

# Coventry School Employees' Pension Plan

<p style="text-align: center;"><b>SECTION I</b> <b>ACTUARIAL EXPERIENCE</b> <b>ANALYSIS</b></p>
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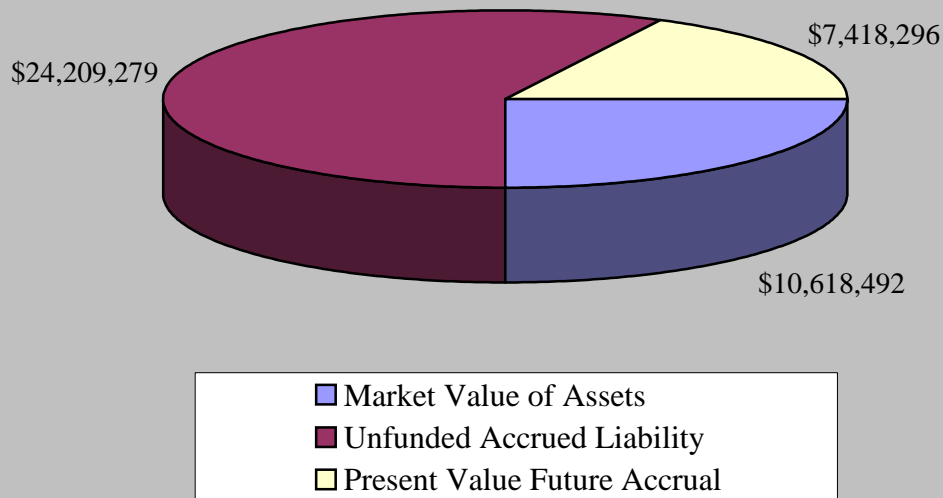
The purpose of Section I of this report is to review the current condition of the Plan. Included in this section is the Plan's current funded status, as of September 1, 2011, which is the most recent actuarial valuation completed. Additionally, this section will provide the historical funded status of the Plan.

Section I also highlights the current, and past, participant demographics of the Plan. Included within the analysis of the participant demographic, is a review of the actuarial assumptions and actuarial methods used in the Plan's actuarial valuations.

# Coventry School Employees' Pension Plan

## Current Plan Funded Status

### Present Value of Benefits as of September 1, 2011



<u>Valuation Results as of September 1, 2011</u>	<u>Share of AAL (\$)</u>	<u>Share of AAL (%)</u>
Market Value of Assets (MVA)	\$10,618,492	30.5%
Unfunded Actuarial Accrued Liability (UAAL)	\$24,209,279	69.5%
Actuarial Accrued Liability (AAL)	\$34,827,771	100.0%

<u>Valuation Results as of September 1, 2011</u>	<u>Share of PVB (\$)</u>	<u>Share of PVB (%)</u>
Actuarial Accrued Liability (AAL)	\$34,827,771	82.4%
Present Value of Future Accruals	\$7,418,296	17.6%
Present Value of Future Benefits (PVB)	\$42,246,067	100.0%

**As of September 1, 2011, the Plan is 30.5% funded**

Valuation results are based on the closed census data as of September 1, 2011, a 7.00% discount rate and the provisions of the September 1, 2011 actuarial valuation.

# Coventry School Employees' Pension Plan

Current Plan Funded Status
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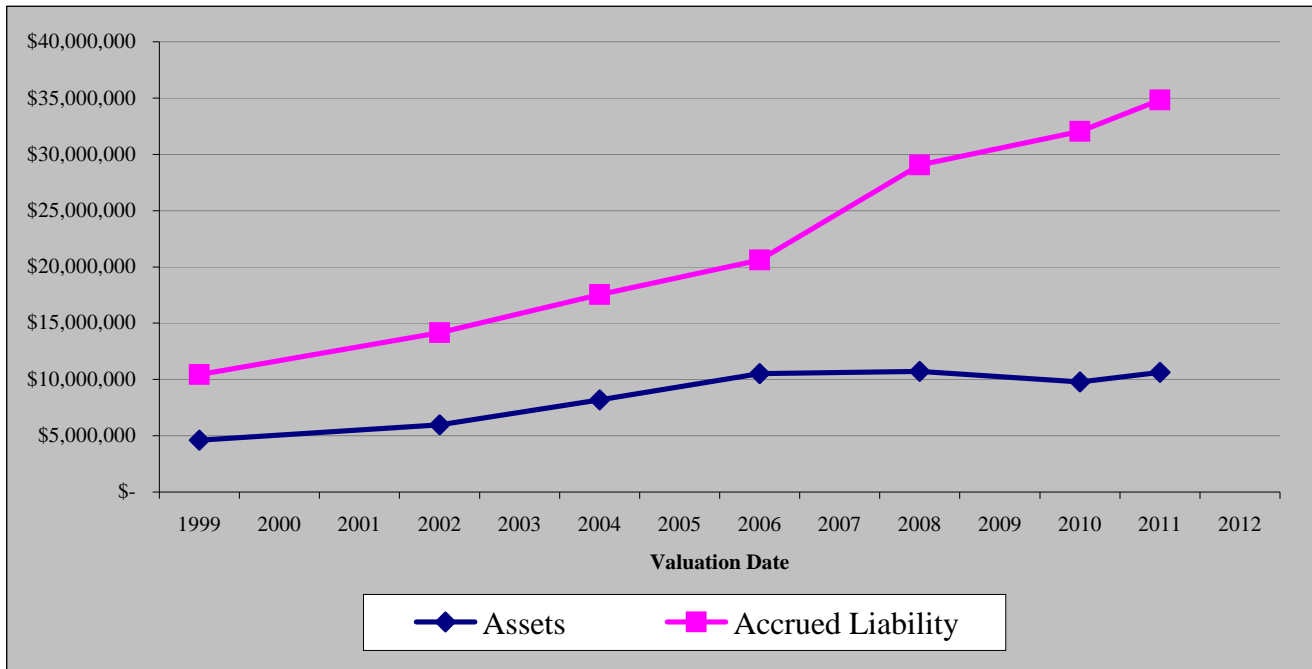
The September 1, 2011 valuation results can also be presented on a basis of funded status for (a) current retirees, (b) current active and (c) current vested terminated participants. In reality, the Plan's assets for all participants are commingled and the funded status of the Plan is valued as a whole, not per individual or group. The following illustration is strictly for illustration purposes:

Valuation Results as of September 1, 2011	<u>Total Plan</u>	<u>Retirees Share</u>	<u>Vested Term Share</u>	<u>Actives Share</u>
1. Actuarial Accrued Liability (AAL)	\$34,827,771	\$12,613,099	\$1,820,645	\$20,394,027
2. Plan Assets*	<u>\$10,618,492</u>	<u>\$10,618,492</u>	<u>TBD</u>	<u>TBD</u>
3. Unfunded AAL (UAAL)	\$24,209,279	\$1,994,607	\$1,820,645	\$20,394,027
4. Funded Ratio	30.5%	84.2%	0.0%	0.0%
5. September 1, 2011 Annual Required Contribution (ARC)				
a. Normal Cost	\$473,830	\$0	\$0	\$473,830
b. Amortization of UAAL	\$1,823,307	\$150,223	\$137,121	\$1,535,963
c. Interest (through mid-year)	<u>\$79,040</u>	<u>\$5,169</u>	<u>\$4,718</u>	<u>\$69,153</u>
d. ARC - 30 Year Open	\$2,376,177	\$155,392	\$141,839	\$2,078,946
6. Proj. Employee Contributions	\$357,798	\$0	\$0	\$357,798
7. Expected Benefit Payments	\$1,324,907	\$1,324,907	\$0	\$0

\*Assets for actives are equal to the aggregate balance of employee contribution account balances, if available. All other assets are allocated to retirees, to the extent funded.

# Coventry School Employees' Pension Plan

## Historical Plan Funded Status



The chart above illustrates the Plan's spread between Accrued Liability and Plan Assets as determined in actuarial valuation reports since 1999. The town did not report liabilities based on Government Accounting Standards Board ("GASB") requirements prior to 2011 as it presumed the plan to be a defined contribution plan, contributing 12.75% of pay per year. The current underfunding can be attributed to many factors. The following items highlight a few, but not all, of the general events that have attributed to the Plan's underfunded status:

**Market Losses from 2007 through 2009:** The Plan experienced large losses in assets during the years between 2007 and 2009. Assets as of September 1, 2007 were \$11.78 million and decreased to \$10.72 million by September 1, 2008, and further decreased to \$9.34 million by September 1, 2009.

**Historical Market Rate of Return:** Below is a history of the Plan's asset rate of return.

<u>Plan Years</u>	<u>Discount Rate</u>	<u>Plan Years</u>	<u>Discount Rate</u>
2002	8.77%	2007	-10.28%
2003	10.26%	2008	-20.37%
2004	9.22%	2009	4.10%
2005	7.61%	2010	12.45%
2006	8.90%		

The arithmetic average rate of return over the past 9 years has been 3.41%. If only the 2008 Plan Year rate of return is omitted, then the average becomes 6.4%. Based on the investment policy of the plan and the long-term expected earnings for a plan invested over 60% in equities the 7.00% Rate of Return assumption appears to be reasonable at this time, but should be periodically monitored to determine if the investment policy combined with the expected rates of return for such policy are consistent with the long-term assumption.

# Coventry School Employees' Pension Plan

Historical Plan Funded Status
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**Actual Contributions Less Than Recommended:** It is a general recommendation (a requirement for single employer plans) to make contributions to a plan equal to the anticipated benefit accrual for the coming year (Normal Cost), and an amortized amount of the underfunding. It has been the Plan's practice to value the annual recommended contribution (commonly referred to as ARC) using a 30-year open amortization schedule. However, the Town has made contributions to the Plan in amounts less than the ARC, contributing 12.75% of compensation each year.

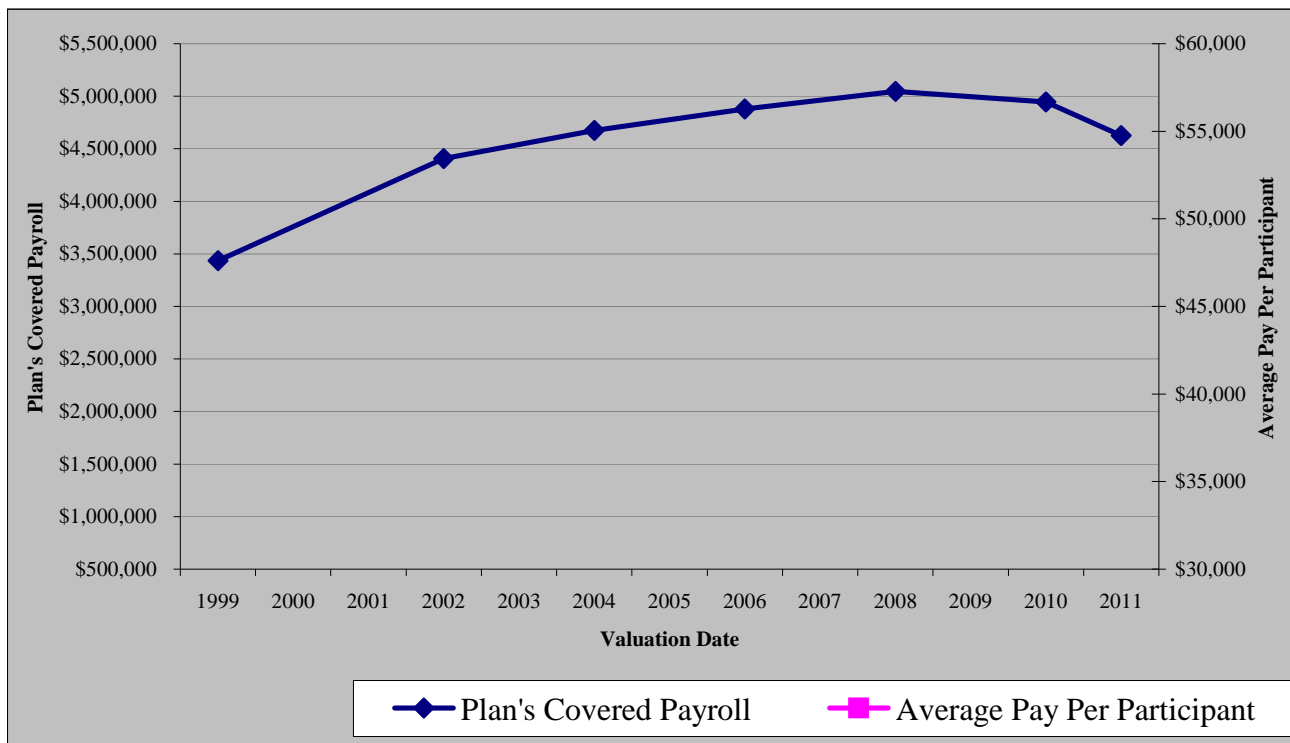
# Coventry School Employees' Pension Plan

## ACTUARIAL EXPERIENCE RESULTS

### Salary Scale Assumption

As of September 1, 2011, the salary scale assumption used in the Plan's actuarial valuation is 4.00% per year.

The chart below illustrates the Plan's covered payroll as a whole, over the span of the actuarial valuations completed between September 1, 1999 and September 1, 2011. The geometric average increase over this 12-year time period is 2.51%. The chart also illustrates the average covered payroll per active participant in the Plan over the same period. The average salary increase on a per active participant basis is 2.51%.



Considering only the participants active as of September 1, 2011, the average increase in salary from September 1, 1999 through September 1, 2011 is 2.92%.

Actuarial experience results of salary scale review: Based on the relatively smaller sample size (number of participants) in this Plan, the Plan's covered payroll on a whole, is a general indicator of the salary increases budgeted for the active participants based on wage inflation alone. Because numerous participants also experience wage increases from promotions, step-rate increases or other job changes to higher paying positions during their career it is reasonable to assume that the valuation salary rate assumption would be somewhat higher than the 2.5% - 3.00% wage inflation observed since the salary scale assumption is intended to reflect salary increases for all reasons from the participant's current age to retirement. Therefore, the 4.00% salary scale assumption seems to be reasonable for the actuarial valuation at this time.

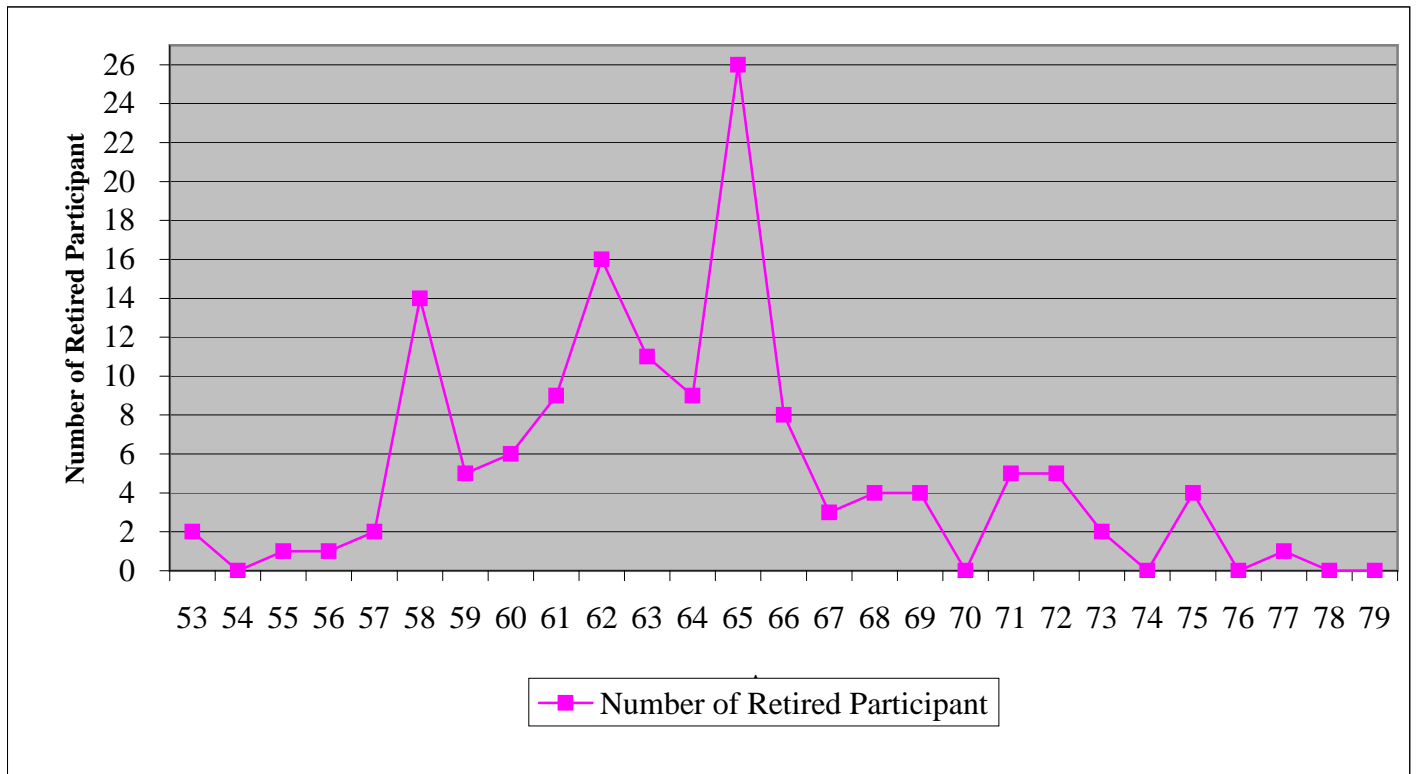
# Coventry School Employees' Pension Plan

## ACTUARIAL EXPERIENCE RESULTS

### Retirement Age Assumption

As of September 1, 2011, the retirement age assumption used in the Plan's actuarial valuation is 100% retirement at the time an active participant attains age 65 and a vested terminated participant attains age 58. The normal retirement age is the earlier of (a) the first day of the month coincident with or next following a participant's 58th Birthday and the completion of 10 Years of Service, or (b) the first day of the month coincident with or next following the completion of 30 Years of Service.

The chart below illustrates the age and numbers of actual retirements for retirees that were covered under the Plan between September 1, 1999 and September 1, 2011.



# Coventry School Employees' Pension Plan

ACTUARIAL EXPERIENCE RESULTS
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The chart above shows that a larger number of retirees (71 of the 138 shown) retired between the ages of 61 and 65. Below illustrates the years of service and numbers of actual retirements for retirees under the plan between September 1, 1999 and September 1, 2011.

Years of Service	<u># of Retirements</u>
5-10	15
11-15	28
16-20	21
21-25	43
26-30	20
30+	11
Total	<u>138</u>

Actuarial experience results of retirement age review: The current assumption assumes active participants retire at age 65 and vested terminated participants retire age 58 at the time they are fully accrued in their benefit. If the retirement age assumption for active participants assumed an earlier age, a significant portion of participants would be assumed to retire without fully accruing their benefit. The plan as of September 1, 2011 does not limit credited service. Therefore, we believe that the current valuation assumption for retirement age is a reasonable and generally conservative assumption.

## **Mortality Assumption**

The current table being used in the September 1, 2011 actuarial valuation is the gender specific RP-2000 Combined Healthy mortality table.

The Plan has experienced 43 deaths since September 1, 1999. Based on the Plan's current and historical population, it resulted in an average death of 1.82% per year.

Changing the current RP-2000 Combined Healthy mortality table would result in an immaterial difference under the Plan's valuation at this time, however it is understood that the ongoing mortality improvement will increase this variance in the future and should be re-evaluated in the future.

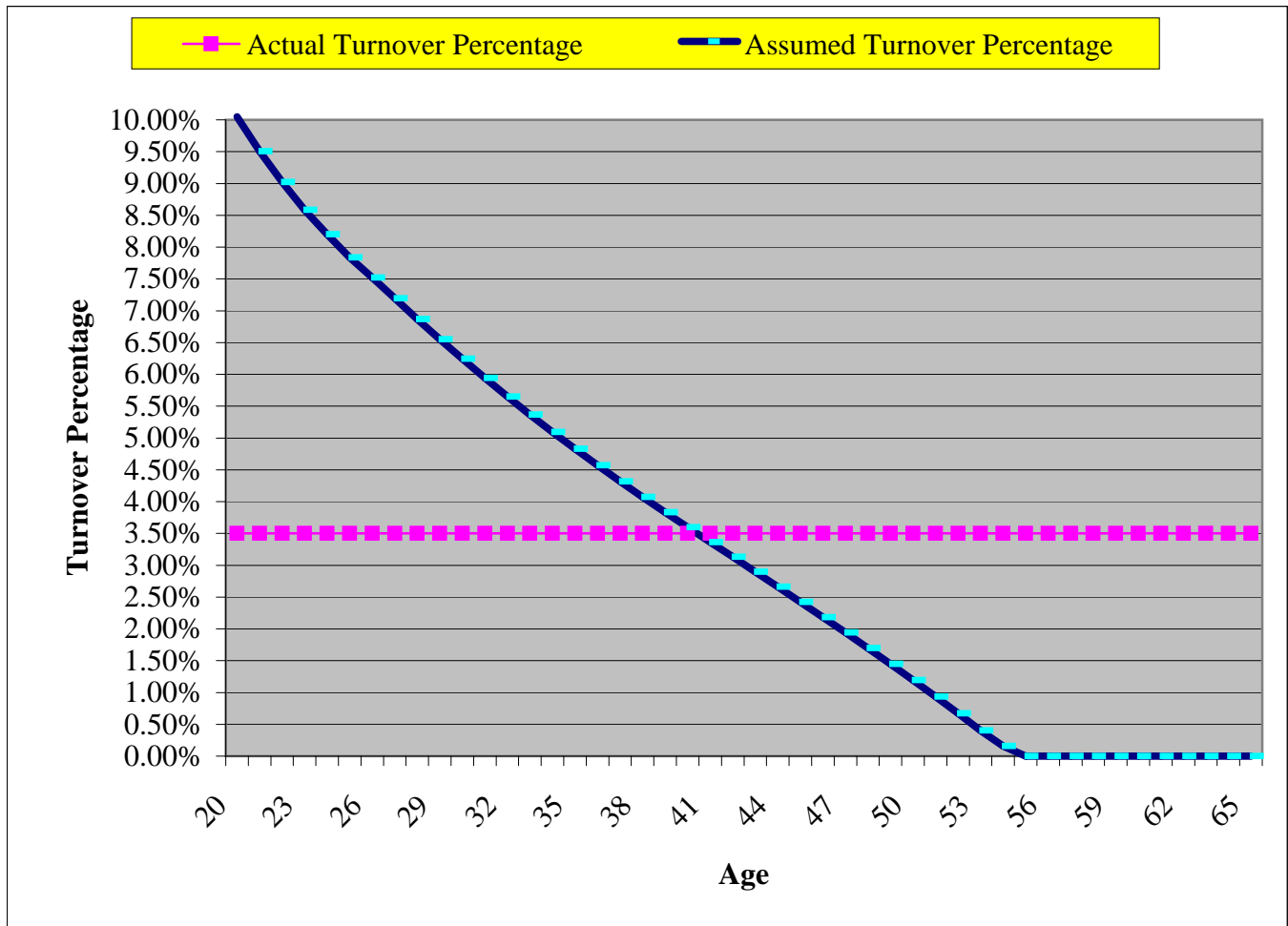


# Coventry School Employees' Pension Plan

## ACTUARIAL EXPERIENCE RESULTS

### Termination Rates

Currently, Sarason Table W-75 termination assumption is being used in the valuation.



Since September 1, 1999, there have been 91 terminations, 26 participants were terminated with vested benefits, and 65 participants were terminated without vested benefits. The terminated participants without vested benefit have an average 4.7 years of service. The average termination age is 52. This results in an average overall turnover rate of 3.50% per year.

Analysis of the termination assumption used by the Plan resulted in a slightly lower liability than the actual experience under the Plan. The termination assumption will continue to be monitored as future valuations are prepared.

# Coventry School Employees' Pension Plan

## ACTUARIAL EXPERIENCE RESULTS

### Disability Assumption

Currently, there is no disability retirement table being used in the September 1, 2011 actuarial valuation.

There are a total of 8 disabled participants receiving pension benefits, and only 3 disability retirements have occurred since 1999. The disability decrement is therefore included in retirements for the plan.

### Investment Rate of Return / Discount Rate

The current investment rate of return (also commonly referred to as the discount rate) used in the September 1, 2011 actuarial valuation is 7.00%.

The historical rate of return on Plan assets from September 1, 1999 through September 1, 2011 is 3.41% (as noted above).

As of August 31, 2011, the Plan asset allocation was as follows:

Equities:	\$5,091,127	47.9%
Fixed Income:	1,762,863	16.6%
Mutual Fund	2,769,174	26.1%
Other	272,497	2.6%
Cash & Equivalents:	722,831	6.8%
Total:	\$10,618,492	100.0%

Prior to the current economic uncertainty, the asset allocation above would have typically justified using a long term rate of return assumption of 7.00%, as most assets are invested in equities. Under the current environment, a long term rate of return of 7.00% may be considered generally reasonable to slightly optimistic until the markets become more stable. For comparison purposes, the State of Rhode Island values the State employee pension plan using a 7.50% discount rate, comprised of 2.75% inflation rate and a 4.75% net real rate of return.

### Cost of Living Adjustments

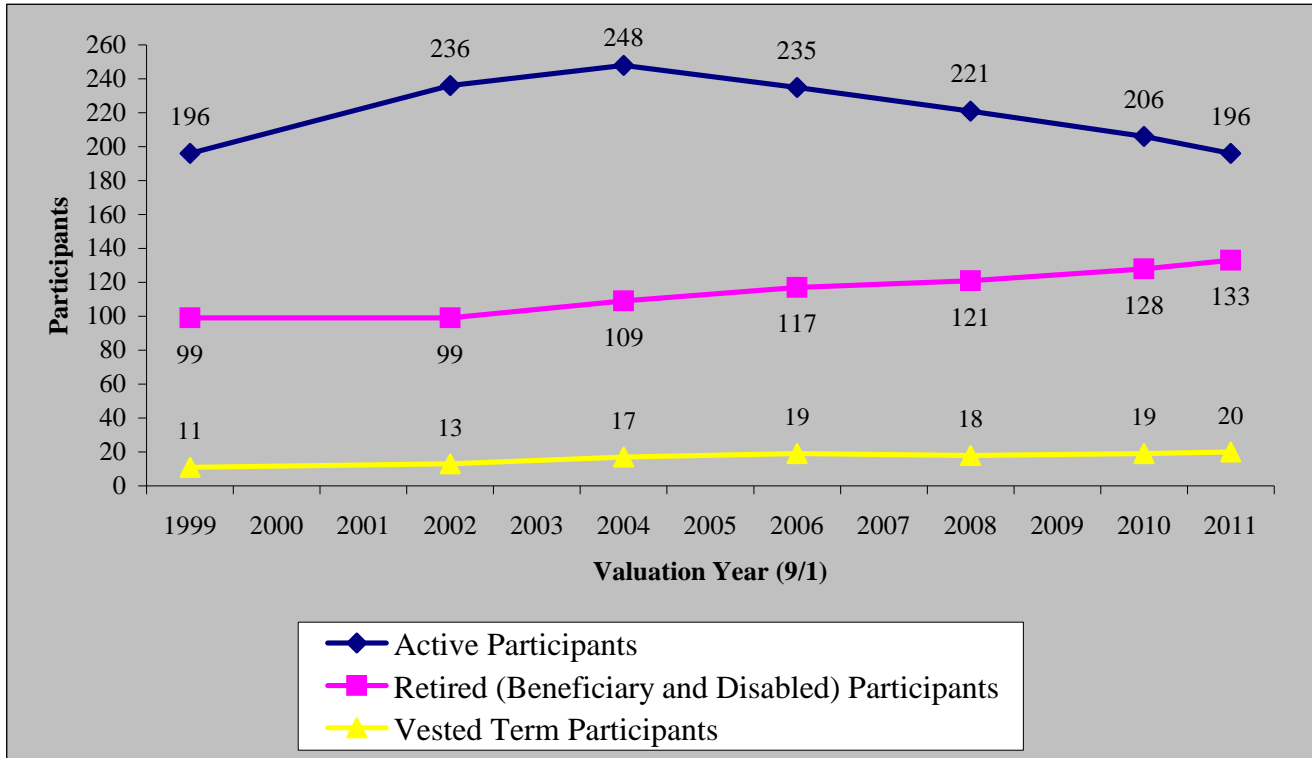
Effective April 1, 1999, any member eligible to retire, is entitled to 3.00% non-compounded cost of living adjustment (COLA) annually. This COLA does not apply to past retirees. Because this increase is directed by the plan document no assumption is being made. The benefits at retirement are simply valued included the 3.00% COLA as described by the plan.

For comparison purposes only to the plan provision, the annual increase in the Consumer Price Index (CPI) for urban consumers was 3.97% from April 1, 1999 through September 1, 2011.

Please note that the plan is amended effective August 31, 2012 to not provide the COLA for retirements after August 31, 2012.

# Coventry School Employees' Pension Plan

Plan Participant Counts

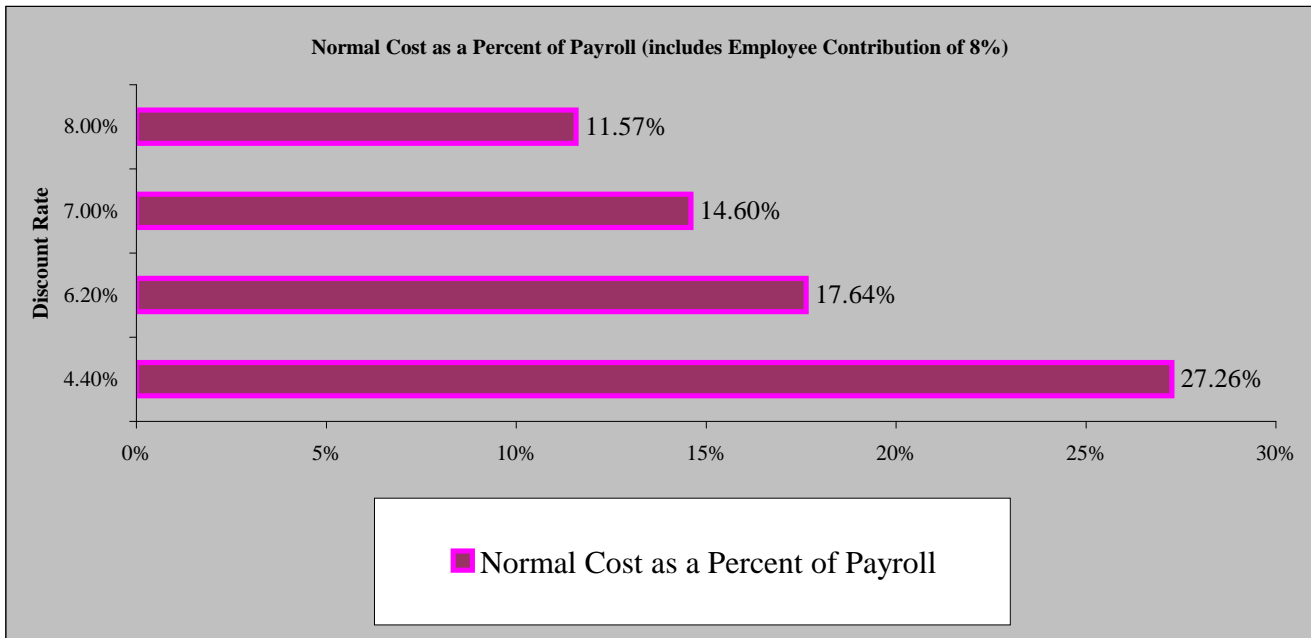


Participant Statistics as of September 1, 2011

Active Participant Count	196
Average Age of Actives	52.28
Average Service of Actives	13.41
Retiree Participant Count	112
Average Age of Retiree	74.25
Average Age at Retirement	63.61
Average Service at Retirement	22.00
Disabled Participant Count	8
Average Age of Disabled	65.82
Average Age at Disability	N/A
Average Service at Disability	N/A
Beneficiary Count	13
Average Age of Beneficiary	71.23

# Coventry School Employees' Pension Plan

## Normal Cost Sensitivity



The Plan's Actuarial Cost Method has been determined under the Entry Age Normal cost method.

The Plan's normal cost is the sum of the normal costs for all participants. For a current participant, the individual normal cost is the participant's normal cost accrual rate multiplied by the participant's current compensation. The normal cost accrual rate equals (a) the present value of future benefits as of the participant's entry age divided by (b) the present value of future compensation as of the participant's entry age. For other than a current participant, the normal cost equals \$0.

The Normal Retirement Benefit for participants, under the Plan's provisions (**effective August 31, 2012**), is:

On or before August 31, 2012

**2% of average compensation multiplied by first 10 years of service, plus 2.5% of average compensation multiplied by the years of service in excess of 10 years of service.**

On or after September 1, 2012

**Sum of accruals as follows: for first 10 years of service 2% of compensation each year; for years after first 10 years of service: 1.25% of annual compensation (total benefit capped at 50% of pay).**

Effective September 1, 2012, the normal form of benefit is a life annuity applied to benefit earned after September 1, 2012. The normal form of benefit is 10 Certain and Continuous for benefits earned before September 1, 2012. In addition, any member who retired between April 1, 1996 and August 31, 2012 shall be entitled to a 3 percent (3%) non-compounded cost of living adjustment (COLA) annually. This does not apply to any past retirees (retiring prior to April 1, 1996).

Effective September 1, 2012, the normal retirement age shall mean a participant's 65th birthday or, if earlier, his completion of 30 years of service. Prior to September 1, 2012, normal retirement age shall mean the earlier of (a) a participant's attainment of age 58 and his completion of 10 years of service, or (b) a participant's completion of 30 years of service.

# Coventry School Employees' Pension Plan

Income Replacement Analysis
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An income replacement ratio is a participant's gross annual income after retirement, divided by his or her projected gross annual income before retirement. Total compensation is not currently available for each participant, so the ratios provided below are provided as a rate of final (projected) pay at a participant's assumed retirement date. The illustration below provides income replacement ratios based on several age and service assumptions at retirement.

The ratio represents the benefit fraction applied to credited compensation used to determine the base annual pension benefit.

<u>Age at Retirement</u>	<u>Total Service at Retirement</u>	<u>Service at 9/1/2012</u>	<u>Service after 9/1/2012</u>	<u>Total Service Counted For Benefit Purpose</u>	<u>Benefit Fraction of Credited Compensation</u>
50	30	30	0	30	70.00%
55	30	20	10	24	50.00%
55	37	22	15	22	50.00%
58	10	10	0	10	20.00%
58	25	25	0	25	57.50%
58	30	15	15	29	50.00%
65	10	10	0	10	20.00%
65	20	18	2	20	42.50%
65	30	18	12	26	50.00%

The average plan replacement ratio for the current active participants, depending retirement based on service or age is:

	Retirement at 25 Years of Service or More	Retirement at 60 Years of Age or Older
Average Retirement Age:	56.9	64.4
Average Service at Retirement:	28.2	18.2
Average Base Income Replacement Ratio:	50.4%	40.4%

The income replacement ratios above do not include Social Security benefits or individual retirement savings.