



February 11, 2021

Mr. David M. Williams, Plan Administrator
West Palm Beach Police Pension Fund
2100 N. Florida Mango Road
West Palm Beach, Florida 33409

Re: West Palm Beach Police Pension Fund

Dear Dave:

As requested, we have prepared the enclosed Supplemental Actuarial Valuation Report to illustrate the first-year impact of increasing the maximum period of DROP participation from 5 years (or upon attaining 30 years of service if earlier) to 8 years (or upon attaining 33 years of service if earlier).

Additionally, we have included below a discussion on the proposed change in the DROP and Share Plan interest crediting rate.

With the exceptions described herein, all other assumptions, methods, benefit provisions, and data are the same as indicated in our September 30, 2019 Actuarial Valuation Report.

Summary of Findings

If the proposed change is adopted:

- The required employer contribution in the first year would increase by \$157,184, from \$5,935,584 to \$6,092,768, assuming the contribution is paid in full on October 1, 2020.
- The Plan's funded ratio (actuarial value of assets divided by actuarial accrued liability) would decrease from 94.0% to 93.7%.
- The Unfunded Actuarial Accrued Liability (UAAL) would increase by \$1,368,084. This increase is being amortized over 30 years.
- The assumed retirement rates were changed to reflect the proposed extension of the maximum DROP participation. The revised retirement rates are summarized on page 6. If the proposed changes are adopted, we recommend that the retirement rates be reviewed and revised periodically to reflect emerging experience.

Please note that the impact of the proposed change is being shown on the actuarially determined contribution for the fiscal year ending September 30, 2021 for illustrative purposes only using the valuation results as of September 30, 2019, the most recent actuarial valuation. If the proposed change is adopted before the end of the current fiscal year, funding would need to begin October 1, 2021. The upcoming actuarial valuation as of September 30, 2020 would show the actuarially determined contribution for the fiscal year ending September 30, 2022 reflecting the plan amendment.

Proposed Change in DROP and Share Plan Interest Crediting Rate

We were also requested to discuss the impact of changing the DROP and Share Plan interest crediting rate from the current rate of 8% or 4% depending on the fund's investment returns to a fixed rate of 7.5%, with the possibility of giving members the option to elect the 7.5% interest rate or maintain the current rates. In our opinion, this change would have no immediate actuarial impact for advance funding purposes, since the DROP and Share Plan interest crediting rate is not explicitly reflected. However, it is likely that gains generated from a 4% interest crediting rate would be eliminated over time.

Under the current DROP and Share Plan interest provisions, actuarial gains are realized in years when the investment return on plan assets is greater than the interest crediting rate, and actuarial losses are realized in years when the investment return is less than the interest crediting rate. The interest crediting rate for DROP and Share Plan accounts is based on the cumulative investment return since FYE 2012. In years when the cumulative return since FYE 2012 exceeds 8%, the interest crediting rate on DROP and Share Plan balances is 8%, and when the cumulative returns since FYE 2012 are below 8% per year, the interest crediting rate is lowered to 4%.

One way to compare the two interest rate options is to consider that crediting 7.5% for each of the next eight years is similar to the current provision if 8% is credited for seven years and 4% is credited for one year (i.e., both options would produce the same cumulative return over the eight-year period in this hypothetical example). However, if over the same period there would be more years limited to the 4% rate, then the 7.5% interest option would be costlier than the current provision. Based on the recent capital market forecasts, average investment returns are expected to be below 7.5%, and therefore, over time the cumulative investment return since FYE 2012 is expected to decrease below 8%. If this occurs, the interest crediting rate for DROP and Share Plan accounts will decrease to 4% under the current provisions. If the interest crediting rate is changed to a fixed 7.5%, this would result in 7.5% being credited in years when the 4% rate would have applied. Therefore, the 7.5% interest crediting rate would increase the probability of eliminating actuarial gains that are projected to occur over time.

Other Cost Considerations

As of September 30, 2019, the Actuarial Value of Assets exceeds the Market Value of Assets by approximately \$6.2 million. This difference will be recognized over the next several years. In turn, the computed overall employer contribution rate will gradually increase by approximately 2.14% of covered payroll in the absence of offsetting gains.

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in



the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: Plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; 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. The scope of this report does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the Plan's future financial condition include:

1. Investment risk – actual investment returns may differ from the either assumed or forecasted returns;
2. Contribution risk – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the Plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
3. Salary and Payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
4. Longevity risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
5. Other demographic risks – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return is less (or more) than the assumed rate, the cost of the Plan can be expected to increase (or decrease). Likewise if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The computed contribution amounts may be considered as minimum contributions that comply with the pension Board's funding policy and the State statutes. The timely receipt of the actuarially determined contributions is critical to support the financial health of the Plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.



Additional Risk Assessment

Additional risk assessment is outside the scope of this report. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.

Additional Disclosures

This report was prepared at the request of the Fraternal Order of Police, with the Board's authorization, and is intended for use by the Retirement Plan and those designated or approved by the them. This report may be provided to parties other than the Plan only in its entirety and only with the permission of the Fraternal Order of Police or the Board. GRS is not responsible for unauthorized use of this report.

This report is intended to describe the financial effect of the proposed plan changes on the Retirement Plan. Potential effects on other benefit plans were not considered. No statement in this report is intended to be interpreted as a recommendation in favor of the changes, or in opposition to them.

The study was performed on the basis of participant and financial data supplied by the Plan Administrator for the September 30, 2019 valuation. We checked for internal and year-to-year consistency, but did not audit this data. We are not responsible for the accuracy or completeness of the information provided by the Plan Administrator.

The measurement date used for calculating the financial effect of the proposed change was September 30, 2019. The calculations are based upon assumptions regarding future events, which may or may not materialize. They are also based upon present and proposed plan provisions that are outlined in the report. If you have reason to believe that the assumptions that were used are unreasonable, that the plan provisions are incorrectly described, that important plan provisions relevant to this proposal are not described, or that conditions have changed since the calculations were made, you should contact the author of this report prior to relying on information in the report.

If you have reason to believe that the information provided in this report is inaccurate, or is in any way incomplete, or if you need further information in order to make an informed decision on the subject matter of this report, please contact the author of the report prior to making such decision.

In the event that more than one plan change is being considered, it is very important to remember that the results of separate actuarial valuations cannot generally be added together to produce a correct estimate of the combined effect of all of the changes. The total can be considerably greater than the sum of the parts due to the interaction of various plan provisions with each other, and with the assumptions that must be used.



This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

Jeffrey Amrose and Trisha Amrose are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. The undersigned actuaries are independent of the plan sponsor.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Plan as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

We welcome your questions and comments.

Sincerely yours,


Jeffrey Amrose, EA, MAAA
Senior Consultant & Actuary


Trisha Amrose, EA, MAAA
Consultant & Actuary

Enclosures

This communication shall not be construed to provide tax advice, legal advice or investment advice.



SUPPLEMENTAL ACTUARIAL VALUATION REPORT

Plan

West Palm Beach Police Pension Fund

Valuation Date

September 30, 2019

Date of Report

February 11, 2021

Report Requested by

Fraternal Order of Police, with the Board's authorization

Prepared by

Jeffrey Amrose

Group Valued

All active and inactive members of the Plan.

Benefits Being Considered for Change

The maximum period of DROP participation would be increased from 5 years (or upon attaining 30 years of service if earlier) to 8 years (or upon attaining 33 years of service if earlier).

Participants Affected

Active participants as of the plan change effective date.

Actuarial Assumptions and Methods

Same as September 30, 2019 Actuarial Valuation Report, with the exception of the assumed rates of normal retirement:

- Increase the probability of retirement in the first year when reaching normal retirement eligibility from 45% to 65%.
- Increase the probability of retirement in the next two years after reaching normal retirement eligibility from 35% to 55%.
- Increase the probability of retirement in the third year after reaching normal retirement eligibility from 35% to 100%.
- Increase the initial retirement rate for members eligible for normal retirement as of the valuation date, September 30, 2019, to 85%.

Some of the key assumptions/methods are:

Investment Return	7.50%
Salary increase	5.00% per year
Cost Method	Entry Age Normal
Mortality	RP-2000 Combined Healthy Participant Mortality Table (for pre-retirement mortality) and the RP-2000 Mortality Table for Annuitants (for post-retirement mortality), with mortality improvements projected to all future



years after 2000 using Scale BB. For males, the base mortality rates include a 90% blue collar adjustment and a 10% white collar adjustment. For females, the base mortality rates include a 100% white collar adjustment. These are the same rates used for Special Risk Class members of the Florida Retirement System (FRS) in the July 1, 2018 FRS Valuation, as mandated by Chapter 112.63, Florida Statutes.

Amortization Period for Any Change in Actuarial Accrued Liability

30 years

Summary of Data Used in Report

See attached page

Actuarial Impact of Proposal(s)

See attached page(s) for the first-year impact of the proposed change; please refer to page 2 for a discussion about the proposed change in the interest crediting rate for DROP and Share Plan balances.

Other Cost Considerations

As of September 30, 2019, the Actuarial Value of Assets exceeds the Market Value of Assets by approximately \$6.2 million. This difference will be recognized over the next several years. In turn, the computed overall employer contribution rate will gradually increase by approximately 2.14% of covered payroll in the absence of offsetting gains.

Please refer to page 2 for a discussion about the proposed change in the interest crediting rate for DROP and Share Plan balances.



ACTUARIALLY DETERMINED CONTRIBUTION (ADC)		
A. Valuation Date	September 30, 2019 <i>Valuation</i>	September 30, 2019 <i>Extend DROP Participation to 8 Years</i>
B. ADC to Be Paid During Fiscal Year Ending	9/30/2021	9/30/2021
C. Assumed Date of Employer Contrib.	Quarterly	Quarterly
D. Annual Payment to Amortize Unfunded Actuarial Accrued Liability (UAAL)	\$ 1,865,856	\$ 1,963,044
E. Normal Cost	6,746,272	6,803,986
F. Total Required Contribution if Paid Continuously During Year Beginning on Valuation Date	8,612,128	8,767,030
G. Covered Payroll	24,754,653	24,754,653
H. Total Required Contribution as % of Covered Payroll	34.79 %	35.42 %
I. Member Contribution as % of Covered Payroll	11.00 %	11.00 %
J. State Contribution as % of Covered Payroll	0.00 %	0.00 %
K. Required Employer Contribution (REC) as % of Covered Payroll	23.79 %	24.42 %
L. Projected Covered Payroll for Contribution Year	25,868,612	25,868,612
M. REC for Contribution Year: K x L	6,154,144	6,317,117
N. REC as % of Covered Payroll in Contribution Year: M ÷ L	23.79 %	24.42 %
O. Change in REC for Contribution Year		162,973
P. Change in REC as % of Covered Payroll in Contribution Year		0.63 %
If the City Makes its Contribution on October 1st:		
Q. REC for Contribution Year	5,935,584	6,092,768
R. REC as % of Covered Payroll in Contribution Year	22.95 %	23.55 %
S. Change in REC for Contribution Year		157,184
T. Change in REC as % of Covered Payroll in Contribution Year		0.60 %



ACTUARIAL VALUE OF BENEFITS AND ASSETS

A. Valuation Date	September 30, 2019 <i>Valuation</i>	September 30, 2019 <i>Extend DROP Participation to 8 Years</i>
B. Actuarial Present Value of All Projected Benefits for		
1. Active Members		
a. Service Retirement Benefits	\$ 149,551,512	\$ 148,487,019
b. Vesting Benefits	4,646,762	4,646,762
c. Disability Benefits	5,971,963	5,971,963
d. Preretirement Death Benefits	1,625,442	1,435,298
e. Return of Member Contributions	<u>516,059</u>	<u>511,684</u>
f. Total	162,311,738	161,052,726
2. Inactive Members		
a. Service Retirees & Beneficiaries	187,937,907	187,937,907
b. Terminated Vested Members	<u>1,708,451</u>	<u>1,708,451</u>
c. Total	189,646,358	189,646,358
3 Share Plan / DROP Accounts	112,701,915	112,701,915
4. Total for All Members	464,660,011	463,400,999
C. Actuarial Accrued (Past Service) Liability	414,552,779	415,920,863
D. Actuarial Value of Accumulated Plan Benefits per FASB No. 35	N/A	N/A
E. Plan Assets		
1. Market Value	383,442,225	383,442,225
2. Actuarial Value	389,635,162	389,635,162
F. Unfunded Actuarial Accrued Liability (UAAL)	24,917,617	26,285,701
G. Change in UAAL	N/A	1,368,084
H. Actuarial Present Value of Projected Covered Payroll	191,615,196	179,766,885
I. Actuarial Present Value of Projected Member Contributions	21,077,672	19,774,357
J. Funded Ratio: E2/C	94.0 %	93.7 %



CALCULATION OF NORMAL COST

A. Valuation Date	September 30, 2019 <i>Valuation</i>	September 30, 2019 <i>Extend DROP Participation to 8 Years</i>
B. Normal Cost for		
1. Service Retirement Benefits	\$ 5,488,173	\$ 5,536,649
2. Vesting Benefits	308,182	313,388
3. Disability Benefits	414,728	421,511
4. Preretirement Death Benefits	95,178	89,113
5. Return of Member Contributions	<u>192,464</u>	<u>195,778</u>
6. Total for Future Benefits	6,498,725	6,556,439
As % of Covered Payroll	26.25 %	26.49 %
7. Assumed Amount for Administrative Expenses	<u>247,547</u>	<u>247,547</u>
As % of Covered Payroll	1.00 %	1.00 %
8. Total Normal Cost	6,746,272	6,803,986
As % of Covered Payroll	27.25 %	27.49 %

PARTICIPANT DATA		
	September 30, 2019 <i>Valuation</i>	September 30, 2019 <i>Extend DROP Participation to 8 Years</i>
ACTIVE MEMBERS		
Number	264	264
Covered Annual Payroll	24,754,653	24,754,653
Average Annual Payroll	\$ 93,768	\$ 93,768
Average Age	39.1	\$ 39.1
Average Past Service	11.1	11.1
Average Age at Hire	28.0	28.0
RETIRES, BENEFICIARIES & DROP		
Number	246	246
Annual Benefits	\$ 13,480,932	\$ 13,480,932
Average Annual Benefit	\$ 54,801	\$ 54,801
Average Age	64.6	64.6
DISABILITY RETIREES		
Number	20	20
Annual Benefits	\$ 958,616	\$ 958,616
Average Annual Benefit	\$ 47,931	\$ 47,931
Average Age	54.2	54.2
TERMINATED VESTED MEMBERS		
Number	7	7
Annual Benefits	\$ 167,053	\$ 167,053
Average Annual Benefit	\$ 23,865	\$ 23,865
Average Age	45.0	45.0

