Gabriel Roeder Smith & Company
Consultants & Actuaries

MONROE COUNTY RETIREE HEALTH PLAN

TWENTY-FIRST ANNUAL ACTUARIAL VALUATION

DECEMBER 31, 2011

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August 17, 2012

The County of Monroe
Monroe, Michigan

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 County of Monroe Retiree Health Plan.

The date of the valuation was December 31, 2011.

The valuation was based upon information, furnished by the County, concerning retiree health benefits, financial transactions, and individual members, terminated members, retirees and beneficiaries. Data was checked for internal consistency, but was not otherwise audited.

An Executive Summary is included as Section A.

Valuation results are contained in Section B.

Cash Flow Projection results are displayed in Section C.

Sensitivity Test results are presented in Section D.

Valuation data 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 benefit plans. The valuation uses generally accepted actuarial principles and is in accordance with 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.

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

The undersigned are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

Mark Buis

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Actuary

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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 above. This report or the financial results contained herein may not be used for any purpose, other than described above.

The signing actuaries are independent of the plan sponsor.

The valuation was based upon information furnished by the County, concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. Claims and premium information was provided by the health care providers. 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 and the health care providers.

The developed findings included in this report consider data or other information through December 31, 2011.

Contents

SECTION A

EXECUTIVE SUMMARY

1. Computed Total Contributions and Estimated Pay-as-you-go Costs - Fiscal Year Beginning January 1, 2013

The computed total contributions for each division are shown below:

Division	Computed Total Contributions
General County - Billable	$1,297,226
General County - Non-Billable	3,471,081
Sheriff's Office - Billable	930,661
Sheriff's Office - Non-Billable	2,404,819
Dispatchers	149,029
County Sub-Total	8,252,816
County Agency	615,902
All Combined	**$8,868,718**

Please note these are the total contributions before adjustment for member contributions. The member contributions need to be subtracted to obtain the net employer contribution. Based on information provided by the County, the expected member contributions will be $402,398 for the fiscal year beginning January 1, 2013.

The estimated pay-as-you-go costs for the fiscal year beginning January 1, 2013 are $5,017,900.

2. Contribution Comparison

The contribution amounts for retiree health benefits from this valuation are compared below to the contributions from the 2010 valuation.

	Computed Total Contributions	
Division	2010	2011
General County - Billable	$1,374,952	$1,297,226
General County - Non-Billable	3,557,282	3,471,081
Sheriff's Office - Billable	959,000	930,661
Sheriff's Office - Non-Billable	2,367,667	2,404,819
Dispatchers	174,371	149,029
County Sub-Total	8,433,272	8,252,816
County Agency	654,134	615,902
All Combined	9,087,406	8,868,718

3. Reasons for Change

There are three general reasons why contributions 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 2011 between the Plan's actual experience and what the assumptions predicted.

The health care trend rates were updated to better reflect future anticipated experience. There were no other changes in assumptions. The actuarial assumptions are recommended by the Actuary based on the results of an experience study and are adopted by the Retirement Board. The actuarial assumptions used in the valuation of the Retiree Health Plan, except for the investment return assumption, are the same as those used in the valuation of the Retirement System.

This report shows all results as dollar amounts, and not as a percent-of-payroll because retiree health benefits are not pay related benefits.

4. 2011 Plan Experience

The effect of Plan experience on the unfunded accrued liability was favorable, with a net experience gain of $4,580,916.

Investment gain/(loss)	$ (1,595,615)
Other gain/(loss)	6,176,531
Gain (Loss) from all causes	$ 4,580,916

The investment loss of $1,595,615 is attributable to continued recognition of unfavorable investment performance from 2008 and 2011. The return on the smoothed value of assets for the 2011 calendar year was 1.34%, compared to the long term expected return of 7.0%.

The other (non-investment) gain of $6,176,531 during calendar year 2011 was attributable to a decrease in expected premiums since the prior valuation.

5. Context

Contributing on the basis of valuation results allows the employer to somewhat level out the cost of retiree health benefits. In addition, this practice provides benefit security to plan members. ***However, due to the volatility of health care inflation and utilization, the results of the retiree health valuation are likely to fluctuate more from year to year than the results of the Retirement System valuation***.

Currently there is no federal or state law that requires pre-funding the retiree health benefits. If the County chooses to contribute amounts less than those recommended by the actuarial valuation, absent any favorable experience, future County contributions will increase to make up for the shortfall. If the County contributes less than the recommended amounts over an extended period of time, the long term investment return assumption of 7.0% may no longer be reasonable. According to GASB Statements No. 45 and No. 43, a long term investment return assumption can be used if the plan sponsor contributes the recommended amounts to an irrevocable trust, and the trust has an investment policy that could generate this long term return. This is because the trust is expected to pay the retiree health benefits. If the plan sponsor contributes less than the recommended amount, the following two situations can arise:

- If the plan sponsor contributes less than the full amount, but more than the pay-as-you-go cost, the benefits will be paid from both the trust and the plan sponsor's general assets. In that case GASB requires the use of a blended interest rate.
- If the plan sponsor contributes the pay-as-you-go cost, and there are no assets in a trust, the retiree health benefits will be paid from the plan sponsor's general assets. In that case, GASB requires the use of an interest rate that is representative of the return that can be earned by the plan sponsor's general assets.

We suggest that the County discuss this issue with the auditors of the Plan.

6. Comments

Comment A: The results shown in this report comply with the requirements of GASB Statements No. 43 and No. 45. Please note that Statements No. 43 and No. 45 are accounting standards, not funding requirements.

Comment B: Employees of the Road Commission, the Library, and the Mental Health Authority have been excluded from this valuation as they do not participate in the County's Retiree Health Plan.

Comment C: At the County’s request, the contribution rates for the General County and Sheriff’s Office groups have been calculated separately for the Billable and Non-Billable groups. The County provided the billable/non-billable status for each active and retired member in the valuation. Assets are tracked separately, based on actual contributions made by the County and the members as well as benefit payments being paid to the retirees of each group.

Comment D: The General County (Billable and Non-Billable), County Agency and Dispatch groups are closed to new hires (closure dates described in section E). The Sheriff’s Office (Billable and Non-Billable) is partially closed as of January 1, 2011. The Annual Required Contributions were calculated based on methods that are appropriate for closed groups. The method is described below:

- The normal cost is projected based on a closed population and will decrease as active members retire. The unfunded accrued liability (UAL) is amortized as a level dollar over 20 years. This means if all assumptions are met, the annual dollar amortization payment is expected to remain level. If the current policy of decreasing the amortization period by one year each year continues, the UAL is expected to be paid off in 20 years. Thereafter, if there are any active members remaining in these groups, the employer contribution will be the employer normal cost only, 20 years from now.

SECTION B

VALUATION RESULTS

Financial Objective

The financial objective of the Retiree Health Plan is to establish and receive contributions, and to accumulate enough assets to pay the benefits when due.

Your annual actuarial valuations determine how well the objective is being met.

Contribution Amounts

The retiree health benefits are supported by contributions from the County and the members and by the investment income earned on Plan assets. The County provides an actuarially determined contribution needed to meet the financial objective.

Employer 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 plan costs allocated to the current year by the valuation method described in Section F. The unfunded accrued liability is the portion of Plan costs not covered by present plan assets and future normal costs.

The contribution requirements for retiree health benefits for the fiscal year beginning January 1, 2013 are presented on page B-2.

Total Contributions to Provide Retiree Health Benefits
Fiscal Year Beginning January 1, 2013

	General County		Sheriff's Office				County	
Contributions for	**Billable**	**Non-Billable**	**Billable**	**Non-Billable**	**Dispatchers**	**Subtotal**	**Agency**	**Grand Total**
Total Normal Cost of Benefits	$ 192,556	$ 313,235	$ 306,025	$ 460,245	$ 65,995	$ 1,338,056	$ 68,854	$ 1,406,910
Unfunded Accrued Liability	$1,104,670	$3,157,846	$624,636	$1,944,574	$83,034	$6,914,760	$547,048	$ 7,461,808
Computed Employer Contribution	**$1,297,226**	**$3,471,081**	**$930,661**	**$2,404,819**	**$149,029**	**$8,252,816**	**$615,902**	**$8,868,718**

Unfunded actuarial accrued liabilities were financed as a level dollar amount over a period of 20 years.

Page B-3 displays the unfunded accrued liabilities that are amortized by the contribution amounts shown above.

Note: These are the total contributions before adjustment for member contributions. The member contributions need to be subtracted to obtain the net employer contribution. Based on information provided by the County, the expected member contributions will be $402,398 for the fiscal year beginning January 1, 2013.

Determination of Unfunded Accrued Liability
December 31, 2011

	General County		Sheriff's Office				County	
	Billable	**Non-Billable**	**Billable**	**Non-Billable**	**Dispatchers**	**Subtotal**	**Agency**	**Combined**
A. Accrued Liability								
1. For retirees and beneficiaries								
a. Health benefits	$10,446,925	$33,120,851	$4,316,885	$20,093,144	$1,483,354	$69,461,159	$5,447,884	$74,909,043
b. Reserves	--	--	--	--	--	--	--	--
c. Totals	10,446,925	33,120,851	4,316,885	20,093,144	1,483,354	69,461,159	5,447,884	74,909,043
2. For vested terminated members	0	0	0	0	0	0	0	0
3. For present active members								
a. Value of expected future benefit payments	7,487,759	11,229,439	9,130,106	13,236,510	1,812,564	42,896,378	2,328,711	45,225,089
b. Value of future normal costs	1,651,188	2,546,116	3,428,404	4,878,948	772,198	13,276,854	665,415	13,942,269
c. Active member liability: (a) - (b)	5,836,571	8,683,323	5,701,702	8,357,562	1,040,366	29,619,524	1,663,296	31,282,820
4. Total	16,283,496	41,804,174	10,018,587	28,450,706	2,523,720	99,080,683	7,111,180	106,191,863
B. Valuation Assets	4,967,730	9,456,548	3,620,085	8,531,323	1,673,158	28,248,844	1,507,456	29,756,300
C. Unfunded Accrued Liability: (A.4) - (B)	11,315,766	32,347,626	6,398,502	19,919,383	850,562	70,831,839	5,603,724	76,435,563
D. Funded Ratio: (B) ÷ (A.4)	30.5%	22.6%	36.1%	30.0%	66.3%	28.5%	21.2%	28.0%

Retiree Premium Rate Development

Premium rates for Monroe County were developed separately for the self-insured and the fully-insured portions and then blended to create one set of premium rates.

Initial self-insured premium rates were developed separately for each class (pre-65 and post-65). The rates were calculated by using claims and exposure data for the period from January 2009 to December 2011 adjusted for catastrophic claims, plus the load for administration, network access fee, and stop loss premiums. The self-insured Medical and prescription drug data were provided by the County. The Medical data was analyzed for the pre-65 and post-65 participants separately since Medicare is available for the post-65 participants and has a significant impact on the claim experience. Furthermore, since the prescription drug claims and the medical claims exhibit different trends and claim payment patterns, we analyzed these claims separately as well.

Initial premium rates were developed for the two classes of retirees (pre-65 and post-65). The fully-insured rates provided by the County were utilized to determine the appropriate premium rates. For the pre-65 and post-65 retirees, the fully-insured premium rate is used as the basis of the initial per capita cost without adjustments since the rate reflects the demographics of each group.

Under the healthcare reform bill, government payments to Medicare Advantage plans will be cut by $132 billion over 10 years. (Those plans currently get somewhat more per person from the government than traditional Medicare does.) The changes will be phased in over three years -- payment rates will be frozen in 2011 and then gradually reduced. Because Medicare payments are calculated on a county-by-county basis, this will vary by area. Premium increases are expected to rise more quickly than healthcare inflation and some plans may reduce the extra benefits they provide as they adjust to lower payments from the government. As a result, we loaded the post-65 premiums by 10.3%.

Age graded and sex distinct premiums are utilized in this valuation. The premiums developed by the preceding process 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 specific age/sex combination. The age/sex specific premiums more accurately reflect the health care utilization and cost at that age.

For the current active employees, different retiree health benefit options are available upon retirement. We have developed separate premium rates for future retirees to reflect the benefit differences.

Future Retirees

For Retirees Not Eligible For Medicare

Age	Male	Female
40	$ 306.28	$ 479.86
60	924.41	888.56
64	1,075.96	997.31

For Retirees Eligible For Medicare

Age	Male	Female
65	$ 414.61	$ 381.80
75	530.94	471.20
85	592.04	519.78

Retiree Premium Rate Development

Current Retirees

For Retirees Not Eligible For Medicare

Age	Male	Female
40	$ 315.98	$ 495.05
60	953.67	916.69
64	1,110.03	1,028.89

For Retirees Eligible For Medicare

Age	Male	Female
65	$ 442.11	$ 407.13
75	566.16	502.45
85	631.31	554.26

The dental and vision claims premiums were not “age graded” for this valuation, since neither dental nor vision claims vary significantly by age. The monthly dental premiums used for this valuation were $15.25 for the first person and $13.46 for the second person. The monthly vision premiums used for this valuation were $2.89 for the first person and $4.05 for the second person.

The premium rates used for determining the spouse contributions are:

Future Retirees

Age	Spouse
Pre-65	$ 774.19
Post-65	517.79

Current Retirees

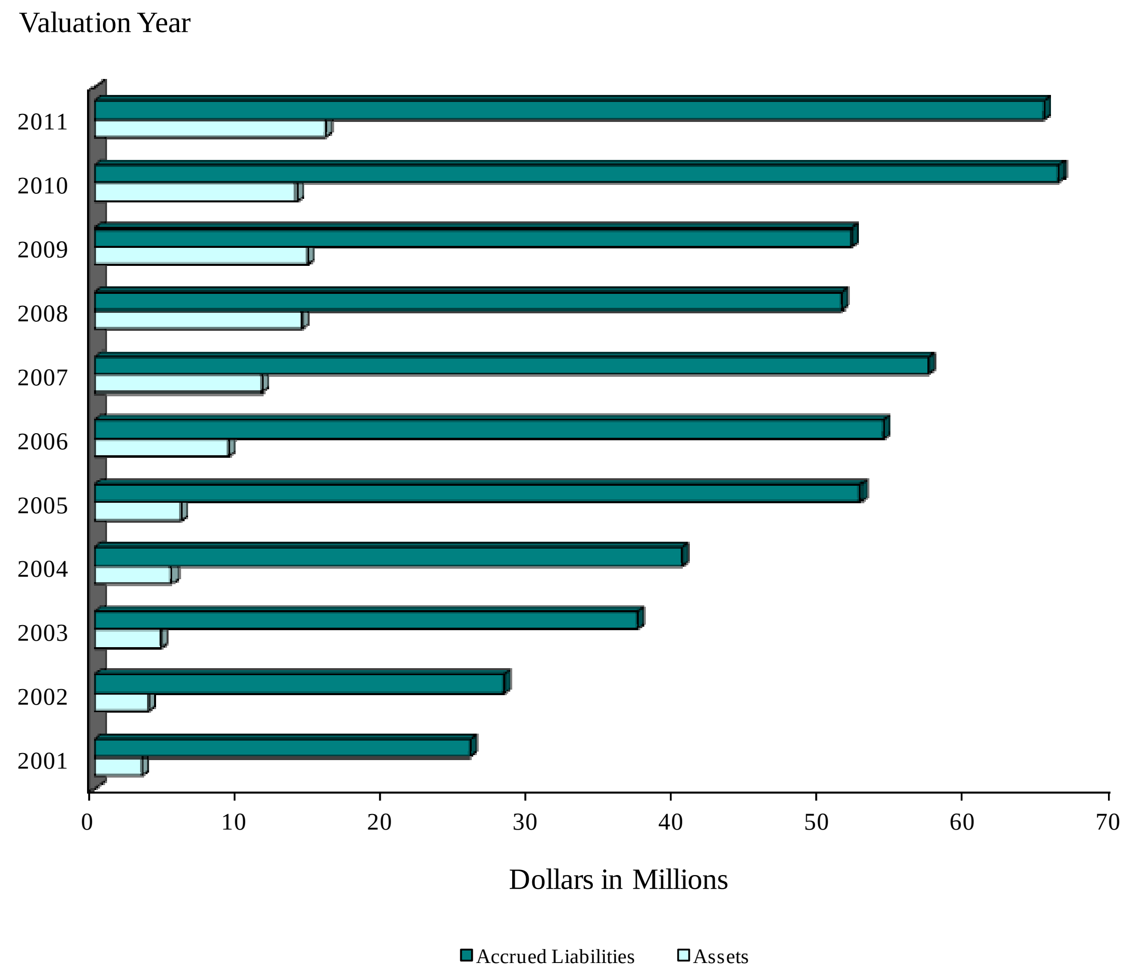
Age	Spouse
Pre-65	$ 799.80
Post-65	553.54

The undersigned is a Member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to certify the per capita retiree health care rates shown above.

John Mallows

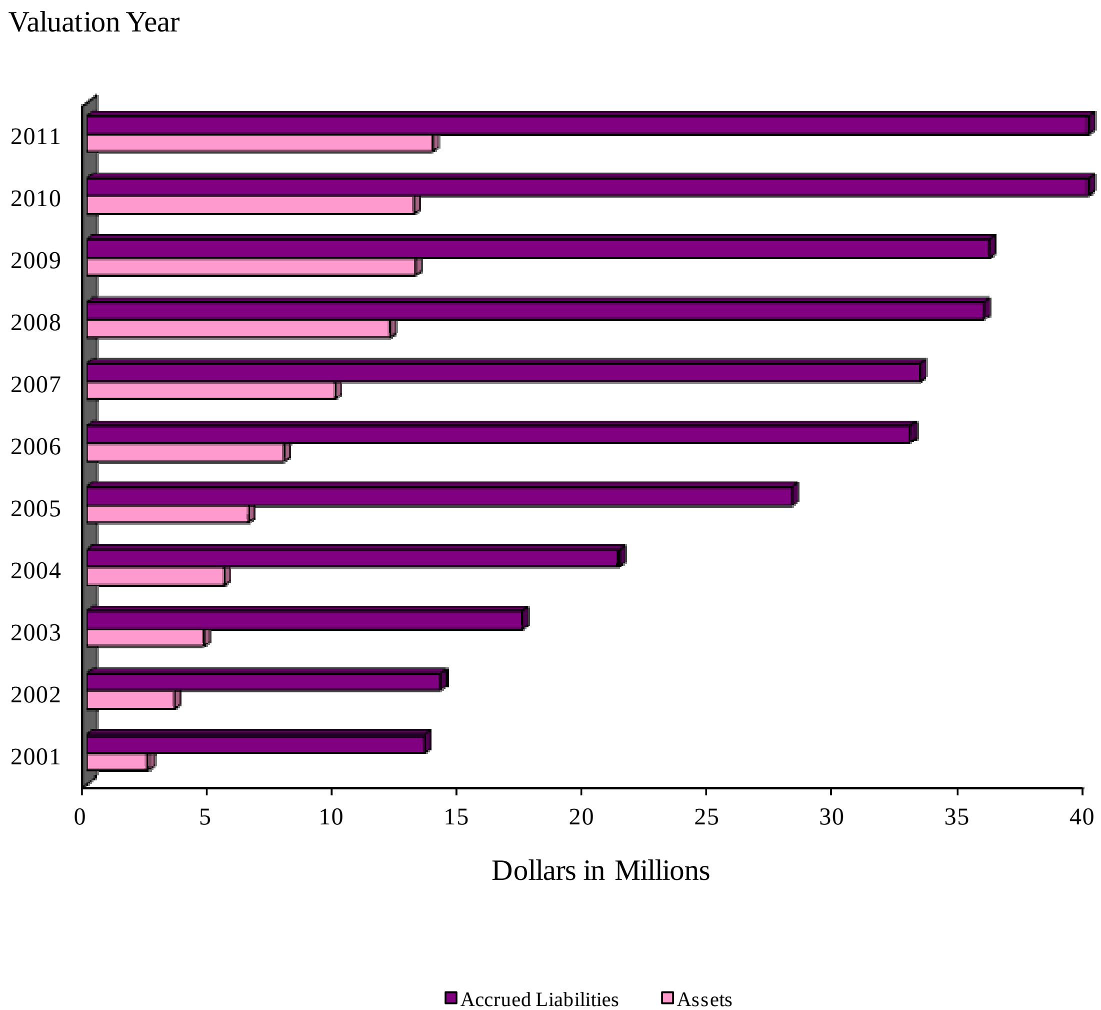
John Mallows, FSA, MAAA

Assets & Accrued Liabilities
General & County Agency



2001 assets equaled 12.7% of accrued liabilities.
2011 assets equaled 24.4% of accrued liabilities.

Assets & Accrued Liabilities
Sheriff's Office & Dispatchers



2001 assets equaled 18.1% of accrued liabilities.

2011 assets equaled 33.7% of accrued liabilities.

Computed Contributions Historical Schedule

Valuation Date December 31,	Active Members	Valuation Payroll	Employer Contributions							
			General		Sheriff's Office		Central		County	Grand
			Billable	Non-Billable	Billable	Non-Billable	Dispatch	Subtotal	Agency	Total
2002*	626	$24,653,113	$ 1,949,884		$1,036,036		$ 107,665	$ 3,093,585	$ 155,435	$3,249,020
2003*	636	25,430,961	2,583,857		1,313,195		120,657	4,017,709	189,194	4,206,903
2004*	615	25,379,284	2,745,801		1,515,359		121,243	4,382,403	234,236	4,616,639
2005*	598	25,441,192	3,810,929		2,027,592		185,301	6,023,822	288,074	6,311,896
2006*	580	25,270,126	4,684,870		2,333,636		278,372	7,296,878	330,761	7,627,639
2007*	560	26,237,483	4,744,783		2,343,474		242,990	7,331,247	456,908	7,788,155
2008*	546	26,551,067	3,808,955		2,393,160		225,220	6,427,335	523,476	6,950,811
2009*#	464	23,660,370	1,044,781	$ 2,678,405	647,703	$ 1,706,831	206,662	6,284,382	468,331	6,752,713
2010*#	371	19,091,364	1,374,952	3,557,282	959,000	2,367,667	174,371	8,433,272	654,134	9,087,406
2011*#	363	19,719,996	1,297,226	3,471,081	930,661	2,404,819	149,029	8,252,816	615,902	8,868,718

* *The split between the member and employer contribution will be determined by the County.*

\# *Beginning with the 2009 valuation, the results for General County and Sheriff's Office were split between "Billable" and "Non-Billable" groups.*

SECTION C

CASH FLOW PROJECTIONS

Cash Flow Projections - Explanation

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 these reasons for increased disbursements apply, as they do for the Monroe County Retiree Health Plan, it is reasonable to expect that the amount of the Plan's annual disbursements for retiree health care will increase for years to come.

We have projected the Plan’s disbursements over the next 40 years. These are closed group projections, assuming no new entrants. The projections are based upon the same assumptions as were used for the valuation of health costs. The schedule on the following page displays the anticipated health disbursements in total only.

The computed contribution rate remains higher than disbursements during the projection period because the contribution rate is funding the accrued liability. Once the liability has been funded, the contribution requirements decrease to the level of the normal cost.

40-Year Projection of Benefit Disbursements and Payroll
In Total

	Retiree Health Payments on Behalf of Present			
Year	**Retirees**	**Employees**	**Total**	**Covered Payroll**
2012	$4,973,500	$ 44,400	$ 5,017,900	$ 20,171,400
2013	5,301,400	145,400	5,446,800	20,086,100
2014	5,539,200	265,100	5,804,300	19,991,200
2015	5,762,800	420,000	6,182,800	19,798,200
2016	5,950,800	591,900	6,542,700	19,519,600
2017	6,001,000	786,100	6,787,100	19,274,100
2018	6,018,100	997,600	7,015,700	19,048,500
2019	6,066,500	1,208,600	7,275,100	18,764,500
2020	6,120,600	1,517,500	7,638,100	18,234,000
2021	6,168,800	1,875,900	8,044,700	17,559,500
2022	6,040,000	2,202,000	8,242,000	16,935,700
2023	6,044,900	2,550,600	8,595,500	16,344,100
2024	5,969,700	2,893,600	8,863,300	15,682,900
2025	5,855,800	3,279,500	9,135,300	14,838,900
2026	5,790,100	3,738,000	9,528,100	13,852,100
2027	5,749,100	4,202,500	9,951,600	12,851,600
2028	5,670,100	4,654,400	10,324,500	11,886,200
2029	5,595,800	5,108,400	10,704,200	10,814,700
2030	5,515,100	5,560,000	11,075,100	9,713,500
2031	5,458,400	5,951,900	11,410,300	8,754,800
2032	5,405,300	6,356,700	11,762,000	7,708,000
2033	5,302,200	6,810,400	12,112,600	6,597,100
2034	5,181,300	7,165,200	12,346,500	5,675,900
2035	5,020,700	7,459,900	12,480,600	4,799,600
2036	4,875,500	7,839,900	12,715,400	3,931,500
2037	4,707,700	8,173,800	12,881,500	3,233,100
2038	4,518,700	8,392,500	12,911,200	2,637,000
2039	4,310,200	8,551,100	12,861,300	2,172,400
2040	4,084,300	8,633,000	12,717,300	1,849,900
2041	3,844,000	8,632,200	12,476,200	1,524,500
2042	3,592,600	8,615,600	12,208,200	1,249,200
2043	3,333,400	8,575,500	11,908,900	1,036,700
2044	3,070,100	8,489,600	11,559,700	839,200
2045	2,805,800	8,379,500	11,185,300	683,100
2046	2,544,400	8,249,100	10,793,500	526,500
2047	2,288,600	8,176,100	10,464,700	355,100
2048	2,041,600	8,062,400	10,104,000	220,900
2049	1,806,200	7,884,000	9,690,200	141,500
2050	1,583,900	7,757,700	9,341,600	108,700
2051	1,376,600	7,600,900	8,977,500	87,600

SECTION D

SENSITIVITY TESTS

Sensitivity Tests - Explanation

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 benefits being promised. This is projected using the anticipated per capita payments for the coming year and assumed rates of future health cost increases. The actual Plan disbursements for retiree health will depend upon how the charges for health benefits actually increase in the future.

In order to demonstrate how the computed contribution rate for these benefits will 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 contribution for 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 care inflation assumption than was used for the valuation. The other is based upon a more pessimistic health care inflation assumption than was used for the valuation.

Of course, outcomes worse than the pessimistic scenario or better than the optimistic are possible.

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

Sensitivity Tests - Future Medical Inflation
General County
Computed Contribution Requirements

	Future Medical Inflation		
Computed Cost	Optimistic Assumption	Valuation Assumption	Pessimistic Assumption
Normal cost	$ 449,648	$ 505,791	$ 558,747
Accrued liability	51,639,938	58,087,670	64,169,449
Valuation assets	14,424,278	14,424,278	14,424,278
Unfunded liability	37,215,660	43,663,392	49,745,171
Amortization payment*	3,633,074	4,262,516	4,856,232
Contribution	$ 4,082,722	$ 4,768,307	$ 5,414,979

** 20-year amortization as a level dollar amount.*

Sensitivity Tests - Future Medical Inflation
County Agency
Computed Contribution Requirements

	Future Medical Inflation		
Computed Cost	Optimistic Assumption	Valuation Assumption	Pessimistic Assumption
Normal cost	$ 61,211	$ 68,854	$ 76,063
Accrued liability	6,321,840	7,111,180	7,855,720
Valuation assets	1,507,456	1,507,456	1,507,456
Unfunded liability	4,814,384	5,603,724	6,348,264
Amortization payment*	469,991	547,048	619,731
Contribution	$ 531,202	$ 615,902	$ 695,794

* *20-year amortization as a level dollar amount.*

Sensitivity Tests - Future Medical Inflation
Sheriff's Office
Computed Contribution Requirements

	Future Medical Inflation		
Computed Cost	**Optimistic Assumption**	**Valuation Assumption**	**Pessimistic Assumption**
Normal cost	$ 681,214	$ 766,270	$ 846,498
Accrued liability	34,199,202	38,469,293	42,497,028
Valuation assets	12,151,408	12,151,408	12,151,408
Unfunded liability	22,047,794	26,317,885	30,345,620
Amortization payment*	2,152,354	2,569,210	2,962,405
Contribution	$ 2,833,568	$ 3,335,480	$ 3,808,903

* *20-year amortization as a level dollar amount.*

Sensitivity Tests - Future Medical Inflation
Dispatchers
Computed Contribution Requirements

	Future Medical Inflation		
Computed Cost	**Optimistic Assumption**	**Valuation Assumption**	**Pessimistic Assumption**
Normal cost	$ 58,670	$ 65,995	$ 72,905
Accrued liability	2,243,588	2,523,720	2,787,953
Valuation assets	1,673,158	1,673,158	1,673,158
Unfunded liability	570,430	850,562	1,114,795
Amortization payment*	55,687	83,034	108,829
Contribution	$ 114,357	$ 149,029	$ 181,734

* *20-year amortization as a level dollar amount.*

Sensitivity Tests - Medical Inflation Assumptions

	Assumed Rate of Medical Inflation		
Year	Optimistic	Valuation	Pessimistic
2013	7.00 %	9.00 %	11.00 %
2014	6.50	8.25	10.00
2015	6.00	7.50	9.25
2016	5.50	7.00	8.50
2017	5.00	6.50	7.75
2018	4.50	6.00	7.00
2019	4.25	5.50	6.25
2020	4.00	5.00	5.50
2021	4.00	4.50	4.75
2022 & After	4.00	4.00	4.00

SECTION E

SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA

Summary of Benefits
December 31, 2011

Group	Eligibility Condition [1]	Medical Benefits [2,7]	Prescription Drug	Spouse Coverage	Cost Sharing	Employee Contributions
General County [6]	Age 55 with 30 years or age 60 with 8 years of service. New hires are no longer eligible for County – paid retiree health care (the effective dates vary by unit).	Yes	Yes	County pays 50% plus 2.27% for each year in excess of 8 years at retirement.[4]	[3]	3% of Pay
County Agency	Age 55 with 30 years or age 60 with 8 years of service. Effective 1/1/2008, new hires are no longer eligible for retiree health care.	Yes	Yes	County pays 50% plus 2.27% for each year in excess of 8 years at retirement.[4]	[3]	3% of Pay
Sheriff's Office	Age 50 with 25 years or age 60 with 8 years of service. Effective 1/1/2011, Correction Officer new hires are no longer eligible for County – paid retiree health care (the effective dates vary by unit).	Yes	Yes	County pays 50% plus 2.94% for each year in excess of 8 years at retirement.[5]	[3]	3% of Pay
Dispatchers [6]	Age 50 with 25 years or age 60 with 8 years of service. Effective 10/1/2007, new hires are no longer eligible for County paid retiree health care.	Yes	Yes	County pays 50% plus 2.94% for each year in excess of 8 years at retirement.[5]	[3]	3% of Pay

1 *Disabled retirees and survivors of deceased employees receive coverage. Deferred vested members do not receive retiree health care coverage.*

2 *Retirees are covered by various plans with different deductibles and co-pays.*

3 *Different groups contribute as defined in the various union contracts based on date of hire.*

4 *For members who retire on or after 12/31/1996. Coverage to the spouse continues upon the retiree's death, provided the spouse is receiving the deceased retiree's retirement allowance.*

5 *For members who retire on or after 1/1/2001. Coverage to the spouse continues upon the retiree's death, provided the spouse is receiving the deceased retiree's retirement allowance.*

6 *General County & Dispatch employees who retired prior to a date defined in their CBA will receive retiree health care benefits upon attainment of the age and service requirements listed.*

7 *Retirees are also provided Life Insurance in the amount of $10,000 for Department Heads, and $4,000 for all other Retirees.*

Summary of Benefits
December 31, 2011

Valuation Group	Union Name	No Retiree Health Care Available if Hired on or After	No Retiree Life Insurance Available if Hired on or After
General County	Non-Union Other	10/28/2003	1/1/2003
	Non-Union Management	10/28/2003	1/1/2003
	Elected Officials - Non-Union	10/28/2003	1/1/2003
	Michigan Nurses Association Unit I	10/28/2003	8/28/2007
	UAW/Friend of the Court	10/28/2003	3/23/2004
	UAW/Probate Court	10/28/2003	8/24/2004
	United Steelworkers/Youth Center	6/14/2005	1/1/2011
	POAM/District Court Unit I	9/2/2005	1/1/2011
	POAM/District Court Unit II	9/2/2005	1/1/2011
	POAM/Assistant Prosecutor's	9/13/2005	9/13/2005
	AFSCME General	7/25/2006	7/25/2006
	AFSCME District Court	7/25/2006	7/25/2006
	AFSCME Youth Center	7/25/2006	7/25/2006
	UAW/Youth Center	8/28/2007	8/28/2007
	County (Non-Union) Part-time	n/a	n/a
County Agency	Utility Workers of America/County Agency	1/1/2008	Available
	Non-Union/County Agency	10/28/2003	1/1/2003
Sheriff's Office	POAM/Sheriff Deputies	Available	Available
	POLC/Command Officers	Available	Available
	POAM/Correctional Officers Unit I	1/1/2011	12/11/2007
	POAM/Correctional Officers Unit II	1/1/2011	2/12/2008
Dispatchers	POLC/Communication Officers	10/1/2007	10/1/2007
	POLC/Communication Supervisors	10/1/2007	10/1/2007

Reported Financial Information at Market Value
Year Ended December 31, 2011

REVENUES AND DISBURSEMENTS

Revenues:

a. Employer Contributions	$5,714,954
b. Member Contributions	402,398
c. Medicare Part D Reimbursements	0
d. Interest and Dividends	816,873
e. Investment Gain	(1,129,358)
f. Other Investment Income	243,566
g. Total	6,048,433

Disbursements:

a. Health Care Benefits	3,575,796
b. Refunds of Member Contributions	91,822
c. Administrative Expenses	24,000
d. Investment Expenses	193,853
e. Total	3,885,471

Reserve Increase:

Total revenues minus total disbursements	$2,162,962

REPORTED ASSETS

Securities:

a. Cash and Short Term Investments	$ 4,365,292
b. Bonds	13,528,731
c. Stocks	9,649,781
d. Less: Accounts Payables	221,406
e. Net assets	$27,322,398

Development of Valuation Assets

Valuation Date December 31:	2007	2008	2009	2010	2011
1. Beginning of Year Assets					
a) Market Value	$ 17,628,805	$ 21,221,477	$ 21,032,303	$ 24,548,981	$ 25,159,436
b) Valuation Assets	17,080,952	21,413,565	26,350,668	27,766,030	26,954,468
2. End of Year Market Value Assets	21,221,477	21,032,303	24,548,981	25,159,436	27,322,398
3. Net Additions to Market Value					
a) Net Contributions (includes Medicare D Reimbursement)	6,281,837	7,652,921	5,275,262	3,031,752	6,117,352
b) Net Investment Income = (3d) - (3a) - (3c)	626,123	(4,802,212)	2,815,242	2,329,699	(262,772)
c) Benefit Payments, Refunds, and Admin. Expenses	(3,315,288)	(3,039,883)	(4,573,826)	(4,750,996)	(3,691,618)
d) Total Additions to Market Value = (2) - (1a)	3,592,672	(189,174)	3,516,678	610,455	2,162,962
4. Average Valuation Assets =					
(1b) + .5 x [(3a) + (3c)]	18,564,227	23,720,084	26,701,386	26,906,408	28,167,335
5. Expected Income at Valuation Rate = 7% x (4)	1,299,496	1,660,406	1,869,097	1,883,449	1,971,713
6. Gain (Loss) = (3b) - (5)	(673,373)	(6,462,618)	946,145	446,250	(2,234,485)
7. Phased-In Recognition of Investment Return					
a) Current Year: 0.2 x (6)	(134,675)	(1,292,524)	189,229	89,250	(446,897)
b) First Prior Year	172,955	(134,675)	(1,292,524)	189,229	89,250
c) Second Prior Year	(90,157)	172,955	(134,675)	(1,292,524)	189,229
d) Third Prior Year	8,061	(90,157)	172,955	(134,675)	(1,292,524)
e) Fourth Prior Year	110,384	8,060	(90,156)	172,953	(134,673)
f) Total Recognized Investment Gain	66,568	(1,336,341)	(1,155,171)	(975,767)	(1,595,615)
8. Change in Valuation Assets					
(3a) + (3c) + (5) + (7f)	4,332,613	4,937,103	1,415,362	(811,562)	2,801,832
9. End of Year Assets					
a) Market Value = (2)	21,221,477	21,032,303	24,548,981	25,159,436	27,322,398
b) Valuation Assets = (1b) + (8)	21,413,565	26,350,668	27,766,030	26,954,468	29,756,300
c) Difference Between Market & Valuation Assets	(192,088)	(5,318,365)	(3,217,049)	(1,795,032)	(2,433,902)
10. Recognized Rate of Return = [(5) + (7f)] / (4)	7.36%	1.37%	2.67%	3.37%	1.34%
11. Market Rate of Return = 2 x (3b) / [(1a) + (2) - (3b)]	3.28%	(20.41%)	13.17%	9.83%	(1.00%)

Schedule of Active and Retiree Population

Valuation Date December 31,	Active		Retiree	
	Active Members	Valuation Payroll	Number Retired	Number Covered
2002	626	$24,653,113	190	294
2003	636	25,430,961	204	317
2004	615	25,379,284	227	356
2005	598	25,441,192	256	374
2006	580	25,270,126	271	398
2007	560	26,237,483	277	405
2008	546	26,551,067	275	408
2009	464	23,660,370	322	486
2010	371	19,091,364	392	604
2011	363	19,719,996	389	600

Retirees Covered by Health Benefits - December 31, 2011
Tabulated by Attained Age

Attained Age	Number Retired	Number Covered
40 - 44	1	2
45 - 49	11	19
50 - 54	44	75
55 - 59	65	108
60 - 64	93	151
65 - 69	58	82
70	10	16
71	12	13
72	11	17
73	7	10
74	7	10
75	8	10
76	5	6
77	7	11
78	3	5
79	4	6
80	5	7
81	5	7
82	2	4
83	7	7
84	2	4
85	2	3
86	3	4
87		
88	3	4
89	3	4
90	4	6
91	1	1
92	2	3
93	1	2
94		
95	1	1
96	2	2
Totals	**389**	**600**

Active Billable General Members* December 31, 2011
by Attained Age and Years of Service

Attained	Years of Service to Valuation Date							Totals	
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
30-34		1	4					5	$ 206,051
35-39		2	4	1				7	319,846
40-44			3	9				12	558,482
45-49		2	2	3	9	2		18	797,257
50-54		4	5	7	1	3	1	21	977,782
55-59		1	2	3	2		1	9	435,768
61		2					1	3	162,916
62				1				1	56,394
67		1						1	94,328
Totals	**0**	**13**	**20**	**24**	**12**	**5**	**3**	**77**	**$3,608,824**

* *New hires after various dates are excluded as they are no longer eligible for County paid retiree health care coverage.*

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

Age: 47.9 years

Service: 16.8 years

Annual Pay: $46,868

Active Non-Billable General Members* December 31, 2011
by Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date 0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals No.	Valuation Payroll
20-24	2							2	$ 54,848
25-29	1							1	27,839
30-34		6	3	1				10	430,263
35-39	2	1	6	1				10	460,844
40-44		1	2	6	3			12	624,942
45-49		4	9	3	3	1		20	923,755
50-54		5	5	3	2	2	3	20	1,025,931
55-59		3	9	2	2	1	2	19	1,019,919
60			1	1				2	68,545
61		1	1	2			1	5	226,394
62					1	1	1	3	192,715
63			1					1	38,730
64							1	1	45,724
66					1			1	95,994
69							1	1	111,920
70						1		1	56,314
Totals	**5**	**21**	**37**	**19**	**12**	**6**	**9**	**109**	**$5,404,677**

* *New hires after various dates are excluded as they are no longer eligible for County paid retiree health care coverage.*

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

Age: 48.5 years

Service: 15.7 years

Annual Pay: $49,584

Active County Agency Members* December 31, 2011
by Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date 0-4	5-9	10-14	15-19	20-24	25-29	Totals No.	Valuation Payroll
20-24	2						2	$ 84,643
25-29	1	1					2	95,850
30-34		1					1	50,958
35-39	1	2	1				4	202,386
40-44								
45-49		1	1	2	3		7	362,339
50-54		2	1	1	1	2	7	309,057
55-59								
61					1		1	50,385
Totals	**4**	**7**	**3**	**3**	**5**	**2**	**24**	**$1,155,618**

* *New hires after various dates are excluded as they are no longer eligible for County paid retiree health care coverage.*

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

Age: 43.2 years

Service: 13.1 years

Annual Pay: $48,151

Active Sheriff's Office Billable* Members December 31, 2011
by Attained Age and Years of Service

Attained	Years of Service to Valuation Date						Totals	
								Valuation
Age	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30 Plus**	**No.**	**Payroll**
25-29	1						1	$ 38,339
30-34	4	2					6	369,570
35-39	5	12	3				20	1,298,124
40-44	2	7		1			10	712,459
45-49		7	2	3	3		15	987,389
50-54		2	1				3	211,293
55-59								
Totals	**12**	**30**	**6**	**4**	**3**	**0**	**55**	**$3,617,174**

* *New Correctional Officers after January 1, 2011 are excluded as they are no longer eligible for County paid retiree health care coverage.*

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

Age: 40.4 years

Service: 13.2 years

Annual Pay: $65,767

Active Sheriff's Office Non-Billable* Members December 31, 2011
by Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date 0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals No.	Totals Valuation Payroll
20-24	1							1	$ 43,697
25-29		3						3	175,440
30-34	4	10	3					17	874,732
35-39	1	4	7	4				16	1,079,976
40-44	3	2	8	5	3			21	1,338,401
45-49		2		3	5	2		12	832,101
50-54		1	1	2	3			7	437,194
55-59			4	2				6	379,113
63	1							1	37,738
Totals	**10**	**22**	**23**	**16**	**11**	**2**	**0**	**84**	**$5,198,392**

* *New Correctional Officers after January 1, 2011 are excluded as they are no longer eligible for County paid retiree health care coverage.*

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

Age: 41.1 years

Service: 12.7 years

Annual Pay: $61,886

Active Dispatcher* Members December 31, 2011
by Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date 0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals No.	Valuation Payroll
20-24		1						1	$ 47,063
25-29									
30-34		3						3	156,209
35-39			2					2	108,360
40-44		3		1				4	197,697
45-49			1					1	58,938
50-54			1					1	54,768
55-59				1		1		2	112,276
Totals	**0**	**7**	**4**	**2**	**0**	**1**	**0**	**14**	**$ 735,311**

* *New hires after October 1, 2007 are excluded as they are no longer eligible for County paid retiree health care coverage.*

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

Age: 40.7 years

Service: 11.7 years

Annual Pay: $52,522

SECTION F

ACTUARIAL COST METHODS, ACTUARIAL ASSUMPTIONS AND 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 an employee's post-retirement health benefits was computed so that each contribution in the series, from entry age to retirement, was a constant percentage of the employee's year-by-year projected covered compensation. This is referred to as the individual entry-age actuarial cost method.

The accrued liability was computed as follows:

Retirees and Beneficiaries: The discounted value of health benefits likely to be paid for retirees and beneficiaries was computed using the investment return, health cost increase and mortality assumptions.

Active Employees: The discounted value of health benefits likely to be paid after retirement for active employees 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: Last year's valuation assets are increased by contributions and investment income and reduced by refunds, and benefit payments. The difference between the actual investment return and the expected return is phased in over a 5-year period.

Financing of Unfunded Actuarial Accrued Liabilities: Unfunded actuarial accrued liabilities were amortized by level (principal & interest combined) dollar contributions over 20 years. The following table shows the amortization factor for each division.

Division	Amortization Period	Amortization Factor
All	20	10.9606

Actuarial Assumptions Used for the Valuation

Investment return (net of investment expenses):

7.0% per year compounded annually. This rate consists of a real rate of return of 3.0% a year plus a long-term rate of inflation of 4.0% a year. This assumption is used to equate the value of payments due at different points in time.

Pay Projections:

Annual Rate of Pay Increases for Sample Ages

		Merit and Longevity	Total
Years of Service	**Base (Economic)**	**General County, County Agency, Sheriff's Office, and Dispatchers**	**General County, County Agency, Sheriff's Office, and Dispatchers**
1	4.0 %	2.8 %	6.8 %
2	4.0	2.8	6.8
3	4.0	2.8	6.8
4	4.0	2.8	6.8
5	4.0	2.8	6.8
6	4.0	2.8	6.8
7	4.0	2.8	6.8
8	4.0	2.8	6.8
9+	4.0	0.5	4.5

If the number of active members remains constant, the total active member payroll will increase 4.0% annually, the base portion of the individual pay increase assumptions.

Health cost increases: 4.0% is the assumed rate of inflation, the base of all the economic assumptions. The rate of increase is used to predict the amount of health benefits payable in future years.

Year	Medical, Prescription Drug and Dental
2013	9.00 %
2014	8.25
2015	7.50
2016	7.00
2017	6.50
2018	6.00
2019	5.50
2020	5.00
2021	4.50
2022 & After	4.00

Mortality: The RP-2000 Mortality Table for males and females projected, 20 years. This table includes a margin for future improvements in mortality. Sample values follow:

Sample	Actuarial Present Value of $1 Monthly for Life with 4.0% Compound Annual Increases*		Future Life Expectancy (Years)	
Ages	Men	Women	Men	Women
50	$244.13	$251.75	32.77	34.63
55	220.41	228.95	28.04	29.88
60	194.54	204.31	23.47	25.31
65	167.37	178.49	19.17	21.02
70	139.78	152.27	15.22	17.06
75	111.64	126.00	11.58	13.47

* *These values do not take into account the temporary period when increases are assumed to exceed 4.0% or the continuation of benefits after death to a beneficiary.*

This assumption is used to measure the probabilities of members dying before retirement and the probabilities of participants surviving after retirement to require health coverage.

Disabled lives were valued using the RP-2000 Mortality Table for males and females, projected 20 years, set forward three years for both males and females.

Rates of separation from active membership (a risk assumption) were as follows:

(Rates do not apply to members eligible for regular retirement and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

Sample Rates of Separation from Active Employment
Before Retirement, Death or Disability

Sample Ages	Years of Service	% of Active Members Separating within Next Year: Sheriff's Office & Dispatchers	% of Active Members Separating within Next Year: General County & County Agency
ALL	0	15.00 %	15.00 %
	1	9.00	13.00
	2	7.00	12.00
	3	7.00	8.00
	4	7.00	8.00
25	5 & Over	3.00	7.65
30		3.00	7.65
35		2.00	6.80
40		2.00	5.10
45		1.75	3.40
50		1.00	3.40
55		0.50	0.85
60		0.00	0.85

Rates of disability: These rates represent the probabilities of active members becoming disabled.

Sample Ages	Number of Disabilities Per 100 Eligible Members: Men	Number of Disabilities Per 100 Eligible Members: Women
20	0.09 %	0.08 %
25	0.09	0.08
30	0.09	0.08
35	0.09	0.08
40	0.24	0.28
45	0.32	0.32
50	0.59	0.45
55	1.07	0.61
60	1.70	0.81

85% of the disabilities were assumed to be non-duty related. For the Sheriff’s Office employees, 50% of the disabilities are assumed to be duty related.

The rates of retirement (a risk assumption) used to measure the probability of eligible members retiring during the next year were as follows:

	Percent of Active Members Retiring Within Next Year	
Age	**General County & County Agency**	**Sheriff's Office & Dispatchers**
50		18.8 %
51		18.8
52		18.8
53		25.0
54		25.0
55	37.5 %	25.0
56	12.5	25.0
57	12.5	12.5
58	12.5	6.3
59	12.5	6.3
60	18.8	6.3
61	18.8	6.3
62	18.8	6.3
63	18.8	6.3
64	6.3	6.3
65	6.3	100.0
66	6.3	
67	6.3	
68	6.3	
69	6.3	
70	100.0	

Health care coverage at retirement: 85% of male and 30% of female General and County Agency employees and 90% of male and 50% of female Sheriff's Office employees and Dispatchers were assumed to have 2 person coverage at retirement.

Medicare Coverage was assumed to be available for all covered members on attainment of age 65.

Medicare benefits: Medicare benefits are assumed to cover the same percentage of health expenses as they do currently. Reductions in the benefits provided by Medicare will result in cost shifting that will increase the cost of this Plan and also the employer's obligation. Due to the unpredictability of such an event, any future changes in Medicare have not been reflected in this valuation.

Continuation percentage to spouse: 80% married retirees are assumed to continue coverage to the surviving spouse.

Non-investment administration expenses: none.

Active member group size: The valuation was based on a closed active member group size.

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." Under the actuarial cost method used the "AAL" differs somewhat from the value of future payments based on benefits earned as of the valuation date.

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, retirement, investment income and salary increases. Decrement assumptions (rates of mortality, separation 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 appropriate 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 normal costs to be paid in the future and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

Actuarial Equivalent - Benefits whose actuarial present values are equal.

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 contributions of interest and principal, as opposed to a lump sum payment.

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

Implicit Rate Subsidy - It is common practice for employers to allow retirees to continue in the employer's group health insurance plan (which also covers active employees), often charging the retiree some portion of the premium charged for active employees. Under the theory that retirees have higher utilization of services, the difference between the true cost of providing retiree coverage and what the retiree is being charged is known as the implicit rate subsidy.

Normal Cost - The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost". An amortization payment toward the unfunded actuarial accrued liability is in addition to the normal cost.

Other Postemployment Benefits (OPEB) - OPEB are postemployment benefits other than pensions. OPEB generally takes the form of health insurance, dental, vision, prescription drugs, life insurance or other health care benefits.

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.