

**Incidence of Contributions:** Contributions are assumed to be received continuously throughout

the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the

funding of new entrant benefits.

#### **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.

**Pension Benefit Obligation**. A standardized disclosure measure of the present value of pension benefits, adjusted for the effects of projected salary increases, estimated to be payable in the future as a result of employee service to date.

**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 market value plus a portion of unrealized appreciation or depreciation.

# **SECTION E**

DISCLOSURE MATERIAL IN CONFORMANCE WITH STATEMENT NO. 25 OF THE GOVERNMENTAL ACCOUNTING STANDARDS BOARD

This information is presented in draft form for review by the System's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the System's financial statements.

## GASB STATEMENT NO. 25 REQUIRED SUPPLEMENTARY INFORMATION

### **Schedule of Funding Progress**

		Actuarial				<b>UAAL</b> as
	Actuarial	Accrued	Unfunded			a % of
Actuarial	Value of	Liability (AAL)	AAL	<b>Funded</b>	Covered	Covered
Valuation	Assets	Entry Age	(UAAL)	Ratio	Payroll	Payroll
Date	(a)	<b>(b)</b>	( <b>b - a</b> )	(a / b)	(c)	[(b - a) / c]
12/31/01@	\$151,153,871	\$121,225,557	\$(29,928,314)	124.7 %	\$32,744,255	(91.4)%
12/31/02@	148,949,978	129,997,328	(18,952,650)	114.6 %	35,716,619	(53.1)%
12/31/03@	146,556,581	139,409,729	(7,146,852)	105.1 %	38,047,803	(18.8)%
12/31/04@	144,411,118	149,377,188	4,966,070	96.7 %	39,609,752	12.5 %
12/31/05@#	153,016,205	159,090,379	6,074,174	96.2 %	42,622,922	14.3 %
12/31/06@	165,525,909	171,374,116	5,848,207	96.6 %	44,015,666	13.3 %
12/31/07@	176,628,933	181,439,996	4,811,063	97.3 %	44,600,186	10.8 %
12/31/08@	175,091,222	191,638,371	16,547,149	91.4 %	45,511,253	36.4 %
12/31/09@	176,924,494	203,602,461	26,677,967	86.9 %	46,078,581	57.9 %
12/31/10@	180,051,710	209,379,385	29,327,675	86.0 %	44,623,366	65.7 %

<sup>@</sup> Plan amended.

Actuarial Cost Method

Individual Entry Age Normal Cost

Asset Valuation Method

Market Value with 5 year Smoothing of Gains and Losses

Principal Actuarial Assumptions (last revised for the 12/31/2005 valuation):

Net Investment Return

7.5%

**Projected Salary Increases** 

5.0% pay inflation plus merit and longevity

Cost-of-Living Adjustments

None

<sup>#</sup> Certain assumptions revised.

## GASB STATEMENT NO. 25 REQUIRED SUPPLEMENTARY INFORMATION

	Fiscal	
Valuation	Year	Annual
Date	Ended	Required
December 31	December 31	Contribution
1995	1997	\$1,525,221
1996	1998	1,370,572
1997	1999	773,180
1998	2000	0
1999	2001	0
2000	2002	0
2001	2003	0
2002	2004	1,257,225
2003	2005	2,774,069
2004	2006	4,148,626
2005 2006	2007 2008	4,379,779 4,600,352
2007	2009	4,603,552
2008	2010	5,546,567
2009	2011	6,750,150

## **Schedule of Employer Contributions**

Actuarial Cost Method Individual Entry Age Normal Cost

Amortization Method Mental Health and Road Commission -

Level percent of payroll General County (including Sheriff) -

Level dollar

Remaining Amortization Period as of December 31, 2010:

All Liabilities 20 years, rolling (open) Mental Health and

Road Commission

19 years, declining (closed) General

County

Asset Valuation Method Market Value with 5 Year Smoothing of

Gains and Losses

Principal Actuarial Assumptions (last revised for the

12/31/2005 valuation):

Net Investment Return 7.5%

Projected Salary Increases 5.0% pay inflation plus merit and longevity

Cost-of-Living Adjustments None

# **APPENDIX**

SUMMARY OF BENEFIT PROVISIONS BY DIVISION

# ST. CLAIR COUNTY SUMMARY OF BENEFIT PROVISIONS 12/31/2010

		Group					Lump Sums	Years in
Group	M or O	Code	Category	Eligibility	Multiplier	Maximum	in FAC	FAC period
Board Members Modified	M	13	G	Rule of 80, 60 & 8	Graded	75.0%		3
Commissioners Modified	M	14	G	Rule of 80, 60 & 8	Graded	75.0%		3
Elected Officials Modified	M	15	G	Rule of 80, 60 & 8	Graded	75.0%		3
Elected Officials Original	О	16	G	Rule of 80, 60 & 8	2%	75.0%		3
Mental Health Modified	M	17	MH	Rule of 80, 60 & 8	Graded	75.0%		5
Mental Health Original	О	18	MH	Rule of 80, 60 & 8	2%	64.0%		5
Road Commission Original	О	19	RC	Rule of 80, 60 & 8	2%	64.0%	Y	3
Road Commission Modified	M	20	RC	Rule of 80, 60 & 8	Graded	75.0%	Y	3
Sheriff Deputies Original	О	21	G	25 & out, 60 & 8	2%	64.0%	Y	3
Sheriff Deputies Modified	M	22	G	25 & out, 60 & 8	Graded	75.0%	Y	3
Corr. Ofcrs. & Support Staff Original	О	23	G	25 & out, 60 & 8	2%	64.0%	Y	3
Corr. Ofcrs. & Support Staff Modified	M	24	G	25 & out, 60 & 8	Graded	75.0%	Y	3
Corrections Officers Supervisors Modified	M	25	G	25 & out, 60 & 8	Graded	75.0%	Y	3
Corrections Officers Supervisors Original	0	26	G	25 & out, 60 & 8	2%	64.0%	Y	3
Sheriff Deputies Supervisors Modified	M	27	G	25 & out, 60 & 8	Graded	75%*	Y	3
Friend of the Court Modified	M	30	G	Rule of 80, 60 & 8	Graded	75.0%		5
Friend of the Court Original	О	31	G	Rule of 80, 60 & 8	2%	64.0%		5
Friend of Court Supervisors Modified	M	32	G	Rule of 80, 60 & 8	Graded	75%*	Y	3
Friend of Court Supervisors Original	О	33	G	Rule of 80, 60 & 8	2%	64.0%	Y	3
Judges Modified	M	35	G	Rule of 80, 60 & 8	Graded	75.0%		3
CANUE Non-Affiliated Modified	M	36	G	Rule of 80, 60 & 8	Graded	75.0%		3
CANUE Non-Affiliated Original	0	37	G	Rule of 80, 60 & 8	2%	75.0%		3
District Court AFSCME Modified	M	38	G	Rule of 80, 60 & 8	Graded	75%**		3
District Court AFSCME Original	0	39	G	Rule of 80, 60 & 8	2%	64.0%		3
Juvenile Center Teamsters Modified	M	40	G	Rule of 80, 60 & 8	Graded	75.0%	Y	3
Juvenile Center Teamsters Original	0	41	G	Rule of 80, 60 & 8	2%	64.0%	Y	3
Prosecuting Attorneys Modified	M	42	G	Rule of 80, 60 & 8	Graded	69.6%	•	3
Prosecuting Attorneys Original	0	43	G	Rule of 80, 60 & 8	2%	64.0%		3
Probate Clerical Modified	M	44	G	Rule of 80, 60 & 8	Graded	75%**		3
Probate Court Juvenile Counselors Modified	M	46	G	Rule of 80, 60 & 8	Graded	75.0%		3
Probate Court Juvenile Counselors Original	0	47	G	Rule of 80, 60 & 8	2%	64.0%		3
Probate Court Supervisors Modified	M	48	G	Rule of 80, 60 & 8	Graded	75.0%	Y	3
Probate Court Supervisors Original	0	49	G	Rule of 80, 60 & 8	2%	64.0%	Y	3
Public Service Employees Modified	M	50	G	Rule of 80, 60 & 8	Graded	75%**	•	3
Public Service Employees Original	0	51	G	Rule of 80, 60 & 8	2%	64.0%		3
Public Health Nurses Modified	M	52	G	Rule of 80, 60 & 8	Graded	75.0%		3
Public Health Nurses Original	O	53	G	Rule of 80, 60 & 8	2%	64.0%		3
Board Members Original	0	57	G	Rule of 80, 60 & 8	2%	75.0%		3
Human Resources Clerks and Specialists Modified	M	58	G	Rule of 80, 60 & 8	Graded	75.0%		3
Human Resources Clerks and Specialists Modified	O	59	G	Rule of 80, 60 & 8	2%	75.0%		3
Public Health Nurse Supervisors Modified	M	60	G	Rule of 80, 60 & 8	Graded	75.0%		3
Public Health Nurse Supervisors Original	O	61	G	Rule of 80, 60 & 8	2%	64.0%		3
RCE - Original	0	63	G	Rule of 80, 60 & 8	2%	75.0%		3
	M	64	G		Graded		Y	3
Juvenile Center Shift Supervisors Modified		65	G	Rule of 80, 60 & 8	2%	75.0%	Y	3
Juvenile Center Shift Supervisors Original	0 M			Rule of 80, 60 & 8		64.0% 75%***	Y	3
Bailiff and Court Security Officers Assoc. Modified	M	66	G	Rule of 80, 60 & 8	Graded			-
Bailiff and Court Security Officers Assoc. Original	0	67	G	Rule of 80, 60 & 8	2%	64.0%	Y	3
Communication Officers POAM Modified	M	68	G	25 & out, 60 & 8	Graded	75.0%	Y	3
Communication Officers POAM Original	0	69	G	25 & out, 60 & 8	2%	64.0%	Y	3

<sup>\*</sup>Employees hired after 1/1/07 have a 70% maximum.

<sup>\*\*</sup>Employees hired after 7/1/06 have a 70% maximum.
\*\*\*Employees hired after 1/1/08 have a 70% maximum.