



HOOKER & HOLCOMBE, INC.
Benefit Consultants and Actuaries

65 LaSalle Road | West Hartford, CT 06107-2397 | *Founded in 1956*

Confidential

May 10, 2012

Ms. Brigid Marks
Director of Human Resources
City of Norwich
City Hall Building Room #213
100 Broadway
Norwich, CT 06360

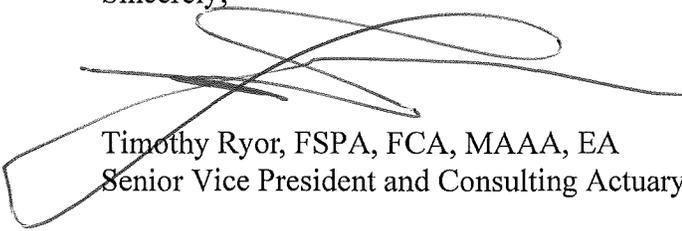
Dear Brigid:

We are pleased to present our actuarial valuation for the City of Norwich Volunteer Firefighters Relief Fund.

The report is as of January 1, 2012, and establishes the contribution level for the fiscal year ending June 30, 2013 and the fiscal year ending June 30, 2014.

Please let me know if you have any questions or concerns.

Sincerely,



Timothy Ryor, FSPA, FCA, MAAA, EA
Senior Vice President and Consulting Actuary

/mmh
Enclosure

c: J. Pothier
J. Ruffo

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HOOKER & HOLCOMBE, INC.
Benefit Consultants and Actuaries

65 LaSalle Road
West Hartford, CT 06107-2397

860-521-8400 tel
860-521-3742 fax
www.hhconsultants.com

**City of Norwich
Volunteer
Firefighters'
Pension Plan**

Actuarial Report for Cash
Contribution Purposes

January 1, 2012

Timothy Ryor, FSPA, FCA,
MAAA, EA
Senior Vice President and
Consulting Actuary

Nancy S. Mastrianni
Pension Analyst

May 10, 2012

City of Norwich Volunteer Firefighters' Pension Plan

Table of Contents

Section	Page
Executive Summary	1
I. Introduction	
A. Purposes of the Valuation	2
B. Experience During Period Under Review	2
C. Changes Since the Last Valuation	2
D. Certification	3
II. Results of the Valuation	
A. Actuarial Balance Sheet	4
B. Development of Unfunded Accrued Liability and Funded Ratio	5
C. Annual Contribution	6
III. Supporting Exhibits	
A. Membership Data	7
Age/Service Chart	8
B. Assets – Market Value	9
IV. Actuarial Methods and Assumptions	
A. Actuarial Cost Method	11
B. Actuarial Assumptions	12
V. Summary of Current Principal Plan Provisions	14

City of Norwich Volunteer Firefighters' Pension Plan

Executive Summary		
	January 1, 2012	January 1, 2010
Status		
Active Employees	143	143
Retired Pensioners	52	50
Terminated Vested Employees	<u>0</u>	<u>0</u>
Total	195	193
Actuarial present value of future benefits	5,292,712	4,421,367
Actuarial accrued liability*	4,804,450	3,962,415
Asset value		
Market	1,639,416	1,403,930
Normal cost – employer	50,400	45,136
Unfunded accrued liability	3,165,034	2,558,485
Employer Contributions as of end of plan year	308,987	254,475
Volunteer Contributions	12,528	13,320

* *EAN level \$ basis.*

City of Norwich Volunteer Firefighters' Pension Plan

Section I Introduction

A. Purposes of the Valuation

The purpose of the valuation is to determine the funded status of the plan as well as the recommended cash contribution for the plan year. The information found in *II. Results of the Valuation B and C* of the report have been developed for this purpose.

The ultimate cost of a pension plan is based primarily on the level of benefits promised by the plan. The pension fund's investment earnings serve to reduce the cost of plan benefits and expenses. Thus,

<i>Town's</i>								
<i>Ultimate</i>	=	<i>Benefits</i>	+	<i>Expenses</i>	-	<i>Investment</i>	-	<i>Employee</i>
<i>Cost</i>		<i>Paid</i>		<i>Incurred</i>		<i>Return</i>		<i>Contributions</i>

B. Experience During Period Under Review

This report shows an Unfunded Accrued Liability after plan changes of \$3,165,034. This represents an increase of \$606,549 compared to the prior valuation. The plan experienced a small net actuarial gain during the last 2 years. Losses from less than expected investment returns in 2011 were offset by better than expected investment returns in 2010 and an overall gain from better than expected liability experience. The net gain increased the resulting contribution by about \$17,500.

C. Changes Since the Last Valuation

This report reflects the plan changes adopted on January 3, 2011 by Ordinance 1648. This increased the normal cost by approximately \$11,900 and the accrued liability by \$739,002.

City of Norwich Volunteer Firefighters' Pension Plan

Section I Introduction (continued)

D. Certification

This report presents the results of the January 1, 2012 Actuarial Valuation for the City of Norwich Volunteer Firefighters' Pension Plan (the Plan) for the purpose of estimating the funded status of the Plan and determining the Annual Required Contribution (ARC) for the fiscal years ending June 30, 2013 and June 30, 2014. This report is intended to satisfy the requirements of Connecticut General Statute 7-450a. This report may not be appropriate for any other purpose.

The valuation has been performed in accordance with generally accepted actuarial principles and practices. It is intended to comply with all applicable Actuarial Standards of Practice.

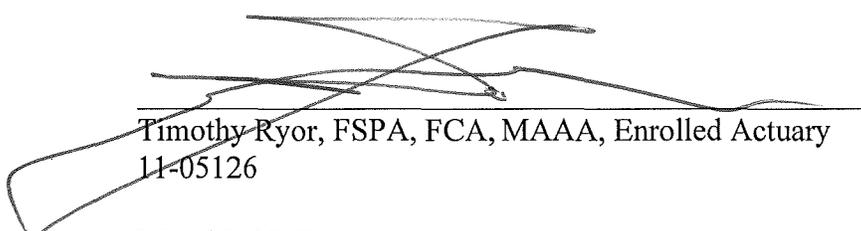
I certify that the actuarial assumptions and methods that were selected by me and represent my best estimate of anticipated actuarial experience under the Plan.

In preparing this valuation, I have relied on employee data provided by the City, and on asset and contribution information provided by the City. I have audited neither the employee data nor the financial information, although I have reviewed them for reasonableness.

The results in this valuation report are based on the Plan as summarized in the *Plan Provisions* section of this report and the actuarial assumptions and methods detailed in the *Description of Actuarial Methods and Assumptions* section of this report.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as: 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 this report, an analysis of the potential range of such future measurements has not been performed.

I am a member of the American Academy of Actuaries and meet its Qualification Standards to render the actuarial opinion contained herein.



Timothy Ryor, FSPA, FCA, MAAA, Enrolled Actuary
11-05126

May 10, 2012

City of Norwich Volunteer Firefighters' Pension Plan

Section II Results of the Valuation

A. Actuarial Balance Sheet

The essential elements of the actuarial valuation process are shown by the actuarial balance sheet. The description of the funding method in Section IV defines and explains the terms used in this actuarial balance sheet.

	January 1, 2012	January 1, 2010
Actuarial Liabilities		
Present Value of Future Benefits		
Active Employees	\$ 2,568,360	\$ 2,233,909
Retired Pensioners	<u>2,724,352</u>	<u>2,187,458</u>
TOTAL	5,292,712	4,421,367
Source of Funds		
Plan Assets (Market Value)	1,639,416	1,403,930
Unfunded Accrued Liability	3,165,034	2,558,485
Actuarial Present Value of Future Normal Cost Contributions	<u>488,262</u>	<u>458,952</u>
TOTAL	5,292,712	4,421,367

City of Norwich Volunteer Firefighters' Pension Plan

Section II

Results of the Valuation (continued)

B. Development of Unfunded Accrued Liability and Funded Ratio

	January 1, 2012	January 1, 2010
Accrued Liability:		
Retired Pensioners	\$2,724,352	\$2,187,458
Active Employees	<u>2,080,098</u>	<u>1,774,957</u>
Total Accrued Liability	4,804,450	3,962,415
Plan Assets (Market Value)	<u>1,639,416</u>	<u>1,403,930</u>
Unfunded Accrued Liability	3,165,034	2,558,485
Funded Ratio (Plan Assets Divided by Total Accrued Liability)	34.12%	35.43%

City of Norwich Volunteer Firefighters' Pension Plan

Section II

Results of the Valuation (continued)

C. Annual Contribution for Fiscal Years Beginning July 1, 2012 and July 1, 2013

Based on the employee data and asset information furnished us, the actuarial methods and assumptions shown in Section IV and the plan provisions outlined in Section V, we have developed the Town's contribution for both the 2012-2013 and 2013-2014 fiscal years.

Recommended Contribution

For each of the 2012-2013 and 2013-2014 Fiscal Years, the Recommended Contribution for the City, in addition to the member contributions, is as follows:

a) Total Normal Cost (including expenses)	\$ 62,928
b) Expected Employee Contributions	<u>12,528</u>
c) City Normal Cost (including expenses): (a) – (b)	50,400
d) Payment to Amortize the Actuarial Unfunded Past Service Liability over 30 years	<u>238,373</u>
e) City Contribution January 1: (c) + (d)	288,733
f) <i>Plus:</i> Interest at 7%	<u>20,214</u>
g) City Contribution due December 31: (e) + (f)	308,987
h) Expected Employee Contributions	<u>12,528</u>
i) Total Contributions	\$321,515

The contribution developed above assumes that the Unfunded Actuarial Past Service Liability will be amortized over a 30-year period from January 1, 2012.

City of Norwich Volunteer Firefighters' Pension Plan

Section III Supporting Exhibits

A. Membership Data

	Active Participants					Total
	Occum	Taftville	Yantic	East Great Plains	Laurel Hill	
Active, 1/1/2010	22	31	36	48	6	143
Adjustment	0	0	0	0	0	0
Retirements*	-1	-1	-1	0	0	-3
Terminations	-1	-1	-1	-2	-1	-6
Transfers	-1	0	+1	+1	-1	0
Deaths						
Without beneficiary	0	0	0	0	0	0
With beneficiary	0	0	0	0	0	
New Entrants	<u>+1</u>	<u>+1</u>	<u>+3</u>	<u>+4</u>	<u>0</u>	<u>+9</u>
Active, 1/1/2012	20	30	38	51	4	143
Active and Accruing Benefits (included above)	4	10	19	23	2	58

* Includes retirees who continue to accrue service.

	Retired Participants*					
Retired, 1/1/2010	10	15	15	8	2	50
Adjustment	0	0	0	0	0	0
New Retirements	+1	+1	+1	0	0	+3
New Beneficiaries	0	0	0	0	0	0
QDRO Beneficiaries	0	0	0	0	0	0
Deaths	<u>0</u>	<u>0</u>	<u>-1</u>	<u>0</u>	<u>0</u>	<u>-1</u>
Total, 1/1/2012	11	16	15	8	2	52

* Includes Retirees accruing service.

City of Norwich Volunteer Firefighters' Pension Plan

Section III Supporting Exhibits (continued)

Development of Asset Market Values

Summary of Fund Activity	
	Market Value
1. Beginning value 1/1/2010	
a. Trust assets	\$ 1,403,930
b. Accrued contribution	0
c. Benefits payable	0
d. Administrative expenses payable	0
e. Net: (a)+(b)-(c)-(d)	1,403,930
2. Contributions	
a. Contributions during year	261,700
b. Change in accrued contribution	0
c. Total for plan year	261,700
3. Disbursements	
a. Benefit payments during year	214,095
b. Administrative expenses during year	6,739
c. Change in benefits payable	0
d. Change in administrative expenses payable	0
e. Total for plan year	220,834
4. Net investment return	
a. Interest and dividends	42,723
b. Change in accrued income	0
c. Realized gain (loss)	7,188
d. Unrealized gain (loss)	116,410
e. Recognized capital appreciation	N/A
f. Required adjustment due to corridor	N/A
g. Reversal of prior year required adjustment	N/A
h. Investment-related expenses	(7,940)
i. Total	158,381
5. Ending value 1/1/2011	
a. Trust assets: (1a)+(2a)-(3a)-(3b)+(4i)	1,603,177
b. Accrued contribution	0
c. Benefits payable	0
d. Administrative expenses payable	0
e. Net: (a)+(b)-(c)-(d)	1,603,177
6. Approximate rate of return 2010	11.1%
7. Rate of return for Form 5500, Schedule B: $2 \times (4i) \div [(1e) + (5e) - (4i)]$	N/A

City of Norwich Volunteer Firefighters' Pension Plan

Section III Supporting Exhibits (continued)

Development of Asset Market Values

Summary of Fund Activity	
	Market Value
1. Beginning value 1/1/2011	
a. Trust assets	\$ 1,603,177
b. Accrued contribution	0
c. Benefits payable	0
d. Administrative expenses payable	0
e. Net: (a)+(b)-(c)-(d)	1,603,177
2. Contributions	
a. Contributions during year	306,560
b. Change in accrued contribution	0
c. Total for plan year	306,560
3. Disbursements	
a. Benefit payments during year	255,080
b. Administrative expenses during year	1,769
c. Change in benefits payable	0
d. Change in administrative expenses payable	0
e. Total for plan year	256,849
4. Net investment return	
a. Interest and dividends	43,190
b. Change in accrued income	0
c. Realized gain (loss)	4,931
d. Unrealized gain (loss)	(54,979)
e. Recognized capital appreciation	N/A
f. Required adjustment due to corridor	N/A
g. Reversal of prior year required adjustment	N/A
h. Investment-related expenses	(6,614)
i. Total	(13,472)
5. Ending value 1/1/2012	
a. Trust assets: (1a)+(2a)-(3a)-(3b)+(4i)	1,639,416
b. Accrued contribution	0
c. Benefits payable	0
d. Administrative expenses payable	0
e. Net: (a)+(b)-(c)-(d)	1,639,416
6. Approximate rate of return 2011	-0.8%
7. Rate of return for Form 5500, Schedule B: 2x(4i)÷[(1e)+(5e)-(4i)]	N/A

City of Norwich Volunteer Firefighters' Pension Plan

Section IV

Actuarial Methods and Assumptions

A. Actuarial Cost Methods - Entry Age Normal

Normal Cost

Under this method, the Normal Cost for each volunteer is the amount, necessary to fund his estimated normal retirement benefit if paid annually from entry age (the age at which the volunteer would have been first eligible for the plan, if it had always been in effect) to his assumed retirement age. The Normal Cost for the plan is the sum of the individual volunteers' Normal Costs. The Normal Cost for the City is the difference between the total Normal Cost for the year and the anticipated member contributions for that year.

Past Service Liability

The Actuarial Present Value of Future Pension Benefits that relates to service before the valuation date is the Actuarial Past Service Liability. The Unfunded City Actuarial Past Service Liability is the difference between the total Actuarial Past Service Liability and any Assets (including Accumulated Volunteer Contributions).

Gains and Losses

All gains and losses (the financial effect of the difference between the actual experience of the prior year and the result expected by the actuarial assumptions for that prior year) appear directly in the Actuarial Past Service Liability and are amortized at the same rate the City is amortizing the remaining Unfunded Actuarial Past Service Liability.

City of Norwich Volunteer Firefighters' Pension Plan

Section IV

Actuarial Methods and Assumptions (continued)

B. Actuarial Assumptions

Interest Return:	7%.										
Mortality:	Current Valuation: RP-2000 Mortality Table with separate male and female rates, with no collar adjustment, combined table for non-annuitants and annuitants projected to the valuation date with Scale AA.										
Mortality Improvement	Projected to date of decrement using Scale AA (generational mortality).										
Retirement Age:	The later of age 55 or 20 years of service. Active participants who are past their normal retirement age are assumed to retire immediately.										
Employee Turnover:	Volunteers who do not currently meet the Plan's eligibility requirements are excluded from the costs. In addition, termination rates based on the following scale are assumed: <table><thead><tr><th><u>Age</u></th><th></th></tr></thead><tbody><tr><td>25</td><td>5.00%</td></tr><tr><td>35</td><td>2.50%</td></tr><tr><td>45</td><td>0.75%</td></tr><tr><td>55</td><td>0.00%</td></tr></tbody></table> <p>Proportionate rates apply to intermediate ages. The above turnover is applied to all active volunteers to reflect the impact of turnover on the plan costs.</p>	<u>Age</u>		25	5.00%	35	2.50%	45	0.75%	55	0.00%
<u>Age</u>											
25	5.00%										
35	2.50%										
45	0.75%										
55	0.00%										
Expense Loading:	Estimated annual expenses are included in the Normal Cost, \$3,500 currently.										
Asset Valuation:	Market Value of assets.										
Death Benefits, Disability Benefits And Return of Contribution:	Valued explicitly using the underlying Actuarial Cost Method.										

City of Norwich Volunteer Firefighters' Pension Plan

Section IV

Actuarial Methods and Assumptions (continued)

Rates of Disability:	1985 Pension Disability Table Class 1		
	<u>Age</u>	<u>Male</u>	<u>Female</u>
	25	.038%	.047%
	35	.069%	.136%
	45	.202%	.303%
	55	.722%	.952%
Percent of Active Employees Married:	80% of males and 80% of females (prior valuation 85%).		
Spouse's Age:	Husbands are assumed to be 3 years older than wives.		

City of Norwich Volunteer Firefighters' Pension Plan

Section V

Outline of Plan Provisions (according to City Ordinance)

Effective Date:	January 1, 1988, Amended as of January 1, 2011 (Adopted January 31, 2011).
Eligibility:	Volunteers who have at least one year of service as of January 1, 1988 become eligible for membership on January 1, 1988. Volunteers after January 1, 1987 shall become Members on the first of the year following completion of 12 months of continuous volunteer service.
Normal Retirement Date:	Age 55 with 20 years of Credited Service.
Normal Retirement Benefit:	\$18.00 (was \$15.00) per month multiplied by years of Credited Service to Normal Retirement Date maximized at 40 years (was 35 years).
Deferred Retirement:	A member who is satisfactorily able to perform his duties may remain in active volunteer service after Normal Retirement Date. A member may begin to receive benefits at Normal Retirement Date even though he continues volunteer service; benefits will be adjusted annually to reflect the additional year of credit and to reflect any change in benefit level.
Form of Annuity:	90% Joint and Survivor Annuity.
Disability:	Totally and permanently disabled in the line of duty, benefit based on 40 years (was 35 years) of service.

City of Norwich Volunteer Firefighters' Pension Plan

Section V

Outline of Plan Provisions (according to City Ordinance) (continued)

Termination: A refund of volunteer contributions with interest at 3% (was 5%).

Pre-Retirement Death Benefits:

Spouse's Benefit:

Upon the death of an active Member who dies as a result of volunteer service to the City, his surviving spouse shall receive \$720 (was \$525) a month. A refund of volunteer contributions with interest shall be payable to a beneficiary if there is no surviving spouse.

Post-Retirement Death Benefits:

The surviving spouse shall receive (until death or remarriage) 90% of the pension the deceased member was receiving. If there is no surviving spouse, or the spouse dies or remarries payments shall be made to the then living children until they attain age 24.

Member's Contributions:

\$18.00 per month (was \$15.00 per month).
No contributions after completion of 40 years (was 35 years) of service.

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