Other Post-Employment Benefits
Actuarial Valuation

Final Report

Town of Medfield

October 7, 2013

stoneconsulting,inc

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SECTION I

MANAGEMENT SUMMARY

Introduction

This report presents the results of the actuarial valuation of the Town of Medfield Other Post-employment Benefits as of January 1, 2013. The valuation was performed for the purpose of measuring the actuarial accrued liabilities associated with these benefits and calculating a funding schedule. These results are used in satisfying the requirements under the Governmental Accounting Standards Board Statement No. 45.

The valuation was based on participant data as of January 1, 2013 supplied by Medfield and the Massachusetts Teachers Retirement Board. The provisions reflected in the valuation are based on Chapter 32B of the General Laws of the Commonwealth of Massachusetts and related statutes and the benefits provided by the Town.

We are pleased to present the results of this valuation. We are available to respond to any questions on the content of this report. Please note that this report is meant to be used in its entirety. Use of excerpts of this report may result in inaccurate or misleading understanding of the results.

Respectfully submitted,

STONE CONSULTING, INC.
October 7, 2013

Lawrence B. Stone
Member, American Academy of Actuaries

Kevin K. Gabriel, FSA, MAAA
Member, American Academy of Actuaries

5 West Mill Street, Suite 4
Medfield, MA 02052
Tel. (508) 359-9600
Fax. (508) 359-0190
E-mail Lstone@stoneconsult.com

Summary of Actuarial Results

The actuarial values in this report were calculated consistent with the Governmental Accounting Standards Board (GASB) Statement No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions, issued June 2004. Values at three discount rates are presented. The 7.50% discount rate represents the expected rate of return for a funded plan with a longer-term investment horizon. For an unfunded plan, the GASB Statement No. 45 calls for the use of a discount rate approximating the rate of return of Medfield's general assets. The rate we used for this is 4.00% The OPEB liability is extremely sensitive to this assumption. Depending upon whether the funded, unfunded, or partially funded rate is used, the Annual Required Contribution (ARC), Accrued Actuarial Liability (AAL), and the Normal Cost change dramatically.
The summary results are as follows:

- Actuarial Accrued Liability ("AAL") is the "price" attributable to benefits earned in past years. The total AAL as of January 1, 2013 (at the 4.00% discount rate) is $42,861,723. This is made up of $18.9 million for current active Medfield employees and $23.9 million for Medfield retirees, terminated vested, spouses and survivors.

- The Normal Cost is the "price" attributable to benefits earned in the current year. The Normal Cost as of January 1, 2013 (at the discount rate) is $1.7 million.

- Based on a twenty-six-year funding schedule (at the 4.00% discount rate), the Fiscal 2013 contribution would be $3,499,080. This figure is referred to as the Annual Required Contribution (ARC). This figure should be contrasted with the ARC using the fully funded 7.50% rate of $2,322,132. Both of these figures compare to the pay-as-you-go contribution of the existing costs for current retirees of $1,450,184. For an illustration of how payment of the ARC impacts the funding of the plan over time, please refer to the "Illustrative Funding Schedule" discussion beginning on page 16 and the accompanying table on page 33. The following table shows the breakdown of the Actuarial Accrued Liability between future retirees and current retirees, as well as the normal cost, at Medfield's different discount rates:

Actuarial Results as of January 1, 2013	7.50% Rate	4.00% Rate
Current Actives	$9,941,264	$18,946,994
Current Retirees, Beneficiaries, Terminated Vesteds and Survivors	$17,263,802	$23,914,729
Total AAL	$27,205,066	$42,861,723
Assets	0	0
UAAL	$27,205,066	$42,861,723
Normal Cost	$789,664	$1,697,110
ARC	$2,322,132	$3,499,080

Change from Prior Valuation

Medfield had a prior valuation of its OPEB liability done as of January 1, 2011. The following table provides a comparison of some of the key figures:

Category	1/1/2013 Valuation (4.00%)	1/1/2011 Valuation Projected to 2013 (4.25%)	% Change
Total AAL	$42.9 million	$44.6 million	-3.9%
Service Cost (Normal Cost)	$1.7 million	$2.1 million	-17.4%
Amortization Cost (2013: 3.25% increasing, 2011: 3.25% increasing)	$1.8 million	$1.9 million	-6.6%
Annual Required Contribution (ARC)	$3.5 million	$3.9 million	-12.2%
Pay-As-You-Go	$1.5 million	$1.5 million	-3.6%

The following addresses the reasons behind these changes:

1) The prior valuation used a 26-year amortization with a 4.25% discount rate. This valuation used the same amortization, with a 4.00% discount rate. This lowered the amortization by about 2%.

2) Mortality was projected to 2018 versus 2010 for the last valuation. This added about 1% to

the Normal Cost and about 2% to the AAL.

3) The change in the interest rate from 4.25% to 4.00% increased the Normal Cost by 4% and the AAL by 2%.

4) Changes in claims, trends, and other factors (spousal percentage, family percentage) decreased the Normal Cost by 14% and the AAL by 11%.

5) Changes in other assumptions decreased the Normal Cost by 7% and decreased the AAL by 1%.

6) The number of retirees increased 15% while the number of actives was flat. This increased the AAL but not the Normal Cost.

The following table summarizes the changes in assumptions between the two valuations:

	Current Val (1/1/2013)	Prior Val (1/1/2011)
Mortality	Projected to 2018	Projected to 2010
Employee Participation	70%	70%
Spouse %	65%	80%
Plans Pre-65	100% MC/0%IND	100% MC/0% IND
Plans Post-65(Medicare Only)	95% IND/5% MC;	84% IND/15% MC
Family % Pre-65/Post-65	35%/20%	40%/25%
Claims age 65 COMMC Blended	$19,141/$16,110	$18,396/$15,738
Claims age 65 COMIND Blended	NA	NA
Claims age 65 MEDMC/MEDIN	$2,187/$3,360	$2,904/$4,282
Cumulative Trend Years 1-10:		
- Commercial MC	74%	102%
- Commercial IND	NA	NA
- Medicare MC	73%	87%
- Medicare IND	66%	105%
# Actives	459	457
# Retirees and Spouses	327	284
# Retirees and Spouses with Med	231	207

Valuation Methodology and Assumptions

VALUATION METHOD

The valuation of the other post-employment benefits is based upon the projected unit credit actuarial cost method. Under this method, future health care benefit cost is projected using assumed rates of annual health care cost increases (health care cost trend rates). The cost of future expected life insurance death benefits is added to the projected medical cost. The actuarial value of the future expected benefits is allocated proportionately over a health plan member's working lifetime.

A normal cost (or service cost) is determined for each year of the member's creditable service and is equal to the value of the future expected benefits divided by the total expected number of years of service. This is similar to a normal cost in a retirement actuarial valuation. The Actuarial Accrued Liability is the accumulated value of prior normal costs, similar to the actuarial accrued liability in a retirement actuarial valuation, and represents the liability associated with prior service.

GASB Statement No. 45

The actuarial cost method used in this valuation is consistent with the Governmental Accounting Standards Board (GASB) Statement No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions, issued June 2004. It is one of the allowable cost methods specified in that accounting standard, and is the cost method most similar to the prescribed method of accounting for these benefits in the private sector described in the Financial Accounting Standards Board Statement 106 (FAS 106).

Difference Between FAS 106 and GASB Statement No. 45

The GASB Statement No. 45 differs in one important regard from the actuarial cost method described in the private sector accounting standard. In the FAS 106 methodology, benefits are considered to be fully earned in the first 10 years of service, since members become vested in the retirement benefits in 10 years. Compared to the FAS 106 method, the GASB Statement No. 45 attribution method produces a lower accrued liability for future retirees. The cost of the benefit is spread over the expected working lifetime of the employee. This makes the cost of the benefit associated with the years of service the employee is providing. This is more appropriate for the public sector due to the relative permanence of public entities compared to private entities. There are other significant differences between the GASB Statement No. 45 and FAS 106, most noticeably in the choice of discount rate. The GASB Statement No. 45 discount rate assumption is discussed below.

ACTUARIAL ASSUMPTIONS

Details of the assumptions used in this valuation are shown in Section II. Here we present a brief discussion of the assumptions selected.

Demographic and Financial Assumptions

These include discount rates of 7.50% and 4.00% as well as mortality, disability, withdrawal and retirement rates. The two discount rates apply to the scenarios of either a fully funded or totally unfunded plan. A fully funded program is when the employer contributes 100% of the ARC each year. An unfunded program is where the only amount contributed is used to pay benefits during the year so no assets accumulate. A partially funded program (not the case here) is one where the employer makes contributions in excess of the pay-as-you go figure (and so accumulates assets) but does not fund the full ARC. GASB Statement No. 45 indicates that the discount rate for a post employment benefit plan should be based on the degree to which the plan is funded. For an unfunded plan, the rate of return on the employer's general assets should be used. The argument for using this rate is that there is no asset accumulation and funds simply come into the employer's general assets and quickly go out. We are recommending a 4.00% rate for this scenario for Medfield. For a fully funded plan, GASB statement No. 45 allows one to use a long-term investment rate such as what would be used for a defined benefit pension fund. The rate we are currently recommending for this scenario for Medfield is 7.50%. For a plan where the Town has been setting aside some funds toward the liability above the pay-as-you-go amount, but less than the full ARC ("partially" funded), a rate in between these two levels should be used. Medfield has put aside some assets for OPEB but the monies are not segregated in an irrevocable trust. Therefore, according to GASB Statement No. 45, these assets are ignored.

Impact of New Pension Eligibility Rules

Starting with employees hired April 2, 2012 and later (referred to as "Tier 2" employees), Commonwealth of Massachusetts municipal retirees will have new retirement eligibility rules. Under these rules, we expect a change in retirement patterns, with people retiring later. We have reflected this change in our valuation and, thus, developed different retirement patterns for the Tier 2 retirees. We have not changed disability or withdrawal assumptions for the Tier 2 employees. Assumptions for Tier 1 employees (those hired under the old rules) are not impacted.

Health Care Plan Assumptions

Assumptions unique to post-retirement medical plans include initial annual health care costs and annual health care cost increase (trend) rates, Medicare eligibility, plan participation and coverage election rates.

- Current health care costs by age

Initial health care cost assumptions were derived from premium rates for the various health care plans in-force at January 1, 2013. Typically, we analyze the plans offered in terms of four different categories: whether the plan offered is Commercial (not integrated with Medicare) or Medicare Supplement and whether the plan is Indemnity (where reimbursements are a function of billed charges) or Managed Care (where reimbursements are a function of negotiated contracts). Grouping the plans in this manner allows us to maintain a reasonable degree of granularity in our analysis. At

the same time, it avoids the problem of a lack of credibility that often arises if one attempts to analyze every plan separately.

Medfield offers plans in three of our categories: two Commercial Managed Care plans, one Medicare Managed Care plan and one Medicare Indemnity plan. Please refer to the "Plan Definition Table" on page 20 for more details.

For all of these groups, weighted-average costs for each plan grouping were calculated based on the actual Medfield active and retiree population enrollments. For categories with more than one plan, costs were based on an average weighted by enrollment. However, in order to capture the effect of aging on health care costs, an assumption is required for the increase in health care costs as a person ages. We based our aging assumption on a study sponsored by the Society of Actuaries Health Section in August 2003. The effect of this aging assumption is illustrated in the table of "Initial Monthly Health Care Costs" in the Actuarial Methods and Assumptions section of this report.

By age-grading the claim costs, we account for the subsidy of older employees by younger employees implicit in a flat premium rate (also referred to as the "Attributed Cost" of each employee). That is, the cost of an active 20-year old employee, for example, is much less than the cost of a retired 80-year old employee. But, the premiums charged the Town are flat – the same for both of these people. Thus, the 20-year old in our example is overcharged and the 80-year old is undercharged by a flat rate premium. Age-grading makes this subsidy or mischarge explicit in the claim costs at each age. For the purposes of the GASB valuation, this subsidy needs to be taken into account in determining the retiree liability and normal cost.

The Medicare plan was also age-graded. While there is no subsidy between actives and retirees in these plans, there is still an escalating cost by age that needs to be reflected. In particular, it should be noted that from one year to the next, the cost of a person in these plans (as well as commercial plans) increases due to two factors: (1) year-over-year medical trends and (2) the fact that the person ages one more year. Without age-grading the Medicare costs, we would understate the rate of increase in costs and so end up with smaller liabilities and associated annual costs.

- Cost trends

The claim rates developed using the methodology described above must be projected over the life of each retiree. For this purpose we use trend rates calculated to reflect the general rate of increase in Health Care costs. Since we did not have adequate data to develop trend rates unique to Medfield's experience, we used trends based upon Stone Consulting's understanding of current health care rate increases.

We developed different trends for each of the categories of plans for which we also developed claim costs. These factors were applied to the premium-based claim rates. Factors for the first year, 2013, were based on actual rate increases, which were known at the time of the valuation. All other trend rates were based on Stone Consulting's trend model.

It should be noted that premium rate increases typically include factors other than health care cost increases, such as aging of the covered population, that are reflected elsewhere in our valuation methodology. Therefore, premium rate increases are not themselves a proxy for health care trends. However, they do give an indication of the level of expected cost increases.

As is typical in post-retirement medical valuations, initially higher rates of health care cost trend are assumed to decrease over time to an ultimate rate consistent with long-term economic assumptions. Our general set of trend assumptions has Commercial Managed Care trends that begin at 9% and scale down to 5%. For Medicare, the Indemnity trend rates begin at 9% and scale down to 6%. These different sets of trend rate reflect our belief that (1) Managed Care plans, with their negotiated pay levels and tighter controls, will exhibit lower trends than unmanaged Indemnity plans; and (2) Commercial plans will be subject to modestly higher trends than Medicare plans due to cost shifting induced by cutbacks in the federal government's payment of Medicare costs.

A table showing the trend rates can be found on page 39.

These trend rates should be thought of not as a forecast but as a reasonable progression of rates based on historic patterns. For many years, health care cost increases have been particularly volatile, and this actuarial assumption should be reviewed and, most likely, reset every year or two. Implicit in our health care cost trend assumptions is that the general rate of medical inflation will moderate due to economic pressure on insurers, employers, employees, retirees, government entities, and health care providers. As expectations of future health care cost increases change, they will be reflected in future valuations, resulting in actuarial gains/losses. These will be incorporated in the future costs and funding schedules. In this manner, there is a systematic means of adjusting to changes in the health care environment.

- Sensitivity analysis

The effect of increasing health care costs is extremely significant in an actuarial valuation of post-employment health benefits. As experience emerges the trend assumptions we have used are unlikely to be realized exactly. To illustrate the effect of different trend rates on the actuarial valuation results, we have included a sensitivity analysis of the effect on the actuarial accrued liability, normal cost and annual required contribution of a 1% increase or decrease in the health care cost trend assumption. This sensitivity analysis applies to the partially funded scenario at . We have also included a sensitivity analysis of the effect on the actuarial accrued liability, normal cost and annual required contribution of a 0.50% increase or decrease in the partially funded discount rate assumption.

- Timing

All values discussed in this report are based on a January 1, 2013 valuation. This means that the first fiscal year of the valuation is July 1, 2012 through June 30, 2013. It is permissible, under GASB Statement No. 45, to use these values, without adjustment for interest or any other timing factor for a limited future time period. For an entity such as Medfield, which will be doing a valuation every two

years, the standard allows use of data "not more than twenty-four months before the beginning of the first of two years for which the valuation provides the ARC." This means that it is acceptable for us to use the January 1, 2013 results without adjustment when discussing the 2013 fiscal year and the 2014 fiscal year. Included are projected costs for the fiscal year after the 2013 fiscal year.

Medicare

Medicare eligibility is an important assumption with regard to future costs. Medfield has adopted Section of 18 of Chapter 32B of the Massachusetts General Laws. This section mandates that if a retiree is eligible for Medicare Part B, they must apply for it. We assume that active employees who were hired after March 31, 1986 will be Medicare eligible due to their mandated participation in the Medicare program. Active employees prior to that employment date are assumed to be 85% Medicare eligible. Adoption of Section 18 leads to lower costs for the retiree medical plan.

- Medicare Changes

The Medicare Prescription Drug, Improvement and Modernization Act of 2003 introduced significant changes to the Medicare program and its interaction with employer-sponsored post-retirement benefits. Medicare beneficiaries are able to participate in a voluntary, prescription drug coverage program. In order to encourage employers, including public-sector employers, to continue providing prescription drug coverage to retirees, the Act provides for a cash subsidy to employers whose prescription drug coverage is deemed to be actuarially equivalent to the new Medicare Part D drug coverage. This cash subsidy can be used to offset partially the cost of retiree medical benefits, including potentially reducing the accrued liability for a portion of the drug benefits provided by a retiree medical plan. The Act may have additional impact on retiree plan choices, as Medicare-eligible retirees may opt for the Part D coverage rather than an employer's plan options. Such changes, if they occur, may affect the selection of future actuarial assumptions.

GASB has indicated that the subsidy should not be included as part of the OPEB valuation. The reason being that the subsidy is considered general governmental revenue and as such in not earmarked towards the funding of OPEB benefits.

- Health plan coverage election

Assumptions must also be made regarding the participation in health plans when active members retire and when those already retired turn age 65. Using data supplied by Medfield, Stone Consulting modeled the behavior of employees as they moved from being active to being retired or moved from being an under age 65 retiree to being an age 65+ retiree. Such modeling involved an analysis of the distribution of the plans chosen by current retirees, the possible plans available to those who will retire in the future, and our opinions about the likely future course of retiree medical care.

Such models are applicable to actives and to retirees not yet age 65, since these groups will have the option to select plans at key ages. Some retiree groupings do not require any modeling. For example, retirees over age 65 are assumed to remain in the plans they have already selected. If retirees have

opted out of Medfield coverage, we assume they will continue to do so. Similarly, those retirees under age 65 already in Medicare plans are assumed to remain in those plans for life. These are people who are disabled or have certain medical conditions that qualify them for Medicare early. Pre age 65 retirees in Commercial plans are assumed to stay in their current plan until age 65. At that point, they may migrate to a different plan. We have modeled their possible choices at age 65 and reflected that in our assumptions. Active employees over age 65, once they retire, are assumed to make the same sorts of selections as retirees at age 65. The following table shows the way we modeled the choices at each of the key ages.

Medfield Participant Behavior at Key Ages

Status	Age	Pre-65 Retirement	65+ Retirement
Active	Under 65	Commercial Managed Care: 100% Commercial Indemnity: 0%	Medicare Managed Care: 5% Medicare Indemnity: 95% Commercial: <1%
Active	65+	NA	Medicare Managed Care: 5% Medicare Indemnity: 95% Commercial: <1%
Retired	Under 65	Current Plan	Medicare Managed Care: 5% Medicare Indemnity: 95% Commercial: <1% or Actual Plan if already in Medicare
Retired	65+	NA	Current Plan

Participation

In addition to determining the choices that retirees will make among plans, there is also the issue of whether the retiree will elect coverage at all. The rate at which retirees elect coverage is called the "Participation" Rate. Stone Consulting examined Medfield retiree data to determine the historical frequency at which retirees elect to take medical coverage. Based on this study, we assumed that 70.0% of future eligible retirees and spouses of retirees will elect health plan coverage. For Life Insurance, we assumed that 70% of Medfield future retirees will elect coverage.

It is also necessary to reflect the participation rate of spouses in the Medical plans. Spouses will not participate at the same rate as employees for various reasons. These can include the availability of coverage from their own employer and the cost of the spouse coverage on top of the employee's coverage. We examined the number of spouses covered both pre-65 and post-65 and determined the implied percentage of spouses participating. Such analysis took into account that spouses may "participate" by virtue of being covered under family plans. The participation rates we developed were 65% for pre-65 and 65% for post-65. We should also note that our expected frequency of spouses for an employee who is retiring is 80%. In other words, we expected 8 out of 10 retiring employees to have a spouse. This level, 80%, is the maximum level of spousal participation in the retiree programs.

Data

The participant census data for the valuation study was supplied by Medfield and by the Massachusetts Teachers Retirement System. Participants include Medfield active employees including teachers, retirees, disability retirees, surviving spouses, and inactive former employees with 10 or more years of service who qualify for a vested retirement benefit.

The participant census data was not audited by Stone Consulting, Inc. However, it was checked for reasonableness.

Summaries of active participants and Medfield retiree census data are included in Section II.

Assets

It is our understanding that the Town of Medfield has not created a trust fund whose trustees are the Town of Medfield Retirement Board. Thus, as of December 31, 2012, the market value of any assets to be offset against the UAAL is $0.

Funding

There are alternative ways to plan for the payment of post-retirement health and life insurance benefits: continue to fund on a pay-as-you go method, contribute on an ad-hoc basis to a fund for this purpose, or develop a funding schedule in which the unfunded amount is amortized over some number of years. With the funding schedule, the normal cost must continue to be paid each year to

keep current.

There is no legal requirement to prefund these post-employment benefit liabilities. Nor does GASB Statement No. 45 require actual prefunding; however, its accounting requirements will serve to highlight the substantial unfunded accrued liabilities associated with these benefits.

ILLUSTRATIVE FUNDING SCHEDULE

The GASB Statement No. 45 is designed to account for non-pension post-employment benefits using an approach similar to the accounting for retirement benefits. It develops an Annual Required Contribution ("ARC") that is based on the Normal Cost plus an amortization of the Unfunded Actuarial Accrued Liability ("UAAL"). To the extent that actual contributions equal to the ARC are made by the employer to the post-employment health benefit plan, no additional liability will be required to be shown on Medfield's balance sheet. Employer contributions may be in the form of benefit or premium payments or contributions to a fund set aside for future benefit payments. Such a fund must meet the requirements set out in the accounting standard.

We have calculated an illustrative funding schedule for the other post-employment benefits, consistent with the GASB Statement No. 45. This funding schedule assumes that Medfield funds 100% of the ARC and begins with Medfield's Fiscal Year 2013. The full schedule is shown in Section II.

Development of Funding Schedule and Annual Required Contribution

The contribution amount under a fully funded scenario using the 7.50% discount rate for Fiscal 2013 is $2,322,132. Part of this comes from the amortization of the January 1, 2013 Unfunded Actuarial Accrued Liability of $27,205,066. Because there are no funds set aside, it is equal to the total actuarial accrued liability (AAL) of $27,205,066. The UAAL is amortized over thirty years using an increasing amortization payment at the rate of assumed payroll increase due to inflation (3.25%). The funding contribution is the amortization payment plus the projected normal cost. As noted earlier, under the GASB Statement No. 45, thirty years is the maximum amortization period allowed. Shorter periods of time and/or other amortization patterns could be considered. The thirty-year funding schedule shown produces the lowest possible initial fiscal year contribution under the GASB parameters. It should be noted that the contribution is assumed to be made at the end of the fiscal year, so the first contribution is assumed to be made June 30, 2013. The amount of the amortization payment in the first year is $1,532,468. For the purposes of this schedule, we have not adjusted the January 1, 2013 liability for timing by applying interest to bring it to any future date.

Yearly contributions will increase, as both normal cost and amortization payments increase each year.

The remaining part of the ARC is the cost of the current year's benefit accrual, the normal cost, of $789,664.

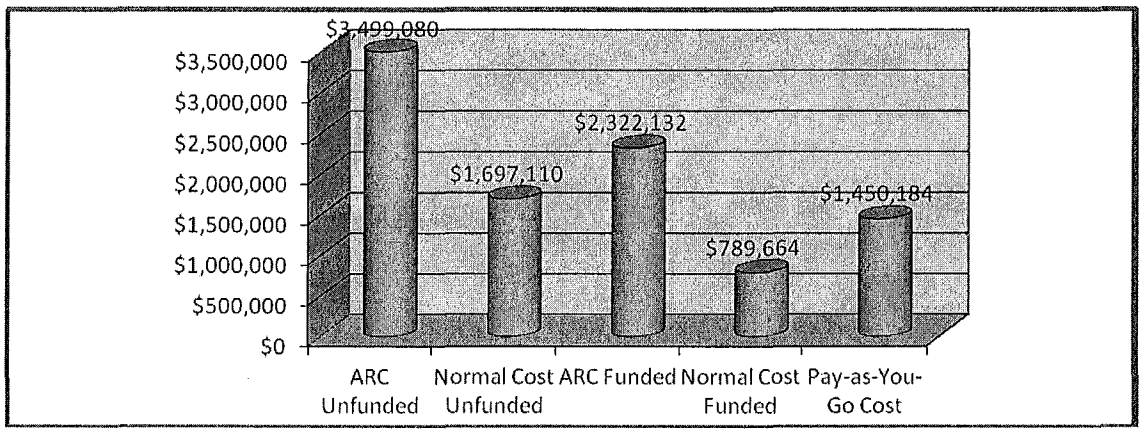
Cash Flow Consideration

We have analyzed the cash flow of a funded post-employment medical trust by comparing the expected payouts of claims over the thirty years period to expected contribution levels. If the actuarial assumptions are met, the funded amounts will be sufficient to cover annual benefit payments each year. Prior to adopting a funding schedule we recommend additional analysis be conducted to examine the effects of potential actuarial gains and losses on the cash flow.

FUNDING VERSUS PAY-AS-YOU-GO VERSUS PARTIAL FUNDING

Currently, most Massachusetts governmental entities are paying for their post-employment medical benefits on a pay-as-you-go basis. This means that no amount in excess of the actual cost for the year is paid. All such entities must report figures for GASB Statement No. 45 based on the unfunded discount rate. Medfield has elected, to date, to follow this course, and has not made any additional contributions above the pay-as-you-go cost.

In order to understand the impact of partially funding versus funding completely, a comparison of the ARCs and normal costs under both scenarios, and the pay-as-you-go amount is illustrated on the following chart:



The chart depicts the advantage to the entity of even a partial funding policy, since the ARC and Normal Cost are significantly higher under the unfunded versus the funded scenario.
As can be seen in the funding schedule, the retiree medical plan's normal cost will increase each year, so that by the time the initial unfunded liability is fully amortized, the required annual contribution will be substantially higher than is illustrated here for the first year. The pay-as-you-go costs will also increase dramatically as more and more employees retire. A projection of annual expected retiree pay-as-you-go costs is included with the funding schedule.

It is very important to understand that, in order to utilize the higher discount rate that goes with the fully funded or partially funded scenarios, there must be a "Funding Policy." That is, the Town must intend to continue to payments and, in the future, must actually make them. Should the policy not be

followed in future years, an adjustment to the discount rate would need to be made. As the figures above illustrate clearly, there is an iterative relationship between the degree of funding and the amounts that must be shown as liabilities, amortization payments, and normal cost figures. Lower funding levels lead to higher amounts for these key figures.

The partial subsidy of prescription drug benefit costs that is available under the Medicare Prescription Drug, Improvement and Modernization Act of 2003 is a potential source of funds for a portion of the retiree medical costs. To the extent that this subsidy reimburses Medfield for drug benefits it would already be paying for, the additional cash from the subsidy could be used to help pre-fund future benefits. The magnitude of any future subsidy is only a small portion of the additional cost to fund. Other plan design changes, such as a carve-out of prescription drug coverage, may yield greater opportunities for savings.

DETERMINATION OF THE NET OPEB OBLIGATION (NOO)

The Statement does not require Medfield to put its entire Actuarial Accrued Liability on its statement of net assets immediately as a liability. Rather, a cost is applied each year. Over time this cost, which is called the OPEB Cost, will add up to the total liability. The total liability at any point in time is called the Net OPEB Obligation (NOO).

For the first year of funding, the OPEB Cost and ARC are identical. Amounts contributed toward the cost of other post-employment benefits must then be deducted. These amounts include: 1) actual premiums paid; 2) the extra implied costs or "implicit subsidy" associated with covering retirees; 3) any additional amounts paid during the year. The Net OPEB Cost is the OPEB Cost less these amounts. For year one (which was Fiscal 2009), where there is no prior NOO on the financial statement, the Net OPEB Cost is the same as the Net OPEB Obligation. Starting year two, the OPEB Cost must recognize not only the Normal Cost and Amortization Cost for the year but also add interest on the prior year's NOO as well as subtract Annual Required Contribution (ARC) adjustment to prevent double counting of the prior year's NOO. The interest and the ARC adjustments somewhat offset each other so the net impact is not large. The total contributions are then subtracted from the OPEB Cost and the result is added to the prior year's NOO. In this manner, the difference between each year's ARC and the contributions are accumulated. Please refer to the following table on page 15 in the following discussion.

We have assumed that Medfield continues its current policy and contributes not to fund the liability. We have not illustrated this scenario with a "funding" schedule. The following chart projects the ARC, Pay-As-You-Go, Annual OPEB Cost and the Net OPEB Obligation for 8 years under the unfunded scenario. Note that the figures for the years 2009-2012 come from the Town's annual financial report. Figures for 2013 and forward come from this valuation report. The Annual OPEB cost is the ARC plus an adjustment for interest not included in the ARC calculation. The Net OPEB Obligation is the accumulation of the Annual OPEB Cost minus any contributions. In the unfunded case, the contributions are the attributed pay-as-you-go amounts.

CALCULATION OF NET OPEB OBLIGATION (NOO) [2]

"Funding" Schedule at 4.25% (2009 - 2012), 4.00% (2013+)

Year	UAL	Normal Cost[1]	Amort.[1]	ARC	Interest on NOO[1]	ARC Adjust.[1]	OPEB Cost	Total Contribs.[1]	Change in NOO	NOO
2009	$43,819,459	$2,150,904	$1,618,698	$3,769,602	NA	NA	$3,769,602	$1,148,598	$2,621,004	$2,621,004
2010	$46,751,352	$2,242,317	$1,675,353	$3,917,670	$111,393	$99,811	$3,929,252	$1,373,194	$2,556,058	$5,177,062
2011	$39,775,805	$1,889,948	$1,613,082	$3,503,030	$220,025	$209,952	$3,513,103	$1,234,867	$2,278,236	$7,455,298
2012	$42,175,713	$1,970,271	$1,765,605	$3,735,876	$316,850	$312,102	$3,740,624	$1,412,261	$2,328,363	$9,783,661
2013	$42,861,723	$1,697,110	$1,801,970	$3,499,080	$391,346	$411,320	$3,479,107	$1,450,184	$2,028,923	$11,812,584
2014	$44,862,283	$1,764,994	$1,954,652	$3,719,646	$472,503	$514,675	$3,677,475	$1,511,192	$2,166,283	$13,978,867
2015	$46,951,249	$1,835,594	$2,123,434	$3,959,028	$559,155	$632,213	$3,885,969	$1,668,843	$2,217,126	$16,195,993
2016	$49,036,424	$1,909,018	$2,306,039	$4,215,057	$647,840	$761,650	$4,101,247	$1,782,894	$2,318,353	$18,514,346

[1] Total Contributions for all fiscal years include the implicit premiums paid.

[2] Based on an unfunded scenario at a 4.00% discount rate for Fiscal Years 2013 on. Prior figures based on latest Medfield financial statements. FY2010 originally reported as $6,566,962 but correct in FY2011. Figures below boxed area are from this valuation.

CALCULATION OF NET OPEB OBLIGATION (Alternative Presentation)

	Fiscal 2014	Fiscal 2013	Fiscal 2012	Fiscal 2011	Fiscal 2010	Fiscal 2009
AAL	$44,862,283	$42,861,723	$42,175,713	$39,775,805	$46,751,352	$43,819,459
Assets	$0	$0	$0	$0	$0	$0
UAL	$44,862,283	$42,861,723	$42,175,713	$39,775,805	$46,751,352	$43,819,459
Service Cost	$1,764,994	$1,697,110	$1,970,271	$1,889,948	$2,242,317	$2,150,904
Amortization of unfunded accrued liability	$1,954,652	$1,801,970	$1,765,605	$1,613,082	$1,675,353	$1,618,698
ARC	$3,719,646	$3,499,080	$3,735,876	$3,503,030	$3,917,670	$3,769,602
Interest on NOO	$472,503	$391,346	$316,850	$220,025	$111,393	$0
ARC Adjustment	$514,675	$411,320	$312,102	$209,952	$99,811	$0
OPEB Cost	$3,677,475	$3,479,107	$3,740,624	$3,513,103	$3,929,252	$3,769,602
Premiums and Implicit Subsidy Paid	$1,511,192	$1,450,184	$1,412,261	$1,234,867	$1,373,194	$1,148,598
Cash contributions	$0	$0	$0	$0	$0	$0
Total Contributions	$1,511,192	$1,450,184	$1,412,261	$1,234,867	$1,373,194	$1,148,598
Change in NOO	$2,166,283	$2,028,923	$2,328,363	$2,278,236	$2,556,058	$2,621,004
NOO Beginning of Fiscal Year	$11,812,584	$9,783,661	$7,455,298	$5,177,062	$2,621,004	$0
NOO End of Fiscal Year	$13,978,867	$11,812,584	$9,783,661	$7,455,298	$5,177,062	$2,621,004

Implementation

According to the GASB Statement No. 45, its provisions would be effective for Medfield fiscal years beginning after December 15, 2007. The timing is due to Medfield being a "Tier 2 government under GASB 34". In the first fiscal year of adoption, Fiscal 2009, Medfield recorded a liability of $2,621,004 on its balance sheet to the extent that its contributions (including benefit payments) for other post-employment benefits were less than the Annual Required Contribution ("ARC") determined in accordance with the GASB standard and described above. The total actuarial liability is determined by a valuation to be performed at least every two years. The total actuarial liability is reduced by any assets set aside to pre-fund the post-retirement benefits, with the resulting unfunded actuarial liability being amortized according to a funding schedule similar to that illustrated in this report. By the end of Fiscal 2012, Medfield had recorded a figure of $9,783,661 for its NOO.

To be considered a funded system, the retiree medical plan assets must be "segregated and restricted in a trust, or equivalent arrangement, in which (a) employer contributions to the plan are irrevocable, (b) assets are dedicated to providing benefits to retirees and their beneficiaries, and (c) assets are legally protected from creditors of the employers or plan administrator, for the payment of benefits in accordance with the terms of the plan." (GASB 45, p. 47, "Plan Assets"). Our understanding is that Medfield has set up such a trust and therefore Medfield receives "credit" under the GASB accounting standard for assets set aside to pre-fund post-retirement benefits.

Recommendations and Comments

Post-employment medical benefits are a significant long-term liability that is only now starting to be addressed by Massachusetts government employers. In managing this liability, any governmental entity needs to consider the parameters that can significantly influence the level of the liability. To facilitate such a review, we recommend that Medfield continues to maintain a continuing group that is cognizant of the relevant financial and employee benefits issues raised by GASB Statement No. 45. We would recommend that the group review the following:

1) Funding Policy: As previously discussed, the funding policy is critical to the valuation not only because it impacts the funds backing the liability but also because it impacts the discount rate that is used to calculate all of the relevant figures. Medfield needs to bear in mind that it is the formulation of a funding policy that is essential, not simply the contribution of funds. Of course, if a funding policy is developed, it needs to be implemented, not just formulated. Thus, we recommend that the Town maintain a written funding policy that it reviews each year. This is especially the case now that Medfield is partially funding its liability.

2) Plan Design: One of the major factors influencing costs is the design of the plans that Medfield offers to retirees. To the extent that any part of these plans changes materially, costs my either increase or decrease. In order to keep costs under control, the Town should review the design of all its medical plans annually. Changes in plan characteristics such as deductibles, coinsurance levels, out-of-pocket maximums, and covered services can help mitigate the impacts of ever-increasing medical costs. In addition, the Town should review

the networks it is using to be sure that it is getting the most competitive reimbursement levels available.

3) Contribution Levels: The extent to which the Town subsidizes the cost of retiree benefits is one of the most significant factors in the ultimate costs. Under the GIC, retired Medfield employees and their spouses pay 50% of the premium cost for their medical insurance. This is at the high end of what is typical for Massachusetts municipal entities. At the extremes, some municipal entities require as much as 50% for all participants (the most that retirees can be asked to contribute) while other require as little as 10%. Contribution levels have a double impact on costs. First off, there is a direct relationship between contributions and costs in that higher contribution levels mean that more of the cost of the plan is born by the Town. Secondly, higher contribution levels lead to higher participation rates because the plan becomes less costly to the retiree. In the case of cities and towns where a substantial portion of the medical costs are paid by the employer, participation rates tend to be very high. Medfield's participation level of 70.0% for retirees is lower than average and about what we would expect for a municipality with its contribution levels.

   In general, a very-well subsidized plan will have many participants enrolled at a high cost. Also, to the extent that other employers are cutting back or eliminating their programs, there is increased likelihood that a favorably subsidized plan will be elected by retirees, since no coverage or only very expensive coverage may be available from other sources such as their spouse's employer. There has been a very definite move toward reducing the subsidies paid by Massachusetts public entities.

4) Eligibility: The extent to which retirees are eligible for benefits is another variable that very directly impacts costs. Medfield should review its eligibility criteria each year to be sure that they are accord with town goals for controlling costs and for providing well-deserved benefits for those who have worked for the town. Retirement system policies can also affect the eligibility for benefits. In the case of Medfield, the Town pays for medical benefits for those who reach ten years of service, even if they do not retire from the Town immediately upon separation from service. This will produce a higher liability and ARC for Medfield than if only those actually retiring from the Town were covered.

Medfield's OPEB data is the most complete data we have received from a client. It is well maintained and relatively complete. We encourage Medfield to continue its efforts

B. FUTURE RETIREES – ACTIVE PARTICIPANTS

	# OF PARTICIPANTS*		
Current Plan	Medicare Eligible	Potentially Non-Medicare Eligible	Total
No Medical/ Unknown	179	1	180
Indemnity	0	0	0
Managed Care	257	22	269
TOTAL	436	23	459

* "Potentially Non-Medicare eligible" means hired March 31, 1986 or before and "Medicare eligible" means hired after March 31, 1986. Employees hired March 31, 1986 or before do not contribute to Medicare.

PLAN DEFINITION TABLE

Plan Name	Plan Type	Indv. Rate[1]	Retirees Enrolled	Family Rate[1]	Retirees Enrolled	Employee Contrib. %
BCBS HMO	Commercial Managed Care	$689.80	31	$1,794.41	4	50.00%
BCBS PPO	Commercial Managed Care	$696.84	23	$1,813.49	6	50.00%
Tufts Preferred	Medicare Managed Care	$226.00	10	NA	NA	50.00%
MEDEX	Medicare Indemnity	$346.43	157	NA	NA	50.00%
Life ($5,000)	Life	$5.60	179	NA	NA	50.00%

[1]Rates at 1/1/2013

C. DISTRIBUTION BY AGE AND SERVICE: ACTIVE PARTICIPANTS

Age Group	0-4	5-9	10-15	15-19	20-24	25-29	30-34	35-39	40+	Total
0-19	0	0	0	0	0	0	0	0	0	0
20-24	5	1	0	0	0	0	0	0	0	6
25-29	26	11	0	0	0	0	0	0	0	37
30-34	19	18	2	0	0	0	0	0	0	39
35-39	16	17	17	1	0	0	0	0	0	51
40-44	19	15	8	13	3	0	0	0	0	58
45-49	15	19	11	5	6	1	0	0	0	57
50-54	16	20	13	4	3	7	1	1	0	65
55-59	10	11	18	14	5	3	3	1	0	65
60-64	3	7	12	16	8	6	1	1	1	55
65-69	2	3	5	2	2	3	1	2	0	20
70-74	0	0	0	1	1	0	2	0	1	5
75-79	0	0	0	0	0	0	0	0	1	1
80-84	0	0	0	0	0	0	0	0	0	0
85-89	0	0	0	0	0	0	0	0	0	0
90-94	0	0	0	0	0	0	0	0	0	0
95-99	0	0	0	0	0	0	0	0	0	0
100+	0	0	0	0	0	0	0	0	0	0
TOTAL	131	122	86	56	28	20	8	5	3	459

SUMMARY OF RESULTS

Actives	
- Already in Medicare	0
- Pre-Medicare Coverage	23
- Post-Medicare Coverage	436
Total	459
Retired, Disabled, Survivors, Vesteds, and Beneficiaries	327

Actuarial Accrued Liability and Unfunded Actuarial Accrued Liability (as of January 1, 2013)

	At 7.50% Discount	At 4.00% Discount
AAL Active Employees	$9,941,264	$18,946,994
AAL Current Retirees	$17,263,802	$23,914,729
TOTAL AAL	$27,205,066	$42,861,723
FUNDING	0	0
TOTAL UAAL	$27,205,066	$42,861,723

Normal (Service) Cost (as of January 1, 2013)

	At 7.50% Discount	At 4.00% Discount
TOTAL	$789,664	$1,697,110

SUMMARY OF RESULTS
(continued)

Annual Required Contribution (ARC) Calculation

	At 7.50% Discount	At 4.00% Discount
Amortization of UAAL (26 yrs for Unfunded, 30 Yrs for Funded)	$1,532,468	$1,801,970
Normal Cost	$789,664	$1,697,110
TOTAL	$2,322,132	$3,499,080

Expected Claims

- Fiscal 2013 $1,450,184

Schedule of Funding Progress Other Post-Employment Benefits
(Dollars in Thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) [Projected Unit Credit] (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll (b-a)/c)
7/1/2008	$0	$43,819	$43,819	0.00%	NA	NA
1/1/2011	$0	$39,776	$39,776	0.00%	$29,389	135%
1/1/2013	$0	$42,862	$42,862	0.00%	$30,199	141.9%

RESULTS BY ENTERPRISE FUND

Water

Year	UAL	Normal Cost	Amort.	ARC	Interest on NOO[1]	ARC Adjust.[1]	OPEB Cost	Total Contribs.[1]	Change in NOO	NOO
2009	$344,319	$16,305	$12,719	$29,024	NA	NA	$29,024	$4,006	$25,018	$25,018
2010	$367,357	$16,998	$13,164	$30,163	$1,063	$953	$30,273	$4,789	$25,484	$50,502
2011	$312,546	$14,327	$12,675	$27,002	$2,146	$1,015	$28,134	$4,307	$23,827	$74,329
2012	$336,367	$14,936	$14,081	$29,017	$3,159	$2,114	$30,062	$4,926	$25,136	$99,465
2013	$139,216	$9,884	$5,853	$15,737	$3,979	$4,182	$15,534	$1,720	$13,815	$113,280
2014	$153,310	$10,280	$6,680	$16,960	$4,531	$4,936	$16,555	$1,792	$14,763	$128,043

Sewer

Year	UAL	Normal Cost	Amort.	ARC	Interest on NOO[1]	ARC Adjust.[1]	OPEB Cost	Total Contribs.[1]	Change in NOO	NOO
2009	$249,623	$12,881	$9,221	$22,102	NA	NA	$22,102	$2,290	$19,811	$19,811
2010	$266,325	$13,428	$9,544	$22,972	$842	$754	$23,060	$2,738	$20,321	$40,133
2011	$226,588	$11,318	$9,189	$20,507	$1,706	$779	$21,433	$2,462	$18,971	$59,104
2012	$245,503	$11,799	$10,277	$22,077	$2,512	$2,397	$22,192	$2,816	$19,375	$78,479
2013	$584,910	$11,567	$24,590	$36,157	$3,139	$3,299	$35,997	$10,807	$25,190	$103,669
2014	$609,315	$12,030	$26,548	$38,577	$4,147	$4,517	$38,207	$16,776	$21,432	$125,101

All Other

Year	UAL	Normal Cost	Amort.	ARC	Interest on NOO[1]	ARC Adjust.[1]	OPEB Cost	Total Contribs.[1]	Change in NOO	NOO
2009	$43,819,459	$2,121,718	$1,596,758	$3,718,476	NA	NA	$3,718,476	$1,142,302	$2,576,174	$2,576,174
2010	$46,751,352	$2,211,891	$1,652,644	$3,864,535	$109,487	$98,104	$3,875,919	$1,365,666	$2,510,253	$5,086,427
2011	$39,775,805	$1,864,303	$1,591,218	$3,455,521	$216,173	$208,158	$3,463,535	$1,228,098	$2,235,438	$7,321,865
2012	$42,175,713	$1,943,536	$1,741,246	$3,684,782	$311,179	$307,591	$3,688,371	$1,404,519	$2,283,851	$9,605,716
2013	$42,861,723	$1,675,659	$1,771,527	$3,447,186	$384,229	$403,839	$3,427,576	$1,437,657	$1,989,919	$11,595,635
2014	$44,862,283	$1,742,685	$1,921,424	$3,664,109	$463,825	$505,222	$3,622,712	$1,492,624	$2,130,088	$13,725,723

[1]For all years, Total Contributions are equal to the implicit premiums paid.
Black boxed area estimated numbers based on prior valuation.

Funding Schedule at 7.50%

Fiscal Year	Normal Cost[1]	Amortization[2]	Contribution	Year-End UAAL	Projected Annual Benefit Cost[3]
2013	789,664	1,532,468	2,322,132	27,598,043	1,450,184
2014	848,889	1,582,274	2,431,162	27,966,952	1,511,192
2015	912,555	1,633,697	2,546,253	28,308,248	1,668,843
2016	980,997	1,686,793	2,667,790	28,618,065	1,782,894
2017	1,054,572	1,741,613	2,796,185	28,892,186	1,875,872
2018	1,133,665	1,798,216	2,931,881	29,126,018	1,936,612
2019	1,218,690	1,856,658	3,075,347	29,314,562	2,043,246
2020	1,310,091	1,916,999	3,227,091	29,452,380	2,096,348
2021	1,408,348	1,979,302	3,387,650	29,533,559	2,163,639
2022	1,513,974	2,043,629	3,557,603	29,551,675	2,217,784
2023	1,627,522	2,110,047	3,737,569	29,499,750	2,251,060
2024	1,749,587	2,178,623	3,928,210	29,370,211	2,238,781
2025	1,880,806	2,249,429	4,130,234	29,154,841	2,314,072
2026	2,021,866	2,322,535	4,344,401	28,844,729	2,343,902
2027	2,173,506	2,398,017	4,571,523	28,430,215	2,358,767
2028	2,336,519	2,475,953	4,812,472	27,900,832	2,384,127
2029	2,511,758	2,556,422	5,068,179	27,245,241	2,320,684
2030	2,700,140	2,639,505	5,339,645	26,451,166	2,328,733
2031	2,902,650	2,725,289	5,627,939	25,505,318	2,347,046
2032	3,120,349	2,813,861	5,934,210	24,393,316	2,340,817
2033	3,354,375	2,905,312	6,259,687	23,099,605	2,330,401
2034	3,605,953	2,999,734	6,605,687	21,607,361	2,317,537
2035	3,876,400	3,097,225	6,973,625	19,898,395	2,226,116
2036	4,167,130	3,197,885	7,365,015	17,953,048	2,144,485
2037	4,479,664	3,301,817	7,781,481	15,750,074	2,114,651
2038	4,815,639	3,409,126	8,224,765	13,266,520	2,075,814
2039	5,176,812	3,519,922	8,696,734	10,477,592	1,997,427
2040	5,565,073	3,634,320	9,199,393	7,356,518	1,959,125
2041	5,982,454	3,752,435	9,734,889	3,874,389	1,878,766
2042	6,431,138	3,874,389	10,305,527	0	1,805,232

[1]Assumes 7.50% annual increase in normal cost and a static group of actives
[2]Asssumes 3.25% annual increase in amortization payment
[3]The Pay-As-You-Go amount is for the current group of actives and retirees and is shown for the calendar year. It does not include any future hires. It is not directly comparable to the funding contribution but it included for illustrative purposes only. It does illustrate in the short-term, the estimated amount of claims costs for retirees. However, the retiree amount is expected to grow as new employees retire or become disabled.

Sensitivity Analysis

The results of any actuarial valuation are sensitive to the assumptions used. That is, a change in an actuarial assumption will produce a change in the actuarial accrued liability and/or normal cost each year of the valuation. To illustrate this sensitivity, we performed valuations in which we changed two different inputs: the trend rate and the discount rate.

A) Trend Rate Sensitivity

For postretirement medical plans in particular, the calculated actuarial values are highly sensitive to the assumed rate of health care cost trend. This is due to the compounding effect of the annual trend rates assumed for medical costs, as opposed to pension valuations where benefit levels typically remain fixed.

The following table illustrates the effect on our valuation results of a 1% increase or decrease in the assumed rates of health care cost trend in each year.

	Health Care Cost Trend Rates		
	As Reported (4.00%)	+1% Each Year	-1% Each Year
Liability for:			
▪ Future Retirees	$18,946,994	$23,845,586	$15,573,937
▪ Current Retirees, Beneficiaries, and Survivors	$23,914,729	$26,853,844	$21,746,126
Total AAL	$42,861,723	$50,699,430	$37,320,063
Normal Cost	$1,697,110	$2,228,351	$1,346,646
Annual Required Contribution for Fiscal Year 2013:	$3,499,080	$4,359,830	$2,915,637

The cumulative effect of a 1% increase in health care cost trend increases the AAL by approximately 18%, the normal cost by 31%, and the ARC by 25%. A 1% decrease in trend would decrease the AAL by 13%, the normal cost by 21% and the ARC by 17%.

There is the likelihood – based on historical experience – of significant deviations from the smooth rates of health care cost increase typically projected in any actuarial valuation. Therefore, emerging experience under the plan is likely to differ from the assumptions made as of any valuation date. This will produce actuarial gains and losses each year, even if the underlying assumptions remain reasonable for the future. Amortization of gains and losses will affect the updated funding schedule calculated at any point in the future.

B) Discount Rate Sensitivity

We also examined the sensitivity of the various key numbers to changes in the discount rate. For this testing, we varied the discount rate by 0.50%, or in other words, we used rates of 3.50% and 4.50%. The following table shows the results we obtained:

	As Reported (4.00%)	Minus 0.50% (3.50%)	Plus 0.50% (4.50%)
Liability for:			
Future Retirees	$18,946,994	$21,377,956	$17,195,846
Current Retirees, Beneficiaries, and Survivors	$23,914,729	$25,454,560	$22,861,192
Total AAL	$42,861,723	$46,832,516	$40,057,038
Normal Cost	$1,697,110	$1,958,841	$1,514,875
Annual Required Contribution for Fiscal Year 2013:	$3,499,080	$3,815,069	$3,298,346

Thus, the cumulative effect of a 0.50% increase in the discount rate is to decrease the AAL by approximately 7%, the normal cost by 11%, and the ARC by 6%. A 0.50% decrease in the discount rate would increase the AAL by 9%, the normal cost by 15% and the ARC by 9%. It is prudent, and GASB Statement No. 45 requires, an updated actuarial valuation be performed periodically. For an entity of Medfield's size, a new valuation will be required at least every two years.

Actuarial Methods and Assumptions

1.	Actuarial Cost Method	Costs are attributed between past and future service using the Projected Unit Credit cost method. For attribution purposes, benefits are assumed to accrue over all employee service until decrement.
2.	Interest Rate/Discount Rate	7.50% per year net of investment expenses for a funded program. 4.00% per year net of investment expenses for an unfunded program. per year net of investment expenses for a partially program.
3.	Amortization Method	Closed twenty-six year amortization (remainder of initial thirty year amortization). Uses level percentage of payroll (3.25% annual rate of increase) for partially funded plan.
4.	Asset Valuation Method	Not applicable
5.	Mortality	Actives: The RP-2000 Mortality Tables (Sex-distinct) for Employees projected 18 years. Retirees: The RP-2000 Mortality Tables (Sex-distinct) for Healthy Annuitants projected 18 years. Disabled: The RP-2000 Mortality Tables (Sex-distinct) for Healthy Annuitants projected 18 years and set forward 2 years

Actuarial Methods and Assumptions
(Continued)

6a. Withdrawal Prior to Retirement (all except teachers). Based on years of service. Same for Tier 1 and Tier 2 employees.

Years of Service	Groups 1,2	Group 4
0	15.00%	1.50%
1	12.00%	1.50%
2	10.00%	1.50%
3	9.00%	1.50%
4	8.00%	1.50%
5	7.60%	1.50%
6	7.50%	1.50%
7	6.70%	1.50%
8	6.30%	1.50%
9	5.90%	1.50%
10	5.40%	1.50%
11	5.00%	0.00%
12	4.60%	0.00%
13	4.10%	0.00%
14	3.70%	0.00%
15	3.30%	0.00%
16	2.00%	0.00%
17	2.00%	0.00%
18	2.00%	0.00%
19	2.00%	0.00%
20	2.00%	0.00%
21	1.00%	0.00%
22	1.00%	0.00%
23	1.00%	0.00%
24	1.00%	0.00%
25	1.00%	0.00%
26	1.00%	0.00%
27	1.00%	0.00%
28	1.00%	0.00%
29	1.00%	0.00%
30+	0.00%	0.00%

Actuarial Methods and Assumptions
(Continued)

6b. Withdrawal Prior to Retirement for Teachers. Same for Tier 1 and Tier 2 employees.

		Service		
	Age	0	5	10
Male Teachers	25	12.00%	4.50%	1.00%
	35	11.00	5.00	1.50
	45	9.50	5.00	2.00
	55	7.50	4.50	2.50
Female Teachers	25	10.00%	9.00%	5.00%
	35	12.00	8.40	4.10
	45	8.90	4.70	2.40
	55	8.00	3.20	2.00

7.	Eligibility for Vested Post-Retirement Medical Benefits upon Withdrawal	Only those actually retiring from the Town with 10 years of Chapter 32 Credited Service are eligible for a benefit.

Actuarial Methods and Assumptions
(Continued)

8. Disability Prior to Retirement

The rates shown at the following sample ages illustrate the assumption regarding the incidence of disability. Disability is assumed to be 55% ordinary and 45% accidental for Group 1 and 10% ordinary and 90% accidental for Group 4 and 55% ordinary and 45% accidental for Teachers. Disability rates were not different for Tier 1 employees versus Tier 2 employees.

Rate of Disability

Age	Groups 1 and 2	Group 4	Teachers
20	0.01%	0.10%	0.004%
25	0.02%	0.20%	0.005%
30	0.03%	0.30%	0.006%
35	0.06%	0.30%	0.006%
40	0.10%	0.30%	0.010%
45	0.15%	1.00%	0.030%
50	0.19%	1.25%	0.050%
55	0.24%	1.20%	0.080%
60	0.28%	0.85%	0.100%

Actuarial Methods and Assumptions
(Continued)

9a. Rates of Retirement: Tier 1 Non-Teachers (hired before April 2, 2012)

	Rates of Retirement		
Age	Groups 1 and 2 Male	Groups 1 and 2 Female	Group 4
50	1.00%	1.50%	2.00%
51	1.00%	1.50%	2.00%
52	1.00%	2.00%	2.00%
53	1.00%	2.50%	5.00%
54	2.00%	2.50%	7.50%
55	2.00%	5.50%	15.00%
56	2.50%	6.50%	10.00%
57	2.50%	6.50%	10.00%
58	5.00%	6.50%	10.00%
59	6.50%	6.50%	15.00%
60	12.00%	5.00%	20.00%
61	20.00%	13.00%	20.00%
62	30.00%	15.00%	25.00%
63	25.00%	12.50%	25.00%
64	22.00%	18.00%	30.00%
65	40.00%	15.00%	100.00%
66	25.00%	20.00%	NA
67	25.00%	20.00%	NA
68	30.00%	25.00%	NA
69	30.00%	20.00%	NA
70	100.00%	100.00%	NA

Actuarial Methods and Assumptions
(Continued)

9a. Rates of Retirement: Tier 2 Non-Teachers (hired post-April 1, 2012)

	Rates of Retirement		
Age	Groups 1 and 2 Male	Groups 1 and 2 Female	Group 4
50	-	-	
51	-	-	
52	-	-	
53	-	-	
54	-	-	
55	-	-	25.00%
56	-	-	15.00%
57	-	-	20.00%
58	-	-	10.00%
59	-	-	15.00%
60	30.00%	30.00%	20.00%
61	20.00%	10.00%	20.00%
62	15.00%	12.00%	25.00%
63	25.00%	10.00%	25.00%
64	20.00%	15.00%	30.00%
65	25.00%	13.00%	100.00%
66	20.00%	18.00%	NA
67	50.00%	40.00%	NA
68	30.00%	25.00%	NA
69	30.00%	25.00%	NA
70	100.00%	100.00%	NA

9b. Rates of Retirement: Tier 1 Teachers (hired before April 2, 2012)

Male Teachers

	Service		
Age	<20 Years	20-29 years	>29 years
50	N/A	1.0%	2.0%
51	N/A	1.0%	2.0%
52	N/A	1.0%	2.0%
53	N/A	1.0%	2.0%
54	N/A	1.0%	2.0%
55	3.0%	3.0%	6.0%
56	8.0%	5.0%	20.0%
57	15.0%	8.0%	35.0%
58	15.0%	10.0%	50.0%
59	20.0%	20.0%	50.0%
60	15.0%	20.0%	50.0%
61	30.0%	25.0%	50.0%
62	20.0%	30.0%	40.0%
63	30.0%	30.0%	40.0%
64	40.0%	30.0%	40.0%
65	40.0%	40.0%	50.0%
66	40.0%	30.0%	50.0%
67	40.0%	30.0%	50.0%
68	40.0%	30.0%	50.0%
69	40.0%	30.0%	50.0%
70	100.0%	100.0%	100.0%

Actuarial Methods and Assumptions
(Continued)

9b. Rates of Retirement Teachers. Tier 1 Teachers (hired prior to 4/2/2012)

Female Teachers

	Service		
Age	<20 years	20-29 years	>29 years
50	0.0%	1.5%	2.0%
51	0.0%	1.5%	2.0%
52	0.0%	1.5%	2.0%
53	0.0%	1.5%	2.0%
54	0.0%	1.5%	2.0%
55	2.0%	3.0%	6.0%
56	2.0%	3.0%	15.0%
57	8.0%	7.0%	30.0%
58	10.0%	7.0%	35.0%
59	15.0%	11.0%	35.0%
60	20.0%	16.0%	35.0%
61	20.0%	20.0%	35.0%
62	25.0%	30.0%	40.0%
63	24.0%	30.0%	30.0%
64	20.0%	30.0%	35.0%
65	30.0%	30.0%	35.0%
66	30.0%	30.0%	35.0%
67	30.0%	30.0%	30.0%
68	30.0%	30.0%	30.0%
69	30.0%	30.0%	30.0%
70	100.0%	100.0%	100.0%

Actuarial Methods and Assumptions
(Continued)

9b. Rates of Retirement: Tier 2 Teachers (hired after April 1, 2012)

Male Teachers

	Service		
Age	<20 Years	20-29 years	>29 years
50	N/A	N/A	N/A
51	N/A	N/A	N/A
52	N/A	N/A	N/A
53	N/A	N/A	N/A
54	N/A	N/A	N/A
55	3.0%	0.0%	0.0%
56	8.0%	0.0%	0.0%
57	15.0%	0.0%	0.0%
58	15.0%	0.0%	0.0%
59	20.0%	0.0%	0.0%
60	25.0%	35.0%	45.0%
61	35.0%	35.0%	45.0%
62	30.0%	30.0%	45.0%
63	35.0%	30.0%	45.0%
64	40.0%	35.0%	45.0%
65	40.0%	35.0%	45.0%
66	40.0%	40.0%	45.0%
67	50.0%	45.0%	55.0%
68	50.0%	45.0%	55.0%
69	55.0%	45.0%	55.0%
70	100.0%	100.0%	100.0%

Actuarial Methods and Assumptions
(Continued)

9b. Rates of Retirement Teachers. Tier 2 Teachers (hired after 4/1/2012)

Female Teachers

	Service		
Age	<20 years	20-29 years	>29 years
50	0.0%	0.0%	0.0%
51	0.0%	0.0%	0.0%
52	0.0%	0.0%	0.0%
53	0.0%	0.0%	0.0%
54	0.0%	0.0%	0.0%
55	0.0%	0.0%	0.0%
56	0.0%	0.0%	0.0%
57	0.0%	0.0%	0.0%
58	0.0%	0.0%	0.0%
59	0.0%	0.0%	0.0%
60	25.0%	23.0%	45.0%
61	30.0%	30.0%	45.0%
62	25.0%	25.0%	45.0%
63	25.0%	25.0%	45.0%
64	30.0%	30.0%	45.0%
65	30.0%	30.0%	45.0%
66	30.0%	30.0%	45.0%
67	35.0%	35.0%	45.0%
68	35.0%	35.0%	45.0%
69	35.0%	35.0%	45.0%
70	100.0%	100.0%	100.0%

Actuarial Methods and Assumptions
(Continued)

Age	Managed Care Commercial Individual	Managed Care Commercial Blended[1]	Indemnity Medicare	Managed Care Medicare
55	$8,231.60	$13,056.75	$2,291.67	$1,491.52
60	$9,823.88	$15,582.38	$2,734.96	$1,780.04
65	$12,067.62	$16,109.75	$3,359.62	$2,186.59
70	$13,989.68	$18,675.61	$3,894.72	$2,534.86
75	$15,828.04	$21,129.74	$4,406.52	$2,867.96
80	$17,475.43	$23,328.94	$4,865.15	$3,166.46
85	$18,366.86	$18,366.86	$5,113.32	$3,327.98

[1] For Commercial Medical, blended rates below 65 are 35% Family and 65% Individual. Blended rates 65 and higher are 20% Family and 80% Individual. Individual rates are used for all participants 81 and higher.

11. Trend Rates By Plan

Calendar Year	Commercial Managed Care	Medicare Indemnity	Medicare Managed Care
2013	1.79%	-6.37%	6.19%
2014	8.00%	8.00%	7.00%
2015	7.50%	7.50%	6.50%
2016	7.00%	7.00%	6.00%
2017	6.50%	6.50%	5.50%
2018	6.00%	6.00%	5.00%
2019	5.50%	6.00%	5.00%
2020	5.00%	6.00%	5.00%
2021	5.00%	6.00%	5.00%
2022+	5.00%	6.00%	5.00%

12. Medicare Eligibility — Employees: 100% if hired March 31, 1986 or after; 85% if hired pre-March 31, 1986
Spouses:100%

13. Participation Rates — Current retirees and spouses are assumed to continue the same coverage they have as of the valuation date. No future election of coverage is assumed for those retirees and spouses who currently have not elected coverage.
All Retirees: 70.0% of the active Town employees eligible for post-employment medical benefits are assumed to elect Medical Coverage immediately upon retirement.

	70% of the active employees eligible for post-employment medical benefits are assumed to elect Life Insurance coverage immediately upon retirement. For all Retirees: Of those electing coverage, 80% are assumed to have a covered spouse at retirement. Of this 80%, 65% are assumed to participate pre-65, while 65% are assumed to participate post-65. Participants with no or unknown current coverage (e.g. active employees and/or vested inactives who do not currently participate in Medfield's medical plans) are assumed to elect retiree coverage at the same rates as currently covered active employees. Medicare-eligible retirees currently under age 65 are assumed to elect a Medicare plan option at age 65.
14. Expenses	Administrative expenses are included in the per capita medical cost assumption.
15. Projections	The January 1, 2013 valuation was not adjusted for timing when determining the funding schedule. This means that the Pay-as-you-go amount as well as the Actuarial Valuation results have not been modified for interest or any other timing factor in our presentation.
16. Massachusetts Teachers Retirement System (MTRS)	In this report, members of the Massachusetts Teachers Retirement System are sometimes referred to as Teachers.
17. Section 9 ½ of Chapter 32B	No current or future payments or receipts are assumed due to past service or future service with other Chapter 32 entities.
18. Valuation Date	January 1, 2013

Principal Plan Provisions Recognized in Valuation

1.	Eligibility for Benefits	Current retirees, beneficiaries and spouses of Medfield are eligible for medical benefits. Current employees or spouses who retiree with a benefit from the Medfield Retirement System or the Massachusetts Teachers' Retirement System. Survivors of Medfield employees and retirees are also eligible for medical benefits.
2.	Medical Benefits	Various medical plans offered by Medfield to its own employees.
3.	Life Insurance	Medfield retirees are eligible for a $5,000 life insurance benefit offered by Medfield, provided the retiree makes the required contributions. Each employee contributes 25% of the premium or $2.80/month for the coverage.
4.	Retiree Contributions	Based on data provided by Medfield.

Glossary

Actuarial Accrued Liability	The portion, as determined by a particular Actuarial Cost Method, of the present value of benefits which is not provided for by future Normal Costs.
Actuarial Assumptions	Assumptions as to the occurrence of future events affecting Other Post-employment Benefits such as: mortality rates, disability rates, withdrawal rates, and retirement rates, the discount assumption, and the trend rates.
Actuarial Cost Method	A procedure for determining the Actuarial Present Value of Total Projected benefits and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Normal and an Actuarial Accrued Liability.
Amortization Payment	The portion of the OPEB contribution designed to pay interest and to amortize the Unfunded Actuarial Accrued Liability.
Annual OPEB Cost	The accrual-basis measure of the periodic cost of an employer's participation in a defined-benefit OPEB plan.
Annual Required Contribution (ARC)	The employer's periodic contributions to a defined benefit OPEB plan, calculated in accordance with the parameters defined in GASB 45. This is defined as the sum of the Normal Cost and the Amortization payment.
Commercial Plans	Plans designed to cover the medical expenses of those not otherwise covered by Medicare.
GASB	The Governmental Accounting Standards Board is the organization that establishes financial reporting standards for state and local governments.

Glossary
(continued)

Investment Return Assumptions (Discount Rate)	The rate used to adjust a series of future benefit payments to reflect the time value of money. Under GASB 45, this rate is related to the degree to which the OPEB program is funded.
Healthcare Cost Trend Rate	The rate of change in per capita health claims costs over time as a result of factors such as medical inflation, utilization of healthcare services, the intensity of the delivery of services, technological developments, and cost-shifting.
Medicare Plans	Medical plans sold to those over 65 who are also covered by Medicare. These plans are supplemental to the Medicare plan, which is considered primary.
Net OPEB Obligation	The cumulative difference, since the effective date of GASB 45, between the annual OPEB cost and the employer's contributions to the plan.
Normal Cost	The portion of the Actuarial Present value of plan benefits that is allocated to a valuation year by the Actuarial Cost Method.
OPEB	Other Postemployment benefits other than pensions. This does not include plans such as severance plans or sick-time buyouts.
Pay-as-You-Go	The amount of benefits paid out to plan participants during the year.
Per Capita Claims Cost	The current average annual cost of providing postretirement health care benefits per individual.
Unfunded Actuarial Accrued Liability	The portion of the Actuarial Accrued Liability that is not covered by plan assets. For a plan that is completely unfunded, this amount is equivalent to the Actuarial Accrued Liability.
Valuation Date	The point from which all future plan experience is projected and as of which all present values are calculated.

Acknowledgement of Qualifications

We, Lawrence Stone and Kevin Gabriel, are consultants for Stone Consulting, Inc. and are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Lawrence B. Stone
Member, American Academy of Actuaries

Kevin K. Gabriel
Member, American Academy of Actuaries

5 West Mill Street, Suite 4
Medfield, MA 02052
Tel. (508) 359-9600
Fax. (508) 359-0190
E-mail Lstone@stoneconsult.com