

March 4, 2016

Ms. Bethany Rhodes
Executive Director
Ohio Retirement Study Council

Subject: Review of Ohio Police and Fire Funding Period and Actuarial Status – Final

Dear Bethany:

As required by Section 742.311 of the Ohio Revised Code (ORC), we have reviewed adequacy of the current statutory contribution rates to the Ohio Police and Fire Pension Fund (OP&F). This report includes findings based on clarifications learned from conversations with the OP&F actuary.

Our primary findings are that the current statutory contribution rates are adequate to fund the statutory benefits over a period of 25-30 years. This report demonstrates these findings and other issues related to OP&F's progress in meeting the funding objectives.

Topics to be addressed in this report include:

- Adequacy of current statutory contributions rates to fund current statutory benefits
- Requirements of ORC
- Projection methodology
- Impact of Medicare Part B benefits
- Allocation of costs between Police and Fire
- Potential future changes to actuarial assumptions
- Likelihood of necessity for future changes in benefits or contributions
- Health care benefits
- Deferred Retirement Option Plan (DROP) issues
- Reconciliation with earlier reports
- Potential ORSC Recommendations

BACKGROUND

Buck Consultants, actuary for OP&F issued the report on Actuarial Valuation of Pension Benefits as of January 1, 2015 on October 13, 2015. The actuarial report is an essential measure of the funded position of OP&F. While the analysis focuses on pension benefits only, the report also includes an analysis which includes Medicare Part B premium reimbursements as requested by the Ohio Retirement Study Council (ORSC) so that this analysis can be conducted.

An actuarial valuation is built upon five pillars:

- All individual demographic data of OP&F members (active terminated and retired)
- OP&F benefit provisions
- Actuarial assumptions as to future contingent events

- Pension fund asset information
- Funding policy and actuarial funding methods

The actuary uses these parameters to determine various actuarial measures, including:

- Actuarial Accrued Liabilities (AAL) for benefits as of the valuation date (January 1, 2015)
- Unfunded Actuarial Accrued Liabilities (UAAL)
- Normal Cost Rate: The contribution requirement to systematically fund the future service liabilities
- Funding Period necessary to completely amortize the UAAL

ADEQUACY

Section 742.311 of the ORC requires an annual review of the adequacy of the contribution rates provided under sections 742.31, 742.33, and 742.34 and the contribution rates recommended in a report by the actuary of OP&F for the forthcoming year. Section 742.31 governs the contributions made by the employees, 742.33 governs the contributions made by police officers' employers and 742.34 governs the contributions made by the firefighter employers.

Buck made a calculation that the unfunded liability for the statutory pension benefits would be fully amortized over a period of 30 years, based on the current level of contributions. The UAAL of \$5.366 billion as of January 1, 2015 would decline to zero by December 31, 2044. We were able to replicate the Buck calculations and agree that they seem reasonable.

The Buck calculation does not take into consideration two items which are worthy of discussion. The first paints a more favorable situation. The UAAL is \$5.366 billion, based on a smoothed Actuarial Value of Assets (AVA) which is \$424 million less than the current (unsmoothed) Market Value of Assets (MVA). Because the smoothing impact of this \$424 million will be completely recognized within five years – long before the thirty year funding period, an argument could be made that the funding period calculation should be based on the MVA instead of the AVA. If this were the case, the funding period would be only 25 years.

The second consideration is more nuanced. When including the liabilities for statutory Medicare Part B reimbursement, the AAL grows by \$494 million. If the liability pertaining to the Medicare Part B is included but no assets are included, a funding period of either 32 or 38 years results, depending on whether the MVA or AVA is considered, respectively. After conversations with Buck, we learned that their methodology assumes that \$494 million of the \$1.032 billion assets in the separate Health Care Stabilization Fund (HCSF) are allocated toward this Medicare Part B AAL. Consequently, there is no impact on Unfunded AAL by including Medicare Part B. We find that this approach is reasonable, although the solvency of the HCSF is weakened

Our calculations are summarized in the table below and Appendix I. All dollar figures are in \$billions as of January 1, 2015.

Funding Period on Various Bases

| Statutory Benefits Considered | Asset Basis | Actuarial Liability | Assets | UAAL | Funding Period |
|--------------------------------------|-------------|---------------------|----------|---------|----------------|
| Pension Only | AVA | \$18.396 | \$13.029 | \$5.366 | 30 years |
| Pension Only | MVA | 18.396 | 13.453 | 4.942 | 25 years |
| Pension and Medicare B Reimbursement | AVA | 18.890 | 13.523 | 5.366 | 30 years |
| Pension and Medicare B Reimbursement | MVA | 18.890 | 13.947 | 4.942 | 25 years |

This shows strong improvement over the past five years. Note that the amortization period has fallen to 47, 33 and 30 years for 2013, 2014, and 2015, respectively. Prior to 2013 and Senate Bill 340, the OP&F amortization period was infinite, meaning that the contributions were never projected to pay off the unfunded liability.

REQUIREMENTS OF ORC 742.311

The Ohio Revised Code 742.311, for which this report is written, requires that the ORSC shall review the *adequacy* of the OP&F contribution rates. An additional requirement is that the calculations be based on the “entry age normal actuarial cost method” (EAN). We confirm that Buck is using EAN as the basis for its calculations.

The ORC continues to state that the ORSC “shall make recommendations to the general assembly that it finds necessary for the proper financing of the benefits of [OP&F].”

Buck reports that:

Section 742.16 of the ORC, as adopted by Senate Bill No. 82, sets forth an objective that the funding period is no more than 30 years. If the funding period exceeds 30 years, a plan shall be developed and presented by the Board of Trustees to the ORSC to reduce the funding period to not more than 30 years. Section 742.14 of the ORC, as amended by Senate Bill No. 340, sets forth that the next 30-year funding plan be developed and presented not later than 90 days after the Board of Trustees’ receipt of the Jan. 1, 2016 actuarial valuation.

The funding periods for the statutory benefits is 30 years. Although (as will be discussed below) this is not expected to materially improve after poor returns since the January 1, 2015 actuarial valuation, we would not expect that the OP&F will need to be developing a modification to meet its 30-year plan in 2016. However, if (1) the poor returns to date since the most recent actuarial valuation date of January 1, 2015 do not improve and (2) if material changes to the actuarial assumptions are made, and (3) the Health Care Stabilization Fund continues to be depleted, there is reasonable likelihood that OP&F will need to develop a 30-year funding plan following the January 1, 2019 actuarial valuation.

PROJECTION METHODOLOGY

While Buck is using the EAN method, they are reflecting certain future anticipated changes in its projections which determine the funding period. We believe that this approach is reasonable, although some may argue that the methods do not follow the most traditional use of the EAN method and its corollary amortization period.

Buck calculates an employer amortization contribution rate toward the unfunded liability of 15.29% in its Table 1. Buck then goes on to demonstrate that the 15.29% amortization rate with anticipated future adjustments is sufficient to amortize the unfunded liability over 30 years. This is demonstrated in Buck's Table 7 and verified by PTA/KMS in Appendix 1 of this report. Note that the 15.29% rate is projected to increase to 16.45% by 2042. This is expected to occur for two reasons. First is that the member contribution rate is increasing to 12.25% next year and beyond. The 15.29% rate is also projected to increase because the normal cost for future members is lower than the normal cost for current members. We estimate that this cost savings is 0.79% of pay.

Note that traditional actuarial methods and their amortization calculations would not reflect either of these two future expectations. Under the traditional calculation method, an actuarial contribution requirement is determined based only on the current normal cost rate plus an amortization of unfunded liability over 30 years based on AVA. If this were used, a rate higher than 15.29% would be required. That demonstrates that if the member contribution rate and future reduced benefit levels were not in effect, the 30-year period would not be met. We believe that it is reasonable and appropriate to include this anticipation of statutory changes in the funding period calculation as does Buck.

In our tables above, we calculated the funding period using both AVA and MVA. At this point in the investment cycle, the MVA exceeds the AVA. This is because recent strong investment returns have not been fully recognized in AVA. Buck's projection calculations used the more conservative (lower) AVA. At this time, we believe it would be reasonable to consider the more favorable MVA also. This would mean that the funding period for statutory benefits is 25 years. The use of the higher MVA shortens the period by 5 years.

In a potential future year when hard decisions may be likely necessary to stay within the 30-year period, we do not anticipate such a disparity between MVA and AVA. The purpose of AVA is to smooth out investment return fluctuations and not make panic decisions based on short term results. But 742.14 only requires a triennial report for a funding plan. This also has an effect of smoothing out fluctuations. We recommend that all decisions pertaining to plan changes be based on considering both MVA and AVA. ORSC requires reporting on an AVA basis.

MEDICARE PART B IMPACT

As stated previously, the Buck 30-year funding period calculation did not explicitly reflect the non-pension statutory benefit of the reimbursement of Medicare Part B premiums. The inclusion of this benefit increases both the liabilities and assets and has no impact on the UAAL and therefore no impact on the funding period at this time.

There may be some ambiguity in this requirement, because 742.16 of the ORC, which discusses the thirty-year funding plan specifies "unfunded actuarial accrued pension liabilities." While Buck's funding period calculation did not explicitly address the Medicare Part B issue, because there are sufficient assets in the Health Care Stabilization Fund (\$1.032 billion) to cover these liabilities (\$494 million) at this time, the issue is moot. If experience deteriorates, there might not be sufficient assets in the future and the distinction might be relevant.

The \$494 million is not explicitly segregated for Medicare Part B payments, and is likely to decline in the future years as other health benefits (beyond Medicare Part B payments) are provided. In particular,

0.50% of pay is allocated to the HCSF, but 0.46% is the normal cost for the Medicare Part B benefits. This means that almost no allocation can be explicitly attributed to health care benefits other than Medicare Part B. The 0.46% contribution and the \$494 million AAL attributed to Medicare Part B reimbursements are not dedicated or segregated, but comingles with other HCSF assets and liabilities.

During 2014, the HCSF had the following cash flow, as shown in Table 2 of the Buck HCSF Actuarial Report:

| Item | Value (\$000) |
|--|---------------|
| Market Value of HCSF as of December 31, 2013 | \$1,053,534 |
| Contributions in 2014 | |
| Employer | 9,895 |
| Member Premiums | 69,966 |
| Total | 79,861 |
| Benefits and Administrative Expenses in 2014 | 200,326 |
| Investment Income in 2014 | 80,862 |
| Other Income in 2014 | 18,010 |
| Market Value of HCSF as of December 31, 2014 | 1,031,941 |

In very approximate terms, the HCSF is decreasing each year by \$200 million due to benefits and increasing by \$100 million due to contributions plus other income. If investment return on the \$1 billion fund is 4.25% as assumed, that would generate roughly \$40 million. So the HCSF is expected to drop by about \$60 million per year. The roughly \$500 million AAL for Medicare Part B Reimbursements is expected to increase each year by about \$10 million per year from Normal Cost, plus at least \$20 million due to interest on the AAL. (Although not reported, we would anticipate that about 10% of the \$200 million in benefits is for Medicare Part B reimbursements; this would improve the situation somewhat). This means that the gap between the total HCSF which is now roughly \$500 million (\$1,031 minus \$494) is expected to decrease by nearly \$100 million per year. Within roughly five to ten years, unless experience changes in an actuarially favorable manner, there will not be sufficient assets in the HCSF to cover the AAL attributable to Medicare Part B reimbursements.

ALLOCATION BETWEEN POLICE AND FIRE

Contributions to OP&F come from three sources:

- 12.25% Employee Contributions (beginning July, 2015)
- 19.50% Police Employer Contributions
- 24.00% Firefighter Employer Contributions

Because of the disparity between police and firefighter employer contributions, it could be argued that firefighter employers are paying a larger share of the unfunded liability than are police employers. While this is accurate, the police and fire components of OP&F are completely merged and the assets are not explicitly separated between Police and Fire. Buck does do an allocation of assets between P&F based on the AAL for purposes of its Table 1 and Table 1A. But during the year, contributions are pooled and not separated into different P&F asset accounts. Consequently, each year the assets would be allocated between the P&F in accordance with AAL and the two components would be amortized in the same year.

If however, the plans were separated and contributions allocated based on employer, the results would be quite different. We estimate that rather than both being fully funded in 30 years (based on AVA), the fire would be fully funded in 23 years while police would be fully funded only after 48 years. This also assumes that fire UAAL amortization contributions (currently 17.66% of pay) would not be required after 23 years, but would either cease, or be directed toward retiree healthcare benefits. Under the current Buck projection approach, both P&F employers would continue toward the UAAL until fully funded.

POTENTIAL FUTURE CHANGES TO ACTUARIAL ASSUMPTIONS

Buck indicated that the next five-year experience review will cover the period from 2012 through 2016. This means that there may be changes to the actuarial assumptions effective for either the January 1, 2017 actuarial valuation or the January 1, 2018 actuarial valuation. Consequently, the current approach does not call for changes in actuarial assumptions for the next (January 1, 2016) actuarial valuation – the one which triggers the OP&F review of its 30 year funding plan.

When assumptions are reviewed, we would anticipate a strong consideration in a reduction in the 8.25% assumed rate of investment return. This is for two related reasons.

First is that the low interest rate environment which began with the 2008 financial crisis shows little sign of abating. Long term treasury rates are still at near historic lows and long term inflation expectations remain at low rates. For example, Buck’s 8.25% rate is built upon a pillar of 3.25% inflation. Very few long term inflation predictions call for an inflation rate this high.

Second is that public plans around the country, based on their actuaries advice, are reducing their assumed rate of investment return. OP&F’s current 8.25% rate is among the highest currently. According to a recent NASRA Public Fund Survey of 126 large plans, only about 4% of the plans use an investment return of 8.1% and above.

Unlike many pension plans around the country, Buck already uses a very conservative “generational” mortality table which contemplates future improvement in longevity for OP&F members. Consequently, we do not anticipate any further need to strengthen the mortality table which would increase actuarial liabilities.

LIKELIHOOD OF NECESSITY FOR FUTURE CHANGES

Based on the actuarial valuation as of January 1, 2016, Buck has projected that a 30-year funding period for statutory benefits will likely continue to be met. This is despite the weak performance of equity markets during 2015. For example, the S&P 500 return for 2015 was -0.7%. This indicates that it is unlikely that OP&F investment returns during 2015 will be as strong as 8.25%, possibly much lower. Buck informed us that they made an estimate of the “breakeven” return necessary during 2015 to remain under 30 years, all other things being equal. They calculated this as -7% (negative 7%). We have not replicated this calculation but believe it is plausible. Return for OP&F was surely stronger than this rate.

Of course, the January 1, 2016 actuarial valuation will measure all variables, some of which might turn out to be more favorable during 2015 than expected. But all things being equal, we concur that it is not likely that the funding period as of January 1, 2016 will be longer than 30 years.

Because of continued weak returns into 2016, however, it may be prudent for ORSC and OP&F to begin to consider potential actions necessary to improve the funding period position to the thirty-year standard. This could occur following the 2019 actuarial valuation based on a combination of potential unfavorable developments:

- Poor investment returns from January 1, 2015 through December 31, 2018
- Changes to the actuarial assumptions, particularly the 8.25% assumed return on assets, which increase the actuarial liabilities
- Further reductions in the Health Care Stabilization Fund

HEALTH CARE BENEFITS

The actuarial analysis discussed above and presented in the Buck report are based on statutory pension benefits, the statutory Medicare Part B reimbursement benefit, and a contribution to retiree health care benefits of only 0.50%.

This level of 0.50% is not sufficient to provide meaningful retiree health benefits. Buck reports key facts in its October 13, 2015 Actuarial Valuation of Retiree Health Care Benefits as of January 1, 2015. These include:

- The Normal Cost rate for the current level of benefits is 10.92% of pay
- The annual rate for amortizing the unfunded liability is 8.04% of pay
- The employer contribution toward the health care stabilization fund is 0.50% of pay
- The funded ratio (Assets divided by AAL) is 19%
- Employer contributions plus member contributions were \$80 million during 2014
- Benefits and administrative expenses were \$200 million during 2014

This all means that the current contribution rate is nowhere near adequate to fund the current level of healthcare benefits in the long term.

DEFERRED OPTION RETIREMENT PLAN ISSUES

DROP was significant in the actuarial report in two ways. First, the pension actuarial valuation for the first time included DROP balances in both the assets and liabilities of the plan. Prior to January 1, 2015, DROP balances were not included in either, as requested by the plan auditors. Buck made the change to include these balances in response to the GASB requirement that this approach be taken.. Either approach is actuarially correct, but compliance under accounting standards under Statement Number 67 of the Governmental Accounting Standards Board (GASB 67) facilitated the change. Note that the change has no impact on the UAAL.

Second, ORC 742.14(E) states that:

At least once in each quinquennial period, the board shall have prepared by or under the supervision of an actuary an actuarial investigation of the deferred retirement option plan established under section 742.43 of the Revised Code. The investigation shall include an examination of the financial impact, if any, on the fund of offering the plan to members.

This was last completed in February, 2013 and has not been reviewed for this report.

CONSISTENCY WITH PRIOR REVIEWS

In 2013, we were requested by ORSC to analyze OP&F's progress in meeting its funding objectives. Some of our key findings from 2013 follow and are still germane:

In order to provide context, we reviewed several important policy and operational issues that will help the ORSC and the systems monitor the success of the initiatives taken and establish the groundwork for policy decisions affecting the need for, and timing of, possible additional initiatives.

PTA/KMS agrees with the 30-year funding target for the retirement systems as a reasonable funding standard as noted in our report. However, we also recommended that the 30-year period begin in 2013 and decline by one year each year in the future so that Unfunded Liabilities are fully amortized by 2043. In other words, the funding period would decline to 29 years in 2014, 28 years in 2015, etc.

In addition, we recommended a long-term solvency objective for the healthcare plans for now based on a defined minimum level of healthcare benefits, but eventually working toward an actuarially based advance-funding model.

Meeting both of these funding objectives is important to avoid solving a deficiency in one benefit plan at the expense of the other.

It is important for ORSC to endorse these funding standards for both the retirement systems and the healthcare benefits (or agree to alternatives) to establish an objective basis to judge the funding progress of the systems.

ANNUAL ACTUARIAL VALUATIONS/ANALYSIS OF 30-YEAR FUNDING PROGRESS

PTA/KMS strongly supports the continuation of annual actuarial valuations of each system as well as an annual measurement of the success in meeting the funding objectives described above. To enhance the understanding of the actuarial valuation results and their effect on meeting the funding objectives, we recommend development of a standardized reporting format by each system as described below.

In addition, if the current annual actuarial valuation does not result in the funding objectives being met based on the conditions and actuarial methods in effect, we support the development of a detailed plan by each system specifying the additional benefit and/or employee contribution changes that will satisfy the funding objectives at that time. To be specific, unrecognized investment gains should not be counted in determining eventual compliance with the funding objectives because it is inconsistent with ignoring unrecognized investment losses. The use of a smoothed asset value is intended to provide a more stable asset value in determining the plan contribution requirements and lessen the volatility. In addition, forecasting the impact of better than expected investment and/or other system experience may be useful in assessing the extent

of the current short fall as noted below, but by itself does not in our opinion meet the requirement of developing a detailed plan for corrective actions.

This disciplined approach will:

- *Continue the past annual reporting requirements for each system*
- *Identify positive and negative trends in a timely fashion*
- *Meet typical actuarial practices*
- *Provide policy makers with a meaningful and timely comparison and history of each system's progress in meeting the funding objectives each year*
- *Quantify any shortfall in an understandable format, and*
- *Provide the specifics of changes that would be required to meet the funding objectives.*

It also provides an opportunity for each system to assess and prioritize the changes that would be best suited for its membership based on current requirements as well as possible worst and best case future scenarios. Additionally, the communication of these results allows the membership of each system to prepare for potential future changes.

TIMING OF ADDITIONAL CHANGES/BOARD DISCRETION

As noted above, PTA/KMS cautioned in our [2012 comprehensive] report that additional changes to the systems benefit structure and/or member funding would likely be required in the future to meet the funding objectives.

To avoid frequent changes, we suggested that greater cuts than the minimum currently needed be considered, automatic cuts be implemented triggered by current funding measures, and reserves be established during good times to avoid reductions in poor times. PTA/KMS also encouraged limited discretion for the board of each system to make adjustments as needed. For example, we noted the following:

“We strongly encourage an immediate and disciplined mechanism to adjust for future unanticipated actuarial experience (favorable as well as unfavorable). This mechanism at the very least should include limited pension system board discretion to adjust benefits or contributions as included in several of the Senate bills. A more rigorous alternative would be a flexible Cost-of-Living-Adjustment based on funded position.”

PTA/KMS envisioned a dynamic and disciplined effort by the systems utilizing some or all of the above suggestions to meet the funding objectives at each actuarial valuation date or to immediately make additional changes if the funding objectives were not met starting with the initial valuation after the changes were implemented and fully reflected in the actuarial valuation.

Our rationale is as follows:

- *These pension reform plans were based on best efforts and conditions that existed at the time the plans were developed and finalized. Conditions change and several attempts may be required to find a structure that works long-term under varying economic conditions.*

- *The actuarial valuation process provides significant smoothing of favorable and unfavorable experience based on the asset valuation methodology and the 30-year funding of Unfunded Liabilities over an expanding payroll.*
- *The funding standards proposed are minimum standards*
- *Advisable changes are best made sooner rather than later*
- *If the benefit reductions result in the system exceeding the funding objectives in the future, consideration can be given to reversing a portion or all of the changes*

Our thoughts with regard to proposing limited board discretion for benefit and contribution changes were as follows:

- *Limited changes could be implemented on a timely basis*
- *The responsibility for meeting the funding objectives would be shared by each board as part of its fiduciary responsibility*
- *Changes would be made to meet the ORSC approved funding standards*
- *Potential changes would be continuously assessed and a priority for necessary changes maintained by the board to facilitate prompt action*

PTA/KMS does not agree with any restrictions on the time periods in which board action may be taken.

OHIO POLICE AND FIRE PENSION FUND

SB 340 implemented the OP&F 30-year plan and also included some unique reporting and operational provisions that do not meet the uniform recommendations discussed above. Specifically, SB 340 provides for:

- *Triennial, rather than annual, actuarial valuations beginning in 2013*
- *Triennial, rather than annual, development of a plan to meet the 30-year funding objective (if not currently met) also beginning in 2013*
- *Limited board discretion to make changes to member contribution rates and retirement eligibility provisions, but not permitted before 2017 and then only every five years thereafter following the experience analysis*

PTA/KMS recommends that these provisions be amended to meet the annual reporting and disclosure requirements discussed above and remove the time restriction on board action as explained above.

Our review of the OP&F 30-year plan in our July, 2012 report concluded that the retirement changes were nearly adequate to meet the funding objective at the 2010 actuarial valuation date, but as of 2011 would not accomplish the twin funding objectives for both retirement and health care benefits long-term. We concluded:

“This was due to a variety of factors, including:

- *The 2010 30-year plan was not implemented as of 2010*
- *The 2010 30-year plan was calculated on a long-term basis as if member contributions of 12.25% commenced in 2010 rather than being phased in through 2015*

- *The 2010 30-year plan resulted in a health care contribution which was only projected to be solvent until 2027, not indefinitely as we would recommend*
- *Even though both 2009 and 2010 were good investment years, the 2010 30-year plan did not reflect even greater actuarial investment losses (from 2008) expected to be recognized after January 2010. These totaled \$1.6 billion as of January 2011*

As a result, further reductions in benefits of approximately 8% must occur in order to maintain the funding objectives based on conditions as of January 1, 2011, and assuming all assumptions are met after that time.”

PTA/KMS also concluded that further benefit reductions would likely be required after the January 1, 2012 actuarial valuation because of investment results during 2011 and earlier.

This was confirmed in Buck Consultants’ December 12, 2012 report. After the provisions of SB 340 are taken into account, the funding objectives are not met for either program as of January 1, 2012, and the deficit has increased primarily due to 2012 and earlier recognized investment results.

...

SUMMARY OF CONCLUSIONS

- *We agree with Buck’s calculations that based on investment returns through mid-2013 and a modest return for the last half of 2013 and healthcare contributions reduced to 2.85% of pay, the retirement plan is expected to be fully funded within 30 years, but the annual actuarial valuations will continue to show a short fall for some time due to the smoothing techniques and the healthcare plan would be insolvent in 18 years.*
- *Although there is no statutory requirement for health care funding, OP&F does not meet our recommended threshold for solvency.*
- *We encourage the ORSC to develop a more clear definition of what it means to have met the thirty year funding requirement. This would include the following parameters:*
 - *Based on the most recent actuarial valuation, and under the current contribution rates and schedule of benefits, employee contribution rates and healthcare contribution rates, the pension is expected to be 100% funded by 2043.*
 - *Based on the above, the healthcare fund is expected to remain solvent for that time.*
 - *This analysis will be based on an actuarial value (smoothed value) of assets for the retirement plan*
- *We recommend that this determination be made annually, not triennially and each system follow a uniform format for reporting to the ORSC its current status*
- *If the funding objectives are not met currently, each system should provide a detailed plan for meeting the objectives in the future*

We believe that for the most part, these conclusions are still relevant. OP&F has further reduced the allocation of contribution toward retiree health care benefits to 0.50% of payroll. While the increased allocation toward pensions as well as strong investment performance has improved the statutory benefit funding period, it has further jeopardized retiree health benefits. As mentioned previously, this situation

is not likely to improve on its own. Some reduction in benefits or increase in contributions is likely necessary. Although this may not be required in 2016, there is a reasonable probability that they will be required in 2019.

Milliman last reviewed OP&F in 2006. Some of their conclusions included:

The valuation report indicates that, based on the current allocation of the statutory contribution rates, the Unfunded Actuarial Accrued Liability, “UAL”, has an infinite funding period; i.e., the UAL can be expected to grow indefinitely into the future. An infinite funding period was reported in each of the prior two valuation reports also. Thus OP&F’s current statutory contribution rates are not adequate to support both:

1. *the statutory mandated benefits within the 30 year limitation on the funding period in Section 742.16 of the ORC; and,*
2. *the discretionary health insurance benefits provided by the Board to retirees and their dependents and beneficiaries in accordance with Section 742.45 of the ORC.*

This is still substantially accurate nearly ten years later, although:

- pension benefits have been reduced as a result of reforms taken in accordance with SB 340
- contributions made by police officers and firefighters have increased to 12.25% of pay
- OP&F has reduced the allocation of contribution toward health benefits, improving the funding period for pension and statutory benefits at a further cost to the long term solvency of the retiree health care fund
- Investment returns were very poor for the two years following the 2006 report, followed by strong returns, although not strong enough to compensate for the losses from the great recession based on expected return of 8.25%

POTENTIAL ORSC RECOMMENDATIONS

It is encouraging that OP&F is meeting the target funding period of 30 years for statutory benefits. However, the 30-year funding period required by 742.16 might not be satisfied in subsequent years once the triennial actuarial valuation and review are conducted.

ORSC may wish to begin to encourage review of potential changes which may be necessary.

The improved funding period is partly due to the increase in allocation of employer contributions toward statutory pension benefits, leaving reduced contributions toward health care. This has the impact of further jeopardizing the solvency of the retiree health trust. ORSC may wish to encourage further analysis of potential changes to rectify this long term problem.

RECAP OF FINDINGS

- OP&F reported a funding period of 30 years. We confirm the calculations.
- If based on the market value of assets, the funding period is 25 years.
- This is a substantial improvement over prior years.
- If investment returns after 2015 are poor and actuarial assumptions are materially changed in the next few years, we anticipate that the 30-year period may not be met. This may trigger a need for further modifications.

We are available to discuss these findings and recommendations in more detail.

Sincerely,



William B. Fornia, FSA

Cc: Linda Bournival KMS

APPENDIX I – Funding Period Calculations

Replication of Buck Calculation – Based on Actuarial Value of Assets

| Year | Plan Year | Outstanding Balance at Beginning of Year (UAAL) | Assumed Amortization Contribution Rate | Assumed Payroll @ 3.75% Growth Rate | Mid-Year Amortization Contribution Amount | Outstanding Balance at End of Year (UAAL) |
|------|-----------|---|--|-------------------------------------|---|---|
| 1 | 2015 | 5,366,301,330 | 15.285% | 2,021,416,822 | 308,973,561 | 5,487,555,023 |
| 2 | 2016 | 5,487,555,023 | 15.770% | 2,097,219,953 | 330,731,587 | 5,596,174,387 |
| 3 | 2017 | 5,596,174,387 | 15.870% | 2,175,865,701 | 345,309,887 | 5,698,587,110 |
| 4 | 2018 | 5,698,587,110 | 15.970% | 2,257,460,665 | 360,516,468 | 5,793,627,460 |
| 5 | 2019 | 5,793,627,460 | 16.060% | 2,342,115,440 | 376,143,740 | 5,880,249,515 |
| 6 | 2020 | 5,880,249,515 | 16.130% | 2,429,944,769 | 391,950,091 | 5,957,572,447 |
| 7 | 2021 | 5,957,572,447 | 16.200% | 2,521,067,698 | 408,412,967 | 6,024,146,008 |
| 8 | 2022 | 6,024,146,008 | 16.230% | 2,615,607,736 | 424,513,136 | 6,079,460,747 |
| 9 | 2023 | 6,079,460,747 | 16.260% | 2,713,693,026 | 441,246,486 | 6,121,929,029 |
| 10 | 2024 | 6,121,929,029 | 16.280% | 2,815,456,515 | 458,356,321 | 6,150,099,314 |
| 11 | 2025 | 6,150,099,314 | 16.300% | 2,921,036,134 | 476,128,890 | 6,162,102,488 |
| 12 | 2026 | 6,162,102,488 | 16.320% | 3,030,574,989 | 494,589,838 | 6,155,888,551 |
| 13 | 2027 | 6,155,888,551 | 16.340% | 3,144,221,551 | 513,765,801 | 6,129,210,666 |
| 14 | 2028 | 6,129,210,666 | 16.370% | 3,262,129,859 | 534,010,658 | 6,079,268,448 |
| 15 | 2029 | 6,079,268,448 | 16.390% | 3,384,459,729 | 554,712,950 | 6,003,666,657 |
| 16 | 2030 | 6,003,666,657 | 16.410% | 3,511,376,969 | 576,216,961 | 5,899,454,244 |
| 17 | 2031 | 5,899,454,244 | 16.420% | 3,643,053,605 | 598,189,402 | 5,763,783,463 |
| 18 | 2032 | 5,763,783,463 | 16.430% | 3,779,668,116 | 620,999,471 | 5,593,187,503 |
| 19 | 2033 | 5,593,187,503 | 16.430% | 3,921,405,670 | 644,286,952 | 5,384,288,322 |
| 20 | 2034 | 5,384,288,322 | 16.430% | 4,068,458,383 | 668,447,712 | 5,133,017,316 |
| 21 | 2035 | 5,133,017,316 | 16.430% | 4,221,025,572 | 693,514,501 | 4,834,936,147 |
| 22 | 2036 | 4,834,936,147 | 16.430% | 4,379,314,031 | 719,521,295 | 4,485,204,965 |
| 23 | 2037 | 4,485,204,965 | 16.430% | 4,543,538,307 | 746,503,344 | 4,078,547,958 |
| 24 | 2038 | 4,078,547,958 | 16.430% | 4,713,920,993 | 774,497,219 | 3,609,216,007 |
| 25 | 2039 | 3,609,216,007 | 16.440% | 4,890,693,031 | 804,029,934 | 3,070,437,371 |
| 26 | 2040 | 3,070,437,371 | 16.440% | 5,074,094,019 | 834,181,057 | 2,455,839,287 |
| 27 | 2041 | 2,455,839,287 | 16.440% | 5,264,372,545 | 865,462,846 | 1,757,990,266 |
| 28 | 2042 | 1,757,990,266 | 16.450% | 5,461,786,516 | 898,463,882 | 968,233,349 |
| 29 | 2043 | 968,233,349 | 16.450% | 5,666,603,510 | 932,156,277 | 78,266,818 |
| 30 | 2044 | 78,266,818 | 16.450% | 5,879,101,142 | 967,112,138 | 0 |

Resulting Funding Period = 30 Years

APPENDIX I – Funding Period Calculations (continued)

Alternate Calculation – Based on Market Value of Assets

| Year | Plan Year | Outstanding Balance at Beginning of Year (UAAL) | Assumed Amortization Contribution Rate | Assumed Payroll @ 3.75% Growth Rate | Mid-Year Amortization Contribution Amount | Outstanding Balance at End of Year (UAAL) |
|------|-----------|---|--|-------------------------------------|---|---|
| 1 | 2015 | 4,942,144,640 | 15.285% | 2,021,416,822 | 308,973,561 | 5,028,405,406 |
| 2 | 2016 | 5,028,405,406 | 15.770% | 2,097,219,953 | 330,731,587 | 5,099,144,927 |
| 3 | 2017 | 5,099,144,927 | 15.870% | 2,175,865,701 | 345,309,887 | 5,160,552,720 |
| 4 | 2018 | 5,160,552,720 | 15.970% | 2,257,460,665 | 360,516,468 | 5,211,205,232 |
| 5 | 2019 | 5,211,205,232 | 16.060% | 2,342,115,440 | 376,143,740 | 5,249,777,454 |
| 6 | 2020 | 5,249,777,454 | 16.130% | 2,429,944,769 | 391,950,091 | 5,275,086,440 |
| 7 | 2021 | 5,275,086,440 | 16.200% | 2,521,067,698 | 408,412,967 | 5,285,354,905 |
| 8 | 2022 | 5,285,354,905 | 16.230% | 2,615,607,736 | 424,513,136 | 5,279,719,379 |
| 9 | 2023 | 5,279,719,379 | 16.260% | 2,713,693,026 | 441,246,486 | 5,256,208,998 |
| 10 | 2024 | 5,256,208,998 | 16.280% | 2,815,456,515 | 458,356,321 | 5,212,957,380 |
| 11 | 2025 | 5,212,957,380 | 16.300% | 2,921,036,134 | 476,128,890 | 5,147,646,344 |
| 12 | 2026 | 5,147,646,344 | 16.320% | 3,030,574,989 | 494,589,838 | 5,057,739,775 |
| 13 | 2027 | 5,057,739,775 | 16.340% | 3,144,221,551 | 513,765,801 | 4,940,464,617 |
| 14 | 2028 | 4,940,464,617 | 16.370% | 3,262,129,859 | 534,010,658 | 4,792,450,849 |
| 15 | 2029 | 4,792,450,849 | 16.390% | 3,384,459,729 | 554,712,950 | 4,610,686,606 |
| 16 | 2030 | 4,610,686,606 | 16.410% | 3,511,376,969 | 576,216,961 | 4,391,553,340 |
| 17 | 2031 | 4,391,553,340 | 16.420% | 3,643,053,605 | 598,189,402 | 4,131,480,734 |
| 18 | 2032 | 4,131,480,734 | 16.430% | 3,779,668,116 | 620,999,471 | 3,826,219,798 |
| 19 | 2033 | 3,826,219,798 | 16.430% | 3,921,405,670 | 644,286,952 | 3,471,545,782 |
| 20 | 2034 | 3,471,545,782 | 16.430% | 4,068,458,383 | 668,447,712 | 3,062,473,516 |
| 21 | 2035 | 3,062,473,516 | 16.430% | 4,221,025,572 | 693,514,501 | 2,593,572,484 |
| 22 | 2036 | 2,593,572,484 | 16.430% | 4,379,314,031 | 719,521,295 | 2,058,928,800 |
| 23 | 2037 | 2,058,928,800 | 16.430% | 4,543,538,307 | 746,503,344 | 1,452,104,010 |
| 24 | 2038 | 1,452,104,010 | 16.430% | 4,713,920,993 | 774,497,219 | 766,090,433 |
| 25 | 2039 | 766,090,433 | 16.440% | 4,890,693,031 | 804,029,934 | 0 |

Resulting Funding Period = 25 Years