

December 4, 2019

The Honorable Dan Rosenthal
TOWN OF NEWTOWN
Edmond Town Hall
3 Primrose St.
Newtown, CT 06470

Re: Town of Newtown Pension Plan - Selectmen and
Board of Education Personnel & Elected Officials Pension Plan
& Police Union Pension Plan
Our File No. 2823

Dear First Selectman Rosenthal:

We are pleased to present your Annual Valuation Report as of July 1, 2019. Again this year we have separated the report into two sections, with Part I containing the general calculations and disclosures, and Part II covering the individual participants benefit data.

For the 2020-2021 Fiscal Year of the Town, our recommended contributions are as follows:

	<u>Recommended (2020-21)</u>	<u>Prior Year (2019-20)</u>
Selectmen	\$ 687,277	\$ 720,920
Police (see separate rpt.)	<u>1,083,679</u>	<u>988,509</u>
Total Town of Newtown	\$1,770,956	\$1,709,429
Board of Education:	\$ 703,387	\$ 669,083

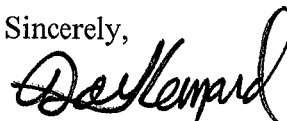
The above amounts are based on the July 1, 2019 valuation results projected forward to be applicable to the following fiscal year, and have been calculated using a 7.0% assumed discount rate.

If the deposits are to be made substantially later than July 1, 2019, interest at 7.0% per annum should be added.

Please see the General Comments section of the valuation report for information regarding changes in the plan's contribution requirements. At the end of the report is the information on the Elected Officials Pension Plan.

Please let me know if you have any questions or comments concerning this report.

Sincerely,



David G. Leonard, A.S.A.
Account Executive

cc: Ellen Whelan
Robert Tait

ACTUARIAL CERTIFICATION

This report has been prepared in accordance with generally accepted actuarial standards and procedures and conforms to the Guidelines for Professional Conduct of the American Academy of Actuaries.

The valuation is based on employee and plan financial data which were provided by the Plan Administrator, Plan Trustee, and various financial institutions. All information submitted to us has been reviewed for reasonableness and consistency, but has otherwise been accepted and relied upon without audit. The plan provisions and other material assumptions are disclosed in report in their respective sections.

Projected mortality improvements have been recognized through the use of SOA tables RP-2014 with projection scale MP-2018. This represents a change from 2018 when the prior year's projection scale, MP-2017 was employed.

To the best of our knowledge, the information supplied in this report is complete and accurate.

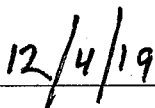
Future actuarial measurements may differ significantly from the current measurement presented in this report due to such factors as the following: plan experience differing from that anticipated; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation 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.

I, David G. Leonard, A.S.A., E.A., am a member of the Society of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained here



David G. Leonard, A.S.A.

Enrollment #17-03604



Date

ANNUAL VALUATION REPORT
FOR
TOWN OF NEWTOWN PENSION PLAN
BOARDS OF SELECTMEN AND EDUCATION
AS OF JULY 1, 2019

Prepared by:

David G. Leonard, ASA
T R PAUL, INC.

December 4, 2019

TOWN OF NEWTOWN PENSION PLAN

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TOWN OF NEWTOWN PENSION PLAN

I. HIGHLIGHTS

This section of the report summarizes the results of the July 1, 2019 actuarial valuation and provides a comparison with the results of the prior valuation. The development of these items for the current valuation is shown in the remaining sections of the report. The percentage in parenthesis express each amount as a percentage of covered payroll:

	July 1, 2019 <u>Valuation</u>		July 1, 2018 <u>Valuation</u>	
1. Recommended Annual Contributions:*				
a. Board of Selectmen	\$687,277	(10.7%)	\$720,920	(8.6%)
b. Board of Education	\$703,387	(9.8%)	\$669,083	(8.3%)
c. Total Town Plan	\$1,390,664	(10.3%)	\$1,390,003	(8.5%)
2. Covered Payroll of Participants (pension earnings projected for the fiscal year following the valuation date)				
a. Board of Selectmen	\$6,411,843		\$7,409,789	
b. Board of Education	\$7,142,960		\$7,335,284	
c. Total Town Plan	\$13,554,803		\$14,745,073	
3. Net Normal Cost (EAN)	\$817,292	(6.0%)	\$823,892	(5.8%)
4. Accrued Actuarial Liability (EAN)	\$33,987,873		\$32,456,485	
5. Assets - Market Value (MV)	\$28,275,000		\$26,552,507	
- Valuation Assets (VA)	\$28,595,505		\$27,126,749	
6. Unfunded Accrued Liability (VA)	\$5,392,368		\$5,329,736	
7. Actuarial Value of Benefits (total plan):				
a. Value of Vested Accrued Benefits	\$28,959,527		\$26,886,395	
b. Value of Non-Vested Accrued Bens.	\$703,815		\$685,300	
c. MV Assets in excess of Vested Benefits (5 minus 7a)	(\$684,527)		(\$333,888)	
8. Number of Participants:	<u>Sel.</u>	<u>Bd. of Ed.</u>	<u>Sel.</u>	<u>Bd. of Ed.</u>
a. Active Participants	110	163	130	175
b. Retired and Beneficiaries	70	70	66	61
c. Terminated Vested Participants (includes refunds only due)	28	20	19	22
d. Total	208	253	215	258

* Calculated assuming end of the fiscal year payment, for use in following fiscal year as of July 1.

TOWN OF NEWTOWN PENSION PLAN

II. GENERAL COMMENTS

The July 1, 2019 valuation report was prepared on a group of 110 active members in the Selectmen's accounts, and 163 actives from the Board of Education. This represents a decrease of thirty-two (32) active members from 2018, with about two-thirds of that in the Selectmen's group and the rest in the Board of Education.

The recommended contribution produced by the July 1, 2019 valuation increased \$601, to a recommended level of \$1,390,664 for the 2020-21 fiscal year. The Selectman group's recommended contribution decreased by about \$33,000, while the Board of Education increased by a similar amount.

A summary of the factors in the change for the year reveals the following:

Estimated Changes Due to:	<u>Selectmen</u>	<u>Bd. of Education</u>
Actives Chg. in Normal Cost:	\$ 32,481	\$ 42,875
Retired/Term Gains	(141,095)	(53,644)
Valuation Asset Losses:	32,660	28,296
New Members:	5,882	0
Change in Assumptions (phased in interest rates)	37,956	35,055
Misc. Actuarial Factors:	(1,527)	(18,278)
Total Changes:	\$ (33,643)	\$ 34,304

The July 1, 2019 Valuation was run using a 7% interest rate – the final step in a three year phase-in from the prior 7.5% assumed rate.

It is interesting to note that last year's full 7% calculations produced a recommended contribution for the 2019-20 plan year of \$1,458,238, which is about \$68,000 more than our 2020-21 recommendation.

The trust assets earned 5.22% using the GASB weighted method of calculating the yield. This created another actuarial loss that will be partially deferred for four more years by the valuation asset smoothing calculation.

The valuation yield was 4.58%, as past losses (and gains) continue to be worked off. We anticipate that next year's valuation will include recognized losses that will increase the recommended contribution by about \$40,000, and this has been built into the 2020-21 recommendation. The valuation asset cost factor shown above includes this bump, but also nets out last year's projected recognition losses.

After the valuation asset losses and the final phase in of the 7.00% interest assumption, the next most important factor in the cost calculations for the year was the participant experience.

TOWN OF NEWTOWN PENSION PLAN

II. GENERAL COMMENTS

The large decrease in active members in the Selectman's group resulted in both a large reduction in the normal cost, but also actuarial gains as terminated members' liabilities were much less than their projected benefit levels as active members. As shown above, the overall recommendation was decreased by \$141,095 thanks to six (6) retirees and sixteen (16) terminated members, both vested and non-vested. There were two new members in the Selectman's group, who added back almost \$6,000 of normal cost.

The Board of Education also experienced a decrease in active members, but their's was not as severe as the Selectmen, and it also was primarily retirees rather than terminations. Retirees will decrease the normal cost but generally do not create additional actuarial gains.

Both groups continuing active members experienced salary increases modestly above the assumed 3% rate (but still below 4%). As part of the new ASOP-51 disclosure (see below), we will be recommending a review of the salary history to see if a change in this assumption is in order.

The plan's market value funding ratios gave back some of last year's gains, due to the trust returns that were slightly below the assumed rate. The funding of accrued actuarial liabilities at 7% interest decreased 3.5% points to 83.2%, while the accrued benefit measure decreased 1.0% points to 95.3%.

Note that the trust assets in this report differ from the GASB statement in that prepaid benefits are not included in the GASB disclosures. Additionally, the GASB liabilities represent a projection from the prior year's base results. The July 1, 2019 liabilities in this report are substantially less than the projections from last year, due to the number of retirees and terminations. This will result in an actuarial gain in next year's GASB beginning balances.

Finally, there is a new disclosure which we have prepared called the ASOP-51. This is a required discussion regarding risk factors and their impact on the valuation results, both now and in the future. We have attached this new item as an appendix to this report. Its purpose and results are described in greater detail in the document itself.

TOWN OF NEWTOWN PENSION PLAN
III. PLAN ASSETS

A. Summary

Investment	07/01/2018 Beginning Balance	Employer Contribs.	Employee Contribs.	Net Investment Income	Trust Expenses	Transfer EEs Distributions	Transfers out	06/30/2019 Ending Balance
ER Contrib. Receivable/(Payable)	0	0	0	0	0	0	0	0
EE Contrib. Receivable	2,439	0	11,950	0	0	0	0	14,389
Distribution Due PARS	(3,095)	0	0	0	0	1,401	0	(1,693)
Prepaid Benefits	166,777	0	0	0	0	27,656	0	194,433
<u>Wells Fargo / Westport Resources</u>								0
Cash	346,923	2,254,873	449,022	1,103,164	(110,548)	(2,325,891)	(1,625,076)	92,467
Investments	42,450,530	0	0	1,260,798	0	0	1,625,076	45,336,404
Accrued Interest	2,604	0	0	(2,277)	0	0	0	328
<u>PLAN TOTALS</u>	42,966,178	2,254,873	460,972	2,361,685	(110,548)	(2,296,834)	0	45,636,327

Distribution of Assets by Department

Plan Category	07/01/2018 Beginning Balance	Employer Contribs.	Employee Contribs.	Net Investment Income*	Distributions	06/30/2019 Ending Balance	06/30/2019 Valuation Asset Balance
Town Plan	26,552,508	1,268,930	266,781	1,403,319	(1,215,537)	28,276,001	28,595,505
Elected officials	100,404	10,972	3,685	6,045	0	121,106	N/A
Police Plan	16,313,268	974,971	190,278	842,000	(1,081,296)	17,239,221	17,434,015
Grand Total	42,966,179	2,254,873	460,744	2,251,364	(2,296,834)	45,636,327	46,029,520

* Income reduced for trust expenses; allocated on a weighted basis by Wells Fargo.

TOWN OF NEWTOWN PENSION PLAN

III. PLAN ASSETS (Continued)

B. Development of Valuation Assets (Actuarial Value of Assets)

The Actuarial Valuation of Assets is calculated by recognizing 20% of the current year's actuarial gain or loss (to the 7.0% assumed rate of return), along with recognition of prior year's gains or losses that are also being recognized 20% per year. The final Valuation Asset level is subject to a corridor of 80% to 120% of the Market Value.

The prior smoothed actuarial asset valuation method was changed for the July 1, 2015 valuation, using the initial unrecognized gains from July 1, 2015 as the only prior base in place.

This method was then modified slightly for 2016 to anticipate Market Value yield at the assumed rate, rather than Expected Valuation Asset Value yield. Please see following page for additional detail.

The following illustrates the calculation of the Actuarial Value of Assets for June 30, 2019:

1. Assumed market value yield at valuation rate*	\$3,086,159
2. Actual MV Yield for June 30, 2019 **	2,316,920
3. Current Year (Gain)/Loss on Market value yield* (1) - (2)	769,239
4. Portion of Curr. Yr. Loss to be Recognized in 2019 (3) x 20%	153,848
5. Portion of Current Years (Gain)/Loss Not Recognized in 2019	615,391
6. Prior Unrec. (Gains)/ losses - June 30, 2019 - see next page	(101,092)
7. Total Unrecognized (Gains)/Losses (5) + (6)	514,299
8. Market Value of Trust Assets as of June 30, 2019	45,515,221
9. Preliminary Actuarial Value of Assets - June 30, 2019 (7)+(8)	\$46,029,520
10. (a) 80% corridor of Market Value	36,412,177
(b) 120% corridor of Market Value	54,618,266
11. Final Actuarial Value of Assets - June 30, 2019***	\$46,029,520

The Preliminary Actuarial Value of Assets is 101.1% of the Market Value, and thus falls within the 80% to 120% corridor of actual June 30, 2019 Market Value.

The yield on Valuation Assets for the 2018-2019 Plan Year was 4.58%.

* Assumed income is calculated based on a weighted balance which takes into account the date that the contributions and distributions are made to the fund.

** All items shown exclude the Money Purchase Plan assets. There was an immaterial receivable contribution as of the end of the fiscal year which has been included in the totals.

*** Includes both Town Plan and Police Plan

TOWN OF NEWTOWN PENSION PLAN

III. PLAN ASSETS (Continued)

C. SMOOTHED VALUATION ASSET AND UNRECONGNIZED (G)/L DETAIL- INCLUDES TOWN AND POLICE PLAN

Smoothed Valuation Asset Calculation

	Transition Year <u>07/01/2014</u>	<u>06/30/2015</u>	<u>06/30/2016</u>	<u>06/30/2017</u>	<u>06/30/2018</u>	<u>06/30/2019</u>	<u>06/30/2020</u>
Actuarial Value of Assets	\$36,445,798						
Market Value of Assets	34,676,083	35,698,524	34,740,866	39,623,234	42,865,776	45,515,221	
Unrecognized (G)/L	1,769,715						
Recognized in Year (for 6/30/15)	(442,429)						
Expected Earnings at Market Value (7.50%/7.00%)*		2,662,813	2,730,057	2,680,400	2,792,502	3,086,159	
Actual Earnings MV		977,145	(1,017,424)	4,614,032	2,921,062	2,316,920	
Actuarial (Gain)/Loss on MV		1,685,668	3,747,481	(1,933,632)	(128,560)	769,239	
Recognition of current years Gain/(Loss)		(337,134)	(749,496)	386,726	25,712	(153,848)	

Anticipated Unrecognized (Gain)/Loss for Future Years

Remaining Unrecognized (G)/L - 7/1/14 Trans.		1,327,286	1,061,829	707,886	353,943	0	0
Remaining Unrecognized (G)/L - 6/30/15 (G)/L		1,348,534	1,011,401	674,267	337,134	0	0
Remaining Unrecognized (G)/L - 6/30/16 (G)/L			2,997,985	2,248,489	1,498,992	749,496	0
Remaining Unrecognized (G)/L - 6/30/17 (G)/L				(1,546,905)	(1,160,179)	(773,453)	(386,726)
Remaining Unrecognized (G)/L - 6/30/18 (G)/L					(102,848)	(77,136)	(51,424)
Remaining Unrecognized (G)/L - 6/30/19 (G)/L						615,391	461,543
Total Unrecognized (Gains)/Losses		2,675,820	5,071,214	2,083,736	927,042	514,299	23,393
Market Value of Assets - EOY		35,698,524	34,740,866	39,623,234	42,865,776	45,515,221	
Total Unrecognized (Gain)/Loss		2,675,820	5,071,214	2,083,736	927,042	514,299	
Actuarial Value of Assets - EOY		\$38,374,344	\$39,812,081	\$41,706,970	\$43,792,818	\$46,029,520	

* Calculated using weighted contributions - ER by date, EE at 50%, Distrib at 50%. 7.00% interest assumption effective July 1, 2017 forward.

Note: 6/30/2015 Valuation Assets shown above based on the "new" method and do not equal the Valuation Assets used for the July 1, 2015 valuation Report.
Outstanding balance of 2018 & 2019 unrecognized gains for 2021-22 Valuations not shown.

TOWN OF NEWTOWN PENSION PLAN

IV. ANNUAL VALUATION - JULY 1, 2019

b. Calculation of Recommended Contributions Assumes 7.00%

	SELECTMEN	BOARD OF ED.	TOTALS
1. Gross Normal Cost as of 7/1/2019	\$508,252	\$547,598	\$1,055,850
2. Expenses	7,396	7,604	15,000
3. Expected Employee Contributions	117,638	135,920	253,558
4. Net Normal Cost (1 + 2 - 3) as of 7/1/2019	398,011	419,282	817,292
5. Accrued Liability:			
i. Active Employees	9,840,547	10,768,141	20,608,688
ii. Inactive Employees	1,222,431	682,216	1,904,646
iii. Retired Participants	6,992,891	4,481,648	11,474,539
6. Total Accrued Liability	\$18,055,869	\$15,932,004	\$33,987,873
7. Plan Assets - Blended Value	15,279,658	13,315,847	28,595,505
8. Unfunded (overfunded) Accrued Liability (6 - 7)	2,776,211	2,616,157	5,392,368
9. Amortization of Unfunded (Overfunded) Accd. Liability*	252,335	248,781	501,115
10. Normal Cost plus Amortization 7/1/2019 (4 + 9)	650,346	668,062	1,318,408
11. Recommended Contrib.- 2020-2021 to be paid 7/01/2020 (10 adjusted for time passage**)	\$687,277	\$703,387	\$1,390,664

* Initial EAN Base amortized over 20 years. (Gains)/losses starting with July 1, 2018 will be amortized over 10 years.

** 2019 adjustment takes into account the expected increases from unrecognized trust asset losses for 2019, plus normal cost increases assumed in the funding method.

TOWN OF NEWTOWN PENSION PLAN

IV. ANNUAL VALUATION - JULY 1, 2019

b. Summary of Funding Bases

SELECTMEN

Summary of Funding Bases	Initial Base	Rem. Bal. -19	Min. Amort.	Rem. Yrs (at min)
Initial Base - 7/1/17	\$ 2,447,983	\$ 2,537,103	\$ 215,955	18
(Gain)/Loss/Amend/Changes - 2018	277,987	263,149	39,579	9
(Gain)/Loss/Amend/Changes - 2019	(24,042)	(24,042)	(3,199)	10
Totals	\$ 2,701,928	\$ 2,776,211	\$ 252,335	

BOARD OF EDUCATION

Summary of Funding Bases	Initial Base	Rem. Bal. -19	Min. Amort.	Rem. Yrs (at min)
Initial Base - 7/1/17	\$ 2,365,758	\$ 2,332,122	\$ 208,702	18
(Gain)/Loss/Amend/Changes - 2018	107,537	97,901	15,311	9
(Gain)/Loss/Amend/Changes - 2019	186,134	186,134	24,768	10
Totals	\$ 2,659,429	\$ 2,616,157	\$ 248,781	

Funding Bases shown at 7.0% only.

If remaining balance is greater than the initial base, then negative amortization has occurred.

- this is an expected result based on the phasing in of the 7.0% discount assumption.
- all payment amounts will be revised the next time the discount assumption is changed.

TOWN OF NEWTOWN PENSION PLAN

IV. ANNUAL VALUATION - JULY 1, 2019

e. GASB Statement 67 and FASB Statement 35/36 Information

	SELECTMEN	BOARD OF ED.	TOTALS
I. ACTUARIAL ACCRUED LIABILITY - 7.00%			
a. Retirees/Benefic./Terminated	\$8,215,322	\$5,163,864	\$13,379,185
b. Current Employees			
I. EE Contr. & Intr.	1,977,848	2,102,101	4,079,949
II. ER Financed Vested	7,327,205	7,604,044	14,931,249
III. ER Financed Non-Vested	535,495	1,061,995	1,597,490
c. TOTALS	\$18,055,869	\$15,932,004	\$33,987,873
d. ASSETS - Market Value	\$15,108,934	\$13,167,066	\$28,276,000
e. FUNDED RATIO (7/1/2019)	83.68%	82.65%	83.19%
f. FUNDED RATIO (7/1/2018)	86.95%	86.33%	86.67%
<i>- These results will differ from the actual GASB disclosures, which are based on projected liabilities in order to ensure timely delivery.</i>			
II. PRESENT VALUE OF ACCRUED BENEFITS - 7.00%			
a. Retirees/Benefic./Terminated	\$8,215,322	\$5,163,864	\$13,379,185
b. Current Employees			
I. EE Contr. & Intr.	1,977,848	2,102,101	4,079,949
II. ER Financed Vested	5,468,966	6,031,426	11,500,393
III. ER Financed Non-Vested	240,637	463,178	703,815
c. TOTALS	\$15,902,773	\$13,760,569	\$29,663,342
d. ASSETS - Market Value	\$15,108,934	\$13,167,066	\$28,276,000
e. FUNDED RATIO (7/1/2019)	95.01%	95.69%	95.32%
f. FUNDED RATIO (7/1/2018)	96.48%	96.10%	96.30%

TOWN OF NEWTOWN PENSION PLAN

VI. PARTICIPANT DATA RECONCILIATION

The total number of active plan participants as of the current valuation date is reconciled with the total number as of the prior valuation date as follows:

	<u>Selectmen's Accounts</u>	<u>Board of Education</u>	<u>Plan Totals</u>
Number of Active Participants as of July 1, 2018:	130	175	305
Decreases:			
Non-Vested Terminations:	(7)	(2)	(9)
Vested Terminations:	(9)	(3)	(12)
Retirements:	(6)	(7)	(13)
Deaths, Transfers:	<u>0</u>	<u>0</u>	<u>0</u>
Total Increases/(Decreases):	(22)	(12)	(34)
New Entrants during 2018-2019: - includes rehires/reinstatements	<u>2</u>	<u>0</u>	<u>2</u>
Net Change:	<u>(20)</u>	<u>(12)</u>	<u>(32)</u>
Number of Active Participants as of July 1, 2019:	110	163	273
Also as of July 1, 2019:			
**Total Vested Terminated:	28	20	48
Total Retired:	<u>70</u>	<u>70</u>	<u>140</u>
TOTAL PARTICIPANTS:	208	253	461

* Active participants include Late Retirees and exclude Inactives.

** Includes 9 participants due refunds of contributions and interest,
and other inactive participants who may not have terminated.

TOWN OF NEWTOWN PENSION PLAN

V. HISTORY OF PLAN CONTRIBUTIONS AND LIABILITIES

Plan Year Beginning	Participants Act. - Other		Compensation*	Accrued Liability***	Market Value Assets	Unfunded Accrued Liability**	Recommended Contribution	(***)	Actual Town Contribution
1/1/1990	91	37	\$2,050,023	\$1,902,884	\$2,141,739	(\$238,855)	\$102,982	(5.02%)	\$114,531
7/1/1995	130	35	3,708,414	3,751,830	3,840,917	(89,087)	208,274	(5.62%)	208,274
7/1/2000	161	58	5,400,600	6,647,849	8,409,663	(1,761,814)	79,486	(1.47%)	80,297
7/1/2005	274	86	9,809,015	11,515,670	11,857,942	(342,272)	416,365	(4.24%)	420,381
7/1/2010	341	111	13,109,110	17,709,414	14,861,965	2,847,449	663,805	(5.06%)	651,581
7/1/2014	338	129	14,332,155	22,250,733	20,979,551	1,271,182	757,780	(5.29%)	731,579
7/1/2015	340	130	14,648,086	24,619,393	21,638,928	2,980,465	836,136	(5.71%)	836,137
7/1/2016	321	147	14,390,882	26,188,592	21,154,338	5,034,254	1,001,871	(6.96%)	1,001,870
7/1/2017	323	155	14,981,541	30,630,006	24,245,131	6,384,875	1,070,329	(7.14%)	1,070,328
2018 Select.	130	85	7,409,789	17,471,305	14,337,237	3,134,070	626,219	(8.45%)	626,219
2018 Board	175	83	7,335,284	14,985,180	12,215,272	2,769,908	642,711	(8.76%)	642,711
07/01/2018 (tot)	305	168	14,745,073	32,456,485	26,552,509	5,903,978	1,268,930	(8.61%)	1,268,930
2019 Select.	110	98	6,411,843	18,055,869	15,108,934	2,946,935	720,920	(11.24%)	
2019 Board	163	90	<u>7,142,960</u>	<u>15,932,004</u>	<u>13,167,066</u>	<u>2,764,939</u>	<u>669,086</u>	(9.37%)	
2019 Total	273	188	13,554,803	33,987,873	28,276,000	5,711,873	1,390,006	(10.25%)	

* Compensation shown is expected for the twelve months following the valuation date for active members only.

**Based on Market Value, not Valuation Assets.

*** Figures in parenthesis are Recommended Contribution as a percentage of compensation.
Recommended Contribution is based on prior year's valuation rolled forward, not on current valuation.
The 2019 valuation produced a Recommended Contribution of \$1,390,664 for the 2020-2021 plan

**** Beginning 7/1/2017 the actuarial liability is calculated at a 7.0% interest rate.

TOWN OF NEWTOWN PENSION PLAN

APPENDIX APENSION TRUST SUMMARY

PLAN SPONSOR: Town of Newtown
 EFFECTIVE DATE: July 1, 1965
 ANNIVERSARY DATE: July 1 of each year.
 VALUATION DATE: JULY 1, 2019

DEFINITIONS

Compensation: Base Salary as of July 1 each year. For departments that do not report base salary, actual earnings from prior plan year are used. Final Average Compensation includes the participants five (5) highest consecutive years.

Participation: Eligibility - Service: 6 Months
 Maximum Age: 60

Entry Date: On the first day of the month following satisfaction of eligibility, with the participant's election to make employee contributions (2% of base salary).

Service: Continuous employment with the Town.

Credited Service: Service used in the determination of plan benefits. Includes all service except:

- (1) Service in excess of 30 years.
- (2) Service after July 1, 1965 during which an employee could have made employee contributions but did not.
- (3) Service prior to July 1, 1965 if an employee did not elect to be covered on that date.

Normal Retirement Benefit: Greater of:

- (1) 2% of Final Average Compensation times years of Credited Service, less 50% of Social Security (at SSNRA),
- or
- (2) 1.15% of Final Average Compensation times years of Credited Service.

If a participant retires on or after his Normal Retirement Age (earlier of 30 years of Service or age 65), he will receive an additional temporary benefit equal to 50% of Social Security from his retirement date to his 65th birthday.

Normal Form of Benefit: Modified Cash Refund Annuity.

Death Benefits: Greater of Qualified Survivor Annuity or return of Employee Contributions plus interest (active and terminated only).

Vesting: 100% vesting in Employer portion of Normal Retirement Benefit at the completion of 10 years of Credited Service. Town Hall contract employees and department heads are eligible for 100% vesting after 5 years of Credited Service.

TOWN OF NEWTOWN PENSION PLAN

APPENDIX BACTUARIAL ASSUMPTIONSFUNDING METHOD

Entry Age Normal Method – This method calculates an annual normal cost for each active employee, and adds an amortization of the unfunded accrued actuarial liability for all participants. The initial funding base was re-established as of July 1, 2017 (when the funding method was changed from Projected Unit Credit), and will be amortized over 20 years. Future changes in accrued liability due to experience gains or losses, changes in assumptions, and/or plan provisions will be amortized over 10 years.

The July 1, 2019 Valuation was the first prepared fully based on 7% interest.

INTEREST ASSUMPTION

Pre-Retirement: 7.0% Compounded Annually
Post-Retirement: 7.0% Compounded Annually

MORTALITY ASSUMPTION

RP-2014 Society of Actuaries Mortality Table, with future generational increases projected with the MP-2018 scale.

TURNOVER

Participants are assumed to terminate at the following rates:

<u>Age</u>	<u>Males</u>	<u>Females</u>
25	10 %	15 %
30	7½	10
35	5	7½
40	3	5
45	1½	2½
50	0	0

SALARY SCALE & SOCIAL SECURITY BENEFITS

Salaries are assumed to increase at 3% per year. Since prospective salaries are reported, the increase applies after the end of the valuation year. Social Security laws projected using 3% COLA, with increases of 3% for the TWB and the NAMW.

RETIREMENT AGE

Participants are assumed to retire 50% of the time at their Normal Retirement Age and the remainder of the time at age 65. Participants past age 65 are assumed to retire one year after the valuation date.

ESTIMATED EXPENSES

Direct expenses of the trust are assumed to be \$15,000.
(This is an increase from \$13,000.)

TOWN OF NEWTOWN ELECTED OFFICIALS PENSION PLAN

ALLOCATION REPORT for the Period
July 1, 2018 to June 30, 2019

	7/1/2018 BEGINNING BALANCE	PAYMENTS	CONTRI- BUTIONS	5.61% INVESTMENT EARNINGS	06/30/2019 ENDING BALANCE
<u>DEBBIE HALSTEAD</u>					
EMPLOYER ACCOUNT	71,601.67	0.00	4,582.20	4,146.14	80,330.02
EMPLOYEE ACCOUNT	23,739.56	0.00	1,538.98	1,375.21	26,653.75
	-----	-----	-----	-----	-----
Participant Total	95,341.23	0.00	6,121.18	5,521.35	106,983.76
<u>DANIEL ROSENTHAL</u>					
EMPLOYER ACCOUNT	3,933.54	0.00	6,389.80	399.98	10,723.32
EMPLOYEE ACCOUNT	1,128.85	0.00	2,146.07	123.55	3,398.47
	-----	-----	-----	-----	-----
Participant Total	5,062.39	0.00	8,535.87	523.53	14,121.79
Plan Totals	100,403.62	0.00	14,657.05	6,044.88	121,105.55

Note: Allocation basis includes a 50% weight for current year contributions.

**TOWN OF NEWTOWN PENSION PLAN -
SELECTMAN & BOARD OF EDUCATION EMPLOYEES**

ASOP 51 - ASSESSMENT AND DISCLOSURE OF RISK

Introduction to ASOP 51 Disclosures for Funding Valuations

The Actuarial Standards Board adopted Actuarial Standard of Practice (ASOP) No. 51, "Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions", effective with measurement dates on and after November 1, 2018.

ASOP 51 defines risk as "The potential of actual future measurements deviating from expected future measurements resulting from actual future experience deviating from actuarially assumed experience. For purposes of this ASOP, risk includes contribution risk." Please note that ASOP 51 Risks are only a subset of the risks that may affect your Plan. This is because ASOP 51 Risks only include risks due to actual experience deviating from assumed experience.

Additional Information Regarding Assessment and Disclosure of Risks

The valuation of pension liabilities requires the use of certain assumptions to estimate events that are expected to occur in the future. These events can be economic, non-economic or demographic in nature. When actual experience in the future differs from the expected experience there is a direct effect on future pension liabilities. This in turn can impact both the funded position of the pension plan as well as the actuarially determined contribution ("ADC").

Certain variables carry more risk than others. Included below is a brief explanation of those variables that can potentially have a significant effect on the plan's future financial condition.

Actuarially Determined Contribution Compared to Actual Contribution

The ADC is calculated using an actuarial funding method. The ADC can vary from year to year as actual experience differs from that expected. The funding method's intent is that if the ADC is deposited by the plan sponsor each year, then the plan would be sufficiently funded over the life of the plan so that promised benefits could be paid to all participants. An historical comparison of the ADC vs. contribution deposited by the plan sponsor for each plan year is shown in the GAS-67 report. The Sponsor currently and historically has contributed at least 100% of the ADC.

Risk Assessments

Investment volatility risk. There is an expectation that the assets of the pension plan will return an average long-term rate each year. If the actual annual net return on plan assets is consistently below the expected return then both the funded ratio and ADC would be negatively impacted – the funded ratio would be lower than expected and the ADC would be higher. For example, an asset "loss" (where loss is the value relative to expected growth) of 10% (about \$2.868M based on current values) in a given year would hypothetically cause the amortization portion of the ADC to increase on average by about \$376,000 for each of the next 10 years. Also, the funded ratio would decrease by about 8 percentage points. On a year-to-year basis, gains and losses are smoothed out but eventually, all losses and gains will impact the ADC.

**TOWN OF NEWTOWN PENSION PLAN -
SELECTMAN & BOARD OF EDUCATION EMPLOYEES**

ASOP 51 - ASSESSMENT AND DISCLOSURE OF RISK (continued)

Investment return risk. The interest rate (which is equal to the Plan's expected return on assets rate) is used to discount the projected benefit payments from the Plan to calculate the present value of the accrued and total liabilities. Decreases in the interest rate (as noted above) will lead to increases in the Accrued Liability and the Normal Cost, which may increase contribution requirements. As an example, a decrease of 25 basis points would lead to an increase in Accrued Liability of about 3% and in Normal Cost of about 7%, yielding an increase in the ADC of about \$210,000 for each of the next 10 years. This dollar amount translates to an increase of 1.5 percentage points in the ADC as a % of pay (from 10.3% to 11.8% for 2020). Note that these changes in costs are estimates only, and we recommend a full review of the actuarial assumptions prior to the next valuation report, including a potential reduction in the assumed interest/discount rates.

Absent any further changes to the interest rate, or future asset and liability gains or losses, the Normal Cost is expected to remain constant each year as a level % of payroll based on the Plan's cost method.

Longevity risk. To the extent participants live longer than expected relative to the mortality assumptions, liabilities (and, thus, the ADC) will increase. We have used the latest projected mortality tables from the Society of Actuaries, however a new set of mortality tables, based on public plan employees, was recently released and we will examine its impact in the next year. We anticipate an increase in liabilities of about 3%-5% from the use of the new tables.

Demographic risk. Several other assumptions are made with respect to anticipated plan experience, including rates of termination, disability, and the retirement age. To the extent actual experience differs from expected, plan liabilities and normal cost can vary up or down.

Since most alternate benefit forms and payment dates provide roughly actuarially equivalent benefits, the level of demographic risk in your plan is small.

Salary Increases. Salary increases impact the cost of the plan and are reflected in the liabilities and the normal cost. Increases above that which are assumed will result in experience losses in the following year, while the inverse is true – lower than expected raises can lead to a decrease in liabilities and normal costs. For example, if the annual salary increase assumption of 3.0% was increased to 4.0%, liabilities would increase about 2% and the normal cost would increase about 12%, adding another \$190,000 to the ADC. While page 9 of report provides a multi-year history of salary levels, we are recommending a study of the actual continuing active increases over a period of time to determine if a change should be considered in the current assumption.

As a reminder, the liabilities included in the actuarial valuation report are based on those participants covered under the pension plan as of the valuation date. No assumption is included for employees expected to enter the pension plan in the future.

**TOWN OF NEWTOWN PENSION PLAN -
SELECTMAN & BOARD OF EDUCATION EMPLOYEES**

ASOP 51 - ASSESSMENT AND DISCLOSURE OF RISK (continued)

Plan Maturity Measures

Certain statistics can help to gauge the financial strength of the pension plan as well as to help identify risk that the plan might be subject to as it matures over time. Certain plan maturity statistics for the current valuation year are included below for your review and analysis. Historical statistics incorporating some of the prior year results may be found in the Highlights and History sections of this year's valuation report.

Ratio of Retiree Liability to Total Plan Liability

Ratio = $11,474,539 / 28,595,505 = 40.1\%$

A pension plan with a high ratio (for example, more than 50%) is considered to be a relatively mature plan since the primary liability is associated with former employees who are now in pay status. As a result, a large amount of plan assets is disbursed to retired participants to satisfy the monthly payments due to this group. Plan sponsors should consult with the investment advisors to the pension plan to determine whether plan assets are invested accordingly to account for the benefit outflows. For the Town's plan, having a ratio of 40.1% (i.e. still under 50%) means we are a few years away from having cash flow concerns as they relate to potential adjustments in investment strategies.

Ratio of Actuarially Determined Contribution to Total Covered Payroll

Ratio = $1,390,664 / 13,554,803 = 10.3\%$

Many plan sponsors find it helpful to look at the cost of the pension plan (on a cash basis) as a percentage of total covered payroll. Covered payroll is generally intended to mean total compensation for those employees actively accruing plan benefits during the year plan. An increase in this ratio (ADC/payroll) could be due to a number of different factors which may require further analysis. For example, the increase could result from a decline in the active population of a plan where participation for new employees is frozen - as the active group decreases over time, other experience factors (including those produced by an ever larger retiree group) can force a larger required contribution over a smaller salary base.

The GAS-67 report reveals that this measure, on a combined basis with the Police Union Plan, has been slowly rising from 6.76% in 2014 to 12.20% in 2019, although changes in actuarial assumptions certainly have increased the contribution percentage independently from any other actuarial experience factors.

**TOWN OF NEWTOWN PENSION PLAN -
SELECTMAN & BOARD OF EDUCATION EMPLOYEES**

ASOP 51 - ASSESSMENT AND DISCLOSURE OF RISK (continued)

Ratio of Expected Outflows to Plan Assets

Ratio = \$1,240,806 / \$28,276,000 = 4.4%

Outflows are defined as: Benefit Payments + Expenses. This ratio measures the liquidity and time-horizon of the plan's assets. It can be used as one of the considerations of how much of the plan's assets should be allocated to short-term fixed income (or cash). Having sufficient amounts of cash on-hand within plan assets better allows for monthly benefit payments (and expenses, if applicable) to be made throughout the year without having to liquidate funds for cash flow at unexpected points in time.

Net Cash Flows: Expected Contributions less Benefit Payment and Expenses

Expected Contributions - \$1,643,561

Expected Outflows - \$1,240,806

Net Inflow/(Outflow) - \$ 402,755

Net Inflow/(Outflows) are defined as: Contributions – Outflows. This amount represents the net cash flow of the Plan. A positive flow means more cash is coming into plan assets than being paid out during the plan year. As a defined benefit plan matures, it (by its nature) becomes a negative net cash flow vehicle, so this value can be a measure of plan maturity.

Since the Town's Plan is still in the positive cash flow state, it has not yet reached the "mature plan" stage of a pension plan's life. For the year just ended, the positive cash flow was approximately \$305,000, thus the level for June 30, 2020 is projected to be an increase in cash flow over 2019.

History of Plan Funding Measures

ASOP-51 requires the presentation of a history of plan funding measures, many of which are discussed above. Please refer to page 9 of the Actuarial Valuation Report for a recent year-by-year history, as well as a look back to the earlier years of the plan.