

ACTUARIAL VALUATION REPORT

# Retirement Income Plan for General Employees of City of Pembroke Pines

4-27083

---

Plan year beginning 10/01/2016 and ending 09/30/2017



# Table of Contents

(Click on topic below to link to that information)

<b>Summary of Results</b> .....	<b>3</b>
Current Year Plan Costs.....	3
Factors Impacting Current Year Costs.....	3
<b>Understanding Your Plan’s Funded Status</b> .....	<b>4</b>
<b>Contribution Schedule</b> .....	<b>8</b>
<b>Funding Calculations</b> .....	<b>9</b>
Actuarially Determined Contribution.....	9
Development of Total Normal Cost.....	10
Actuarial Accrued Liability .....	10
Unfunded Actuarial Accrued Liability.....	11
Schedule of Amortization Bases.....	12
<b>Data and Assumptions</b> .....	<b>13</b>
Plan Assets .....	13
Census Characteristics.....	15
Benefit Cash Flows .....	16
Plan Provisions .....	18
Assumptions and Methods.....	23
Actuary Statement .....	26
<b>Present Value of Accrued Plan Benefits</b> .....	<b>27</b>
<b>Risk-Free Results</b> .....	<b>28</b>
<b>Historical Results</b> .....	<b>29</b>
<b>Florida Disclosures</b> .....	<b>31</b>

The subject matter in this communication is provided with the understanding that The Principal® is not rendering investment, legal, accounting, or tax advice. You should consult with appropriate counsel or other advisors on all matters pertaining to investment, legal, tax, or accounting obligations and requirements.

This report is for the defined benefit retirement plan named on the report cover and may only be provided to other parties in its entirety. Employee data and other information you provide, along with benefits described in your plan document are used for the basis of this report. This report includes your Actuarial Determined Contribution. Amounts in this report are not meant for your financial statements or to terminate your plan. Upon request, we will prepare other reports for these purposes.

# Summary of Results

## Current Year Plan Costs

The following is a synopsis of your plan costs for the current year, including the Actuarially Determined Contribution (ADC). For a complete schedule of the cash due and received by the plan, see the [Contribution Schedule](#).

**The Actuarially  
Determined Contribution  
for this plan year is  
\$2,378,931**

- We have received \$625,017 in employer contributions for the current plan year.
- See [Funding Calculations](#) for details.
- Contributing less than this amount will increase your next year Actuarially Determined Contribution.

## Factors Impacting Current Year Costs

While completing this valuation, we reviewed the actuarial assumptions. The assumption changes we made are disclosed in the [Assumptions and Methods](#) section of this report.

Your Actuarially Determined Contribution increased from \$566,798 in 2015 to \$2,378,931 for 2016.

- The net effect of the assumption change has increased your Actuarially Determined Contribution.

You can compare your contributions to the Actuarially Determined Contributions for each year in the Historical Results section at the back of this report.

Your Pension Actuarial Analyst is Gary R Pepper  
Phone – 1-800-557-6627 extension 49379, or 412-394-9379  
Email – [Peffer.Gary@principal.com](mailto:Peffer.Gary@principal.com)

# Understanding Your Plan’s Funded Status

While it is important to know the actuarially determined contribution level, it is also important to understand your plan’s funded status. The funded status determines contribution levels and can help you make informed decisions about plan funding, investment policies and benefit changes.

## Measures of Plan Funded Status

The table below compares the plan’s 10/01/2016 market value of assets (the solid line) to 10/01/2016 plan liabilities measured using the assumptions we have made about future events.

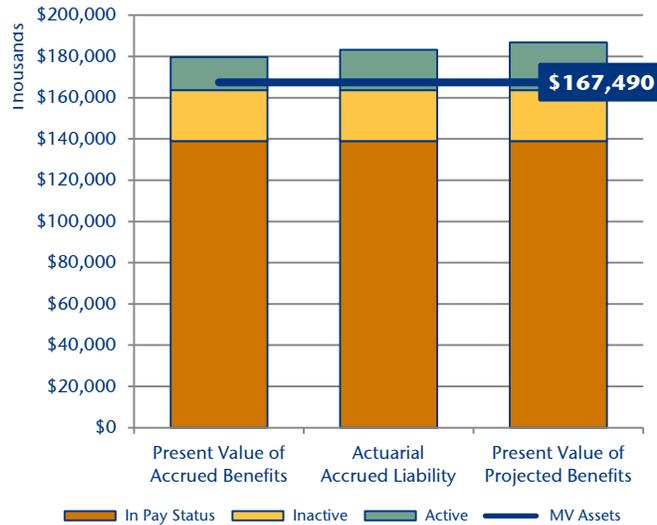
The liabilities assume:

- No one will enter the plan after the valuation date.
- Your asset allocation will remain the same with a return of 6.75% each year into the future.
- Plan participants will retire, die, terminate, and become disabled based on our assumptions.
- Annual pay per person will increase based on the [salary increase assumption](#).

### Three liability measures are shown:

1. **Present Value of Accrued Benefits** - benefits already earned through the valuation date.
2. **Actuarial Accrued Liability (AAL)** - represents the targeted asset level under your plan’s cost method.
3. **Present Value of Projected Benefits** - all benefits expected to be earned through assumed retirement date.

Compare your plan’s assets to each of the three liability measures to determine the funded status.



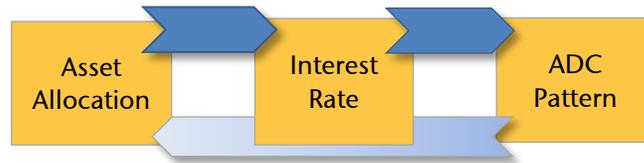
### Considerations

These funded status measurements should be evaluated when making decisions about your plan. The goal of the plan’s cost method is to accumulate assets equal to the AAL. As long as your AAL is fully funded, you will only need to contribute the plan’s Normal Cost each year. Otherwise, you’ll also need to contribute amortization payments toward funding this liability.

Understanding how your assets compare to your Present Value of Accrued Benefits is important. At a minimum you want to have enough assets in the plan to cover the present value of the benefits accrued to date.

Funding in excess of the Present Value of Projected Benefits may not be the best use of your organization’s funds. However, having excess assets may provide funding and plan design flexibility.

## Asset Allocation, Interest Rates and Actuarially Determined Contributions (ADC)



Three key factors are linked in the determination of the pattern and level of the ADC for your plan: your asset allocation, the assumed funding interest rate and the pattern of your ADC. This section discusses how these three factors are related, illustrates the impact of interest rates on measures of benefit liability, and provides information to consider as you review your funding and asset allocation decisions.

The liability measures shown on the previous page and used to calculate your Actuarially Determined Contribution (ADC) reflect assumptions about future investment returns based on your asset allocation. However, future investment returns are not guaranteed, and will fluctuate. To make informed decisions about funding policy, benefit design, and asset allocations, you need to understand the effect of the [liability interest rate assumption](#).

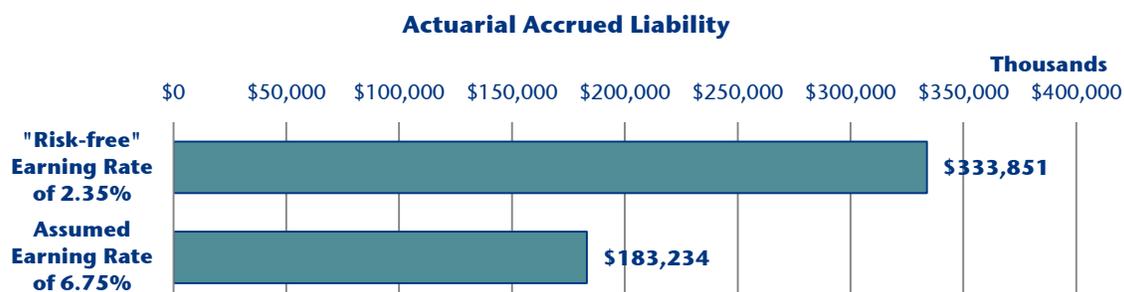
The only sources of funding for your benefits are your cash contributions and asset earnings. The present value of benefits (liability measure) is less than the benefits payable because it is reduced for assumed future asset earnings. When asset earnings fall below expectations, additional cash will be needed to allow payment of all your benefits. Your cost method is used to budget the expected total cost of your plan, and determines the ADC for each plan year.

### Asset Allocations and Interest Rates

To help understand how the level of ADC can change over time, a best practice is to evaluate the benefit liability ignoring the plan's asset allocation. A recommended approach is to use a conservative "risk-free" interest rate such as U.S. Treasury instruments.

	Diversified Asset Allocation	"Risk free" Return
<b>Expected future returns</b>	<a href="#">interest</a> rate based on your plan's asset allocation	conservative interest rates such as U.S. Treasury instruments (not based on your plan's investment allocation)
<b>Means</b>	<b>Lower ADC today</b> and potentially <b>higher ADC later</b> if returns fall below that assumed	<b>Higher ADC today</b> and potentially <b>lower ADC later</b> if greater returns are earned

The chart below shows your plan’s Actuarial Accrued Liability used in the ADC calculation compared to the liability determined using a “risk-free” interest rate. This chart indicates how much impact asset earnings can have on the cash required to fund benefits over the life of the plan.



As you can see above, higher expected returns generate a lower benefit liability. The additional assumed returns between Funding Basis (6.75%) and Risk-Free Basis (2.35%) are referred to as “risk premium”. The \$150,617,144 difference in the two liability amounts is the assumed risk premium to be earned over the life of the plan.

The [Risk-Free Results](#) section later in this report shows additional liability comparisons.

### Asset Allocation and ADC

The interest return assumption we use to measure benefit liabilities for funding is **based on your asset allocation**. As a result, your asset allocation choices impact your ADC:

- More volatile asset classes may reduce the current ADC for your plan, but will cause both future ADC and funded status to fluctuate more. There is the potential for severe declines in funded status and increases in ADC when markets perform poorly.
- More conservative asset classes may result in a higher ADC, but provide a more stable basis for planning and budgeting.

The more volatile the value of your asset classes, the greater the range of the potential ADC. You can evaluate the potential impact of alternative asset allocations - and how you could balance your long-term cost and the volatility of your annual ADC - through forecasting studies.

### Benefit Changes and Risk-Free Interest Rates

A decision to change plan benefits can have long-term funding implications. Plan sponsors should be cautious about spending what appears to be excess assets in a given plan year on benefit increases. Working with your actuary to request a plan design study can help with your decision.

Recognizing the volatility of the ADC (discussed in the paragraph above), you will want to include the value of the proposed benefit change on a more conservative rate (ex. a risk-free rate) and/or a forecast of long-term funding levels. Discussing the study with your plan actuary can help you decide what, if any, benefit changes you can afford over the long term.

## Forecasting: A Best Practice

Industry experts agree that it is a prudent best practice to review the long-term trends of your plan. We provide historical information at the back of this report. But that is like driving using just your rear view mirror: you only see part of the picture.

### Short-Term

Neither this year's ADC nor funded status is a good estimate of future amounts because they are volatile from year to year. These measures depend on your plan's assets and benefit liability:

- **Plan Asset Values** increase or decrease with market returns on investments, contributions made, benefit payments and expenses. Using an asset smoothing method also affects the upcoming year asset values.
- **Benefit Liability** is impacted by benefit payments, salary experience, census or demographic changes, and assumption changes.

If you need to budget for next year or explore the potential volatility of results over the next few years, consider requesting a short-term forecast.

### Long-Term

A 10- or 20-year forecast of your plan's ADC and funded status under both expected and adverse economic scenarios is an excellent planning tool and can be a good investment.

- Comparing the results from your current asset allocation to alternative investment options can provide valuable insights to guide **asset allocations**. Comparing different funding policies can help evaluate whether your policy will meet your goals and fit in your budget.
- Stress-testing based on **economic conditions** can help you assess plan risk, and to set funding and investment policies.
- Projecting salary experience, census or demographic changes, and the benefits offered can help identify **long-term trends**.

If you want to explore the potential volatility of results over an extended time period, consider requesting a long-term forecast.

## Keep Us Informed

Please make us aware of any upcoming plan design or significant participant group changes (such as layoffs, increases in staff, or large retirements). Knowing about possible changes gives us the chance to advise you whether further analysis of the cost impact should be considered.

# Contribution Schedule

The table below shows the contributions received and payments that are due to meet the Actuarially Determined Contribution (ADC) for this year. You can fund more than this schedule.

- The total cash contributions made for the 2015 plan year is \$6,500,000.
- So far, cash contributions of \$625,017 have been received for the current plan year.
- Employee contributions of \$260,487 have been received for the 2015 plan year.

<b>Paid or Date Due</b>	<b>For Plan Year Beginning in</b>		
	<b>2015</b>	<b>2016</b>	<b>2017</b>
12/10/2015	\$625,000		
03/07/2016	\$625,000		
06/07/2016	\$625,000		
09/07/2016	\$625,000		
11/23/2016	\$4,000,000		
12/13/2016		\$625,017	
09/30/2017		\$1,753,914	
09/30/2018			To be determined

**Contributions:**

<span style="display: inline-block; width: 15px; height: 15px; background-color: #FFDAB9; border: 1px solid black;"></span> Received	<span style="display: inline-block; width: 15px; height: 15px; background-color: #FFD700; border: 1px solid black;"></span> Due for Current Year	<span style="display: inline-block; width: 15px; height: 15px; background-color: #FFDAB9; border: 1px solid black;"></span> Due for Next Year
--	--	---

# Funding Calculations

## Actuarially Determined Contribution as of 10/1/2017

The actuarially determined contribution (ADC) includes two primary components. First, the Normal Cost is the cost attributed to the current year, due to the continued accrual of plan benefits for active employees, and plan expenses.

The second main component is an amortization of any unfunded accumulated past costs (Unfunded Actuarial Accrued Liability).

The sum of these two components is then increased for interest to the end of the plan year.

Employer Normal Cost	\$5,151,232
Plus valuation interest	347,708
Minus 15 year amortization of credit balance	2,922,725
Minus valuation interest to the end of the year on credit balance	197,284
<b>Actuarially Determined Contribution (ADC)</b>	<b>\$2,378,931</b>

The Actuarially Determined Contribution is in addition to employee contributions.

Normal Cost - \$758,577

Normal Cost with interest - \$815,470

Prior Credit Balance - \$21,493,138

Contributions - \$6,500,000

Prior Credit Balance and Contributions with interest - \$29,686,454

Credit Balance - \$28,870,984 (\$29,686,454 - \$815,470)

### Development of Total Normal Cost for fiscal year ending 09/30/2017

Normal cost is the portion of cost assigned to each year based on the [cost method](#) and [assumptions](#) shown in this report. The normal cost may be shared by the employer and the employees based on plan provisions.

Normal cost	\$464,001
Plus estimated expenses	50,000
<b>Total Normal Cost</b>	<b>\$514,001</b>
Plus amortization charges	5,849,910
Minus amortization credits	1,516,183
<b>Employer Normal Cost</b>	<b>\$4,847,728</b>

### Development of Total Normal Cost for fiscal year ending 09/30/2018

Normal cost is the portion of cost assigned to each year based on the [cost method](#) and [assumptions](#) shown in this report. The normal cost may be shared by the employer and the employees based on plan provisions.

Total normal cost for fiscal year ending 09/30/2017	\$4,847,728
Plus adjustment for salary increase (4.08%)	197,787
Plus adjustment for interest (6.75%)	340,572
<b>Total Normal Cost for 09/30/2018 FYE</b>	<b>\$5,386,087</b>
Minus employee normal cost (7.25% of compensation - \$3,239,391)	234,855
<b>Employer Normal Cost</b>	<b>\$5,151,232</b>

### Actuarial Accrued Liability

The Actuarial Accrued Liability (AAL) is the targeted asset level for the plan and is used in the calculation of the Unfunded Actuarial Accrued Liability on the following page. The AAL below is the amount after any assumption or plan changes.

Active participants	\$19,555,533
Inactive participants	24,636,956
Participants and beneficiaries in pay status	139,041,295
<b>Actuarial Accrued Liability</b>	<b>\$183,233,784</b>

## Unfunded Actuarial Accrued Liability

Each year the Unfunded Actuarial Accrued Liability (UAAL) is calculated and equals the Actuarial Accrued Liability less the Actuarial Value of Assets. An experience gain or loss occurs when actual plan experience differs from what was assumed. The gain or loss is calculated separately and amortized as a charge (for a loss) or a credit (for a gain). The UAAL is then adjusted for amendments, assumption changes, or method changes and a liability base is created.

<b>Expected Unfunded Actuarial Accrued Liability</b>		
10/01/2015 Unfunded Actuarial Accrued Liability (UAAL)	\$(2,576,638)	
10/01/2015 Employer Normal Cost	758,577	
Interest on the above items	(136,355)	
<b>Total Expected UAAL without Contributions</b>		<b>\$(1,954,416)</b>
Employer contributions	\$6,500,000	
Interest on employer contributions	81,331	
<b>Total Contributions with interest</b>		<b>\$6,581,331</b>
<b>Expected 10/01/2016 Unfunded Actuarial Accrued Liability</b> (Total Expected UAAL less Contributions with interest)		<b>\$(8,535,747)</b>
<b>Actual Unfunded Actuarial Accrued Liability (before any changes)</b>		
Actuarial Accrued Liability	\$166,843,428	
Less Actuarial Value of Assets	173,332,291	
<b>Preliminary 10/01/2016 Unfunded Actuarial Accrued Liability</b>		<b>\$(6,488,863)</b>
<b>Experience (Gain) or Loss</b>		
Actual Unfunded Actuarial Accrued Liability	\$(6,488,863)	
Less Expected Unfunded Actuarial Accrued Liability	(8,535,747)	
<b>(Gain)Loss</b>		<b>\$2,046,884</b>
2015 amortization balances	\$2,286,093	
Interest on amortization balances	171,457	
<b>Additional (Gain)/Loss from (excess) shortage of contributions</b>		<b>\$2,457,550</b>
<b>Total experience (gain) or loss</b>		<b>\$4,504,434</b>
<b>Final Unfunded Actuarial Accrued Liability (after any changes)</b>		
Actuarial Accrued Liability after assumption	\$183,233,784	
Less Actuarial Value of Assets	173,332,291	
<b>10/01/2016 Unfunded Actuarial Accrued Liability after changes</b>		<b>\$9,901,493</b>
<b>Change in Unfunded Actuarial Accrued Liability Due to:</b>		
	(Gain)/Loss	
Change in assumptions	\$16,390,356	

### Funding Calculations

## Schedule of Amortization Bases

Your cost method allocates a portion of plan funding to be amortized in equal annual installments, rather than to be paid through future normal costs. The following amortization periods will be applied consistently to any amortization bases created 10/01/2012 and later.

- Initial Unfunded Actuarial Accrued Liability: 15years
- Experience gains/losses: 15 years.
- Amendments: 15 years
- Assumption changes: 15 years

Date Created	Reason	Initial Balance	Remaining Period (Years)	Outstanding Balance	Annual Amortization
10/01/2016	Assumption	16,390,356	15	\$16,390,356	\$1,659,261
10/01/2016	Experience (gain)/loss	4,504,434	15	4,504,434	456,002
10/01/2015	Assumption	7,693,822	14	7,399,247	780,727
10/01/2015	Experience (Gain)/Loss	(2,799,322)	14	(2,692,144)	(284,060)
10/01/2014	Experience (Gain)/Loss	(3,974,549)	13	(3,661,583)	(404,613)
10/01/2013	Experience (Gain)/Loss	(8,101,838)	12	(7,110,747)	(827,510)
10/01/2012	CMET	28,822,233	11	23,942,914	2,953,920
<b>Total</b>				<b>\$38,772,477</b>	<b>\$4,333,727</b>

# Data and Assumptions

## Plan Assets

We measure your plan's assets at the beginning of each plan year. Plan assets reflect all contributions made for prior plan years. Contributions you may have already made for the 2016 plan year are not included.

Both market value and actuarial value for the 2016 plan year are shown below.

### Market Value of Assets

Investments held by the Principal Financial Group	\$163,486,707
2015 contributions received on or after 10/01/2016	4,003,409
<b>Total Market Value of Assets</b>	<b>\$167,490,116</b>

### Actuarial Value of Assets

Your plan's actuarial value of assets is a smoothed value instead of the market value. Using a smoothing method allows you to soften the volatility of assets from year to year. The Actuarial Value of Assets is used to calculate your ADC.

The actuarial value of assets held by Principal Financial Group is determined on a combined basis. See the following page for the development of this value.

Investments held by the Principal Financial Group	\$169,328,882
Discounted Value of 2015 contributions received on or after 10/01/2016	4,003,409
<b>Total Actuarial Value of Assets</b>	<b>\$173,332,291</b>

### Calculation of Actuarial Value

To determine the actuarial value of investments held by the Principal Financial Group we have adjusted the market value by:

- Subtracting any remaining deferred appreciation in excess of expected investment earnings.
- Adding any remaining deferred appreciation short of expected investment earnings (shortfall).

Of the total excess appreciation or shortfall for any one plan year, 25% is allocated to the current plan year and each of the next three plan years.

a)	Market value of assets as of 2015	\$158,607,927
b)	Contributions/transfers	6,760,487
c)	Benefit payments	(10,243,459)
d)	Expenses	(49,316)
e)	Expected 7.50% interest on (a, b, c, and d)	11,581,665
f)	Expected value of assets as of 10/01/2016 (a+b+c+d+e)	\$166,657,304
g)	Market value as of 10/01/2016	\$167,490,116
h)	Current year excess appreciation/(shortfall) (g-f)	832,812
i)	Adjustment to market value (sum of deferred amounts – see below)	(5,842,175)
j)	Actuarial value of assets (g-i)	<b>\$173,332,291</b>

### Allocation of Deferred Appreciation

Allocation Year	Plan Year			
	2013	2014	2015	2016
2013	\$1,115,905			
2014	1,115,904	\$541,031		
2015	1,115,904	541,030	\$(3,503,907)	
2016	1,115,904	541,030	(3,503,907)	\$208,203
2017		541,030	(3,503,907)	208,203
2018			(3,503,907)	208,203
2019				208,203
Total	\$4,463,617	\$2,164,121	\$(14,015,628)	\$832,812
Deferred	\$0	\$541,030	\$(7,007,814)	\$624,609
Adjustment to market value (sum of deferred amounts)				<b>\$(5,842,175)</b>

### Data and Assumptions

## Census Characteristics

	10/01/2015	10/01/2016	Change
<b>Number of Covered Participants</b>			
Actives	39	39	+0
Terminated Vested	272	255	-17
Disabled	3	2	-1
Retirees	381	393	+12
Total	695	689	-6

<b>Average Age</b>			
Actives	49.5	50.5	+1.0
Terminated Vested	48.1	48.6	+0.5
Disabled	53.7	54.3	+0.6
Retirees	66.9	67.2	+0.3
All	58.5	59.3	+0.8

<b>Reported Annual Payroll</b>			
Actives	\$3,280,160	\$3,441,627	+4.9%
Average Pay Per Active	84,107	88,247	+4.9%

<b>Average Years of Service</b>			
Actives	12.4	13.4	+8.1%

<b>Monthly Projected Retirement Benefits</b>			
Actives	\$232,656	\$237,338	+2.0%
Terminated Vested	266,170	236,753	-11.1%
Disabled	2,734	2,016	-26.3%
Retirees	806,586	841,284	+4.3%

The monthly projected retirement benefit for actives was calculated at Normal Retirement Age (current age if later) with projected service and projected salaries.

## Benefit Cash Flows

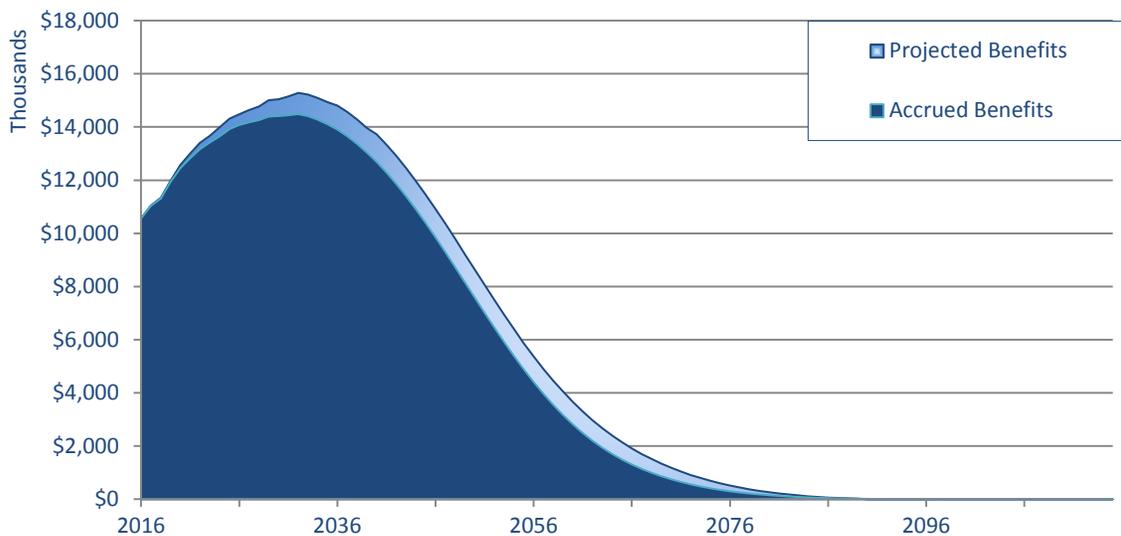
Benefit cash flows are the benefit payments expected to be paid from your plan assets. We provide cash flows to help you calculate and understand your plan obligations and the future liquidity needs of the plan.

You can compare your cash flows to the 10/01/2016 market value of assets, \$167,490,116, to evaluate your asset liquidity needs, and whether cash contributions in excess of the Actuarially Determined Contribution may be needed in the short term.

Benefit cash flows can be based on either the current plan participants (“closed group”) or a group that assumes future new entrants (“open group”). The benefit payments could be based on the accrued benefits or the projected plan benefits (reflecting future service and salary increases).

In this report, we are showing you the benefit cash flows for a closed group. The graph below shows the total benefits expected to be paid for current participants (closed group). The split between benefits already accrued and those to be earned in the future is indicated on the graph. The top line represents the total projected benefits expected to be paid in each plan year.

**Accrued and Projected Benefit Payments**  
Closed Group



The table on the next page provides the details of this graph, showing the accrued and projected benefits expected to be paid, by plan year. All benefit cash flows shown on these two pages are based on the demographic assumptions (retirement and withdrawal rates, mortality, salary growth, and form of benefit) as outlined in the [Assumptions and Methods](#), but do not reflect an interest discount.

## Data and Assumptions

## Benefit Cash Flow Detail

Year	Accrued Benefit Cash Flow	Projected Benefits Cash Flow
2016	10,561,475	10,561,475
2017	11,036,136	11,047,297
2018	11,305,657	11,333,094
2019	11,936,106	11,981,410
2020	12,453,073	12,580,067
2021	12,826,317	13,000,915
2022	13,168,651	13,409,817
2023	13,418,146	13,665,526
2024	13,647,888	13,998,135
2025	13,919,466	14,313,834
2026	14,077,387	14,479,886
2027	14,176,936	14,642,076
2028	14,259,122	14,775,399
2029	14,390,219	15,017,051
2030	14,411,780	15,048,169
2031	14,442,297	15,158,719
2032	14,485,137	15,287,469
2033	14,409,864	15,223,323
2034	14,274,563	15,097,708
2035	14,101,900	14,934,614
2036	13,903,504	14,809,239
2037	13,654,690	14,570,378
2038	13,367,720	14,292,836
2039	13,038,394	13,971,639
2040	12,687,253	13,728,979
2041	12,289,143	13,339,241
2042	11,857,321	12,914,829
2043	11,393,514	12,455,638
2044	10,901,462	11,968,114
2045	10,384,497	11,454,302
2046	9,846,567	10,917,998
2047	9,291,669	10,363,026
2048	8,724,713	9,794,138

Year	Accrued Benefit Cash Flow	Projected Benefits Cash Flow
2049	8,152,340	9,217,842
2050	7,579,929	8,639,360
2051	7,011,657	8,062,719
2052	6,452,076	7,492,257
2053	5,906,853	6,933,430
2054	5,381,307	6,391,471
2055	4,879,727	5,870,556
2056	4,404,896	5,373,328
2057	3,959,029	4,901,926
2058	3,544,059	4,458,408
2059	3,160,568	4,043,531
2060	2,808,322	3,657,293
2061	2,486,308	3,298,826
2062	2,194,520	2,968,416
2063	1,932,587	2,666,381
2064	1,698,572	2,391,135
2065	1,490,308	2,140,755
2066	1,304,859	1,912,586
2067	1,139,824	1,704,561
2068	993,495	1,515,311
2069	863,910	1,343,126
2070	748,949	1,186,377
2071	647,213	1,044,085
2072	557,354	915,341
2073	478,140	798,785
2074	408,674	693,771
2075	348,469	600,329
2076	296,155	516,868
2077	250,894	442,408
2078	211,569	375,642
2079	177,562	316,327
2080	148,072	263,658
2081	122,359	216,811

Year	Accrued Benefit Cash Flow	Projected Benefits Cash Flow
2082	99,894	175,346
2083	80,797	139,821
2084	64,847	110,151
2085	51,484	85,376
2086	40,468	65,210
2087	31,309	48,786
2088	23,877	35,926
2089	17,813	25,872
2090	12,986	18,251
2091	9,158	12,498
2092	6,352	8,458
2093	4,326	5,646
2094	2,888	3,707
2095	1,892	2,397
2096	1,218	1,530
2097	768	957
2098	478	590
2099	296	366
2100	183	225
2101	110	133
2102	65	75
2103	40	46
2104	24	28
2105	10	12
2106	0	0
2107	0	0
2108	0	0
2109	0	0
2110	0	0
2111	0	0
2112	0	0
2113	0	0
2114	0	0

## Plan Provisions

This report reflects the maximum benefit limits under Internal Revenue Code (IRC) Section 415 and maximum compensation limits under IRC Section 401 in effect on the first day of each plan year.

The following is a summary of plan provisions and does not alter the intent or meanings of the provisions contained in the contract or plan document.

<b>Plan Eligibility</b>	
<b>Class</b>	<p>Any general or utility employee whose customary employment with the employer is at least 30 hours per week or an elected official subject to the provisions of Chapter 112.048 of the Florida Statutes.</p> <p>Bargaining - no employee hired on and after 02/01/2010 will become an active participant and no inactive participant or former participant will again become an active participant.</p> <p>Non-collective bargaining - no employee hired on and after 10/01/2014 will become an active participant and no inactive participant or former participant will again become an active participant.</p>

<b>Normal Retirement Benefit</b>	
<b>Age</b>	The later of attained age 55 or ten years vesting service.
<b>Form</b>	Monthly annuity payable for life with payments guaranteed to be at least equal to the participant's accumulation on the normal retirement date (optional forms may be elected in advance of retirement).
<b>Amount (Accrued Benefit)</b>	<p>2.85% of average compensation multiplied by accrual service. Maximum benefit is 80% of average compensation (28.07 years).</p> <p>Benefit is frozen effective 07/01/2010 for those covered under the bargaining agreement.</p>

<b>Early Retirement Benefit</b>	
<b>Age</b>	Attained age 50.
<b>Service</b>	Completed 5 years of service.
<b>Form</b>	Same as Normal Retirement Benefit
<b>Amount</b>	Accrued Benefit on Early Retirement Date reduced by 6 2/3% for each year that the Early Retirement Date precedes Normal Retirement Date.

### Data and Assumptions

<b>Late Retirement Benefit</b>	
<b>Age</b>	No maximum age
<b>Form</b>	Same as Normal Retirement Benefit.
<b>Amount</b>	Greater of Accrued Benefit on Late Retirement Date or Accrued Benefit on Normal Retirement Date increased to recognize that annuity commences subsequent to normal retirement.

<b>Termination Benefit</b>	
<b>Vesting Percentage</b>	Subsequent to five years of service, 50%, plus 10% for each year of service thereafter, up to 100%. However, vesting shall be 100% on or subsequent to the earliest of normal retirement date, date when first eligible to early retire or the date of total and permanent disability.
<b>Form</b>	Same as Normal Retirement Benefit with income deferred until Normal Retirement Date.
<b>Amount</b>	<p>Equal to the sum of</p> <ul style="list-style-type: none"> <li>(a) The amount of retirement annuity which could be purchased on his normal retirement date by his participant's required contribution account.</li> <li>(b) Vesting percentage times the excess of the pension benefit as of the date of termination over (a) above.</li> </ul> <p>At any time on or after termination, the participant may elect to receive his participant's required contribution account in cash in lieu of any and all retirement benefits that could be provided by his participant's required contribution account.</p>

<b>Disability Benefit</b>	
<b>Eligibility</b>	An active participant who becomes totally and permanently disabled prior to his retirement date. Ten years of vesting service is required for a non-service related disability benefit to be payable.
<b>Form</b>	Monthly income payable until normal retirement, death, or recovery and a deferred annuity payable at the Normal Retirement Date.
<b>Amount</b>	<p>For a service related disability, the greater of his accrued benefit on date of disability or 40% of his current monthly compensation on such date.</p> <p>For a non-service related disability, the accrued benefit on date of disability.</p>

## Data and Assumptions

<b>Contributions</b>	
<b>Salary Reduction Contribution</b>	<p>Tax deductible contributions made by the employer on behalf of the employee. This is 7.25% of monthly earnings that have been deducted from the employees pay.</p> <p>Effective 07/01/2010, 0% of monthly earnings will be deducted for those covered under the bargaining agreement.</p>

<b>Death Benefit</b>	
<b>Greater of A or B below.</b>	
<b>A. Single Sum Death Benefit</b>	
<b>Form</b>	Single sum.
<b>Amount</b>	Participant's accumulation on date of death.
<b>B. Pre-Retirement Death Benefit</b>	
<b>Age</b>	Attained age 50.
<b>Service</b>	Five years of service.
<b>Form</b>	Monthly annuity payable to spouse.
<b>Amount</b>	If death occurs between Early Retirement Date and Normal Retirement Date, the benefit is an annuity to the spouse for an amount no less than would have been received had the participant elected a joint and 50% survivorship benefit option and early retired the day before death.

<b>Deferred Retirement Option Plan</b>	
<b>Eligibility</b>	An active participant first becomes eligible to elect the DROP on the first day of the month on or after reaching normal retirement date.
<b>Election</b>	An election to participate in the DROP shall constitute an irrevocable election to resign from service not later than sixty (60) months of reaching the start of the DROP eligibility period. An election to participate must be made within the first five years of eligibility. The period of participation in the DROP cannot exceed a period ending sixty months from first becoming eligible for the DROP or when the participant ceases to be an employee.
<b>Form</b>	Same as normal retirement benefit. While the employee is in the DROP the pension benefit payments will be credited to a separate account that will earn a return based on investments chosen by the employee.
<b>Amount</b>	<p>Accrued benefit on retirement date. No additional accrual service will accumulate after entry into the DROP. Any changes in pension benefits shall not apply to participants in the DROP.</p> <p>Once the DROP period expires or the participant ceases to be an employee, any subsequent pension benefit payments will be paid to the employee. The accumulation in the DROP account will be paid to the employee based on his payment option once the participant ceases to be an employee.</p>

<b>Optional Forms of Benefit</b>	
	<ul style="list-style-type: none"> <li>• A monthly income to the employee for life. No benefits are payable at death.</li> <li>• A monthly income to the employee for life, with a 5, 10, or 15 year period where payments continue to the beneficiary.</li> <li>• A monthly income to the employee for life. If the employee dies before the amount paid equals the employee account on the retirement date, payments continue to the beneficiary until the totals equal that amount.</li> <li>• A monthly income to the employee for life, with a 50%, 66 2/3%, 75%, or 100% of the monthly benefit paid to the surviving spouse.</li> </ul>

## Cost of Living Adjustment

<b>Amount</b>	<p>Annual 2% cost of living adjustment effective 10/01/2003 to active participants and DROP participants on and after 10/01/2003 and to participants who started receiving retirement or disability benefits on or after 10/01/2001.</p> <p>Effective 10/01/2004 the cost of living adjustment was increased to 3.0%.</p> <p>Effective 02/01/2010 the cost of living adjustment is decreased to 2% for any plan participant who attains normal retirement date or becomes a participant in the DROP after 02/01/2010.</p> <p>Effective 07/01/2010 the cost of living adjustment shall not apply for those who are covered under the bargaining agreement and have not reached normal retirement date by 07/01/2010.</p>
---------------	---

## Early Retirement Window

	<p>Available to any participant who is employed with the city of Pembroke in the position of Assistant City Manager, Director Community Services, Assistant Director Community Services, Administrative Services Director, has attained age 50, has 14 years of vesting service, and elected an early retirement date between September 3, and September 12, 2008.</p> <p>The retirement benefit will not be reduced for the application of the early retirement reduction factors. In addition, for the Assistant City Manager position, the retirement benefit will be calculated as if the participant was employed until Normal Retirement Date.</p>
--	--

## Definitions

<b>Average Compensation</b>	The monthly average of total pay received for the two years out of all compensation years prior to retirement date which gives the highest average.
<b>Participant's Required Contribution Account</b>	Participant's contributions, accumulated to the date of determination with interest of 5% compounded annually, plus salary reduction contributions not previously paid out or applied.
<b>Accrual Service</b>	An employee's current and all prior periods of continuous service expressed in whole years and fractional parts of a year.

## Assumptions and Methods

The following assumptions and methods are used in this year’s valuation report. The rationale for each non-prescribed economic and demographic assumption is also included. Some assumptions rely on the **Principal RAS Long-Term Capital Market Assumptions (CMA) 2016**. These assumptions are developed focusing on forward-looking market indicators and valuation models, as well as utilizing the analysis of historical data and trends, the outlook and forecasts from credible economic studies, and investment expert opinions. See [Long Term Capital Market Assumptions 2016](#) for additional information.

### Assumptions and Method Changes Since Last Year

#### Assumption Changes

We recently did a comprehensive review of the economic and demographic assumptions used in the valuation. As a result, we changed the following assumptions for your plan:

- The mortality table has been changed to align with the table the State of Florida uses in their valuation.
- The interest rate has been lowered from 7.50% to 6.75%
- The inflation and compensation limit assumptions have been decreased from 2.50% to 2.25%.

#### Method Changes

No methods affecting the comparability of results were changed since the last valuation report was completed.

### Assumptions Selected by Actuary

<b>Liability Interest</b>	<p>During Benefit Payment Period 6.75%</p> <p>Before Benefit Payment Period 6.75%</p> <p>The interest rate is developed as a long-term expected geometric return on plan assets. Arithmetic expected return is calculated as the weighted average of broad asset classes’ arithmetic returns of the plan’s target asset allocation, and then converted to the geometric under lognormal distribution assumption. For details, see Long-Term Capital Market Assumptions link.</p>
<b>Asset Return</b>	<p>6.75% for the current plan year.</p> <p>The Asset Return is developed as a weighted average rate based on the target asset allocation of the plan and the long-term capital market assumptions. The calculated return is on an arithmetic mean basis. For details, see the See Long-Term Capital Market Assumptions link.</p> <p>See Liability Interest rate for how this rate was determined.</p>
<b>Interest Rate for Employee Accumulations</b>	5.00%

## Data and Assumptions

<b>Retirement Cost of Living Adjustment</b>	3.00% & 2.00% per year depending on location.								
<b>Expected Expense</b>	The expected expense included in Normal Cost is an estimate based on prior year expenses paid from plan assets.  This is the best estimate available of upcoming year's expenses.								
<b>Retirement</b>	Active and inactive participants are assumed to retire at Normal Retirement Age as defined in <a href="#">Plan Provisions</a> .  This assumption is based on the results of recent experience analysis and anticipated future experience.								
<b>Inflation</b>	2.25% increase per year  See Long-Term Capital Market Assumptions link.								
<b>Upcoming Salary Increases</b>	The preceding year's salary is increased using the S-5 Table from The Actuary's Pension Handbook, increased by 2.50% at each age. This table provides a rate of increase that declines as participants age.  <table border="1"> <thead> <tr> <th>Age</th> <th>Upcoming Increase</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>6.68%</td> </tr> <tr> <td>40</td> <td>5.22%</td> </tr> <tr> <td>55</td> <td>4.38%</td> </tr> </tbody> </table> Expected salary increase is composed of salary inflation, a real wage growth and a merit increase.	Age	Upcoming Increase	25	6.68%	40	5.22%	55	4.38%
Age	Upcoming Increase								
25	6.68%								
40	5.22%								
55	4.38%								
<b>Compensation Limit Increase</b>	2.25% increase per year.  Compensation limit increase should be consistent with the inflation assumption.								
<b>Mortality</b>	<b>Rates:</b> RP-2000 – 50% Blue Collar, 50% White Collar for males and 100% white collar for females - Mortality  <b>Mortality Improvement (MI):</b> Scale BB  This table is what the State of Florida is using in their valuation.								
<b>Disability Mortality</b>	Florida Disability Mortality 2016 – Males set back 4 years & Females set forward 2 years.								
<b>Disability</b>	1987 Commissioner's Group Disability Table, six month elimination period, male and female.  We rely on a publicly published table due to the limited size of the plan. The 1987 CGDT was recommended by the Society of Actuaries for pension valuation purposes.								

<b>Withdrawal</b>	2003 Society of Actuaries Small Plan Age Table, multiplied by 0.75. We rely on a publicly published table due to the limited size of the plan. The SOA Small Plan Age Table is the most recent withdrawal experience table published by the Society of Actuaries. A multiplier of 0.75 is applied to this table to reflect the results of the most recent experience analysis and anticipated future experience.
<b>Marriage</b>	75% married; husbands are 3 years older than wives. This assumption does not have material impact on the results of this report and has been selected based on our best estimate of active workforce.
<b>Form of Benefit</b>	Participants are assumed to receive their benefits on the normal form at the assumed retirement age.
<b>Methods Selected by Plan Sponsor</b>	
<b>Actuarial Value of Plan Assets</b>	The market value of the Principal Financial Group accounts is adjusted by spreading the expected value minus the actual value over four years. Contributions received in the current plan year but applied to the prior plan year are added to the actuarial value of the Principal Financial Group accounts.
<b>Actuarial Cost Method</b>	Entry Age.
<b>Methods Selected by Actuary</b>	
<b>Retirees</b>	Assets and liabilities for current and future retirees are included.
<b>Vested Benefits</b>	A benefit is included in vested benefits when the participant will meet age and service eligibility requirements at the valuation date. The benefit is multiplied by the participant's vesting percentage applicable to each benefit on the valuation date. The following ancillary benefits are always treated as nonvested: disability benefits payable to retirement age unless in pay status, and pre-retirement death benefits in excess of the Survivor Annuity Death Benefit except as noted in the Plan Provisions.

## Actuary Statement

This report was prepared at the request of the sponsor of the plan named on the cover of this report. It provides information needed for plan funding. It is not to be used for plan termination estimates, accounting information, or other purposes. If these or other measures of liabilities are needed, please contact me.

In preparing this report, I have relied on:

- reports of participants, salary, and service provided by the plan sponsor as of the last day of the 2015 plan year.
- information for any retirees, beneficiaries, and alternate payees being paid by Principal Life Insurance Co as of the last day of the 2015 plan year, as reported by Principal Life Insurance Company.
- benefit, contribution, and expense transaction information for the preceding plan year, and the market value of assets reported as of the last day of the 2015 plan year by Principal Financial Group and the plan sponsor.
- plan documents on file with Principal Life Insurance Company, including changes as noted on the Summary of Plan Provisions page of this report.

Appropriate tests of reasonableness and accuracy have been made and reviewed. The information provided is adequate to support the results in this report.

I confirm that as the actuary for this pension plan, I am completely independent of the plan sponsor and any of its officers or key personnel. Neither I nor anyone closely associated with me has any relationship known to me which would impair my independence.

In my opinion, each assumption and method chosen by the actuary is reasonable (taking into account the experience of the plan and reasonable expectations). Each material economic assumption is consistent with other economic assumptions selected by the actuary for this measurement period. Note that several different assumptions may be reasonable for a given measurement, and different actuaries will apply different professional judgment and may choose different reasonable assumptions. Demographic assumptions are not expected to produce significant cumulative actuarial gains or losses over the measurement period, and the combined effect of the assumptions is reasonable.

I am a member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. To the best of my knowledge, this report is complete and accurate, and complies with all relevant pension actuarial standards and legal requirements.



03/07/2017

David A Stocklas, EA, MAAA  
Consulting Actuary  
Principal<sup>SM</sup>  
Pittsburgh, PA 15222  
412.394.9380  
[Stocklas.Dave@principal.com](mailto:Stocklas.Dave@principal.com)

---

## Data and Assumptions

# Present Value of Accrued Plan Benefits

The current year present value of vested and nonvested accrued benefits are based on the assumptions and methods shown earlier in this report. (The salary scale, if any, is not included in the calculation of accrued benefits). All retiree liability is included below except for purchased annuities. These amounts below should not be used for other purposes such as estimating plan termination sufficiency.

The prior year present value of vested and nonvested accrued benefits are based on the assumptions shown in that year's valuation report.

	10/01/2016	10/01/2015
<b>Present Value of Vested Benefits</b>		
Participants in pay status	\$139,041,295	\$124,464,855
Inactive participants	24,636,956	24,458,885
Active participants	15,398,318	11,813,331
Total	\$179,076,569	\$160,737,071
<b>Present Value of Nonvested Benefits</b>		
Participants in pay status	\$0	\$0
Inactive participants (not in pay status)	0	0
Active participants	586,136	440,938
Total	\$586,136	\$440,938
<b>Total Present Value of Accumulated Plan Benefits</b>	<b>\$179,662,705</b>	<b>\$161,178,009</b>
Value of Future Service and Compensation	7,113,779	6,339,056
<b>Total Present Value of Projected Plan Benefits</b>	<b>186,776,484</b>	<b>167,517,065</b>

Change in Present Value of Accrued Plan Benefits	
<b>Present Value of Accumulated Plan Benefits as of 10/01/2015</b>	\$161,178,009
<b>Increase (decrease) during the year due to:</b>	
Increase for interest due to decrease in the discount period	11,711,165
Benefits paid	(10,243,459)
Benefits accumulated and plan experience	1,002,639
Change in assumptions	16,014,351
<b>Present Value of Accumulated Plan Benefits as of 10/01/2016</b>	<b>\$179,662,705</b>

The following changes have had these effects, on an annual basis, as of the valuation date:

	Normal Cost	Unfunded Actuarial Accrued Liability	Present Value of Accrued Benefits
Assumptions	\$105,220	\$16,390,356	\$16,014,351

## Present Value of Accrued Plan Benefits

# Risk-Free Results

In the *Asset Allocation, Interest Rates and Actuarially Determined Contributions (ADC)* [section](#), we explained the difference between long term and risk-free returns. The table below shows your plan’s liabilities and assets on both the funding and risk-free interest rate basis.

- The difference in the liability amounts on a Funding Basis versus a Risk-Free Basis represents the additional assumed returns to be earned over the life of the plan; this is also referred to as the “risk premium”.
- The assets in the funding basis column reflect the asset method used to determine your plan’s ADC; the assets in the risk-free basis column are on a mark-to-market basis consistent with the risk-free liabilities.
- The Unfunded Actuarial Accrued Liability and Normal Cost on the Funding Basis are used to calculate your ADC. Those same measures on a Risk-Free Basis show you more conservative results; if the plan’s investment returns fall short of the Funding Basis interest rate, additional contributions will likely be needed.

	Actuarially Determined Contribution	Risk-Free Cost
Interest Rate	6.75%	2.35% <sup>1</sup>
Standard Deviation	9.80%	
Normal Cost <sup>2</sup>	\$464,001	\$1,983,466
Actuarial Accrued Liability	\$183,233,784	\$333,850,928
Market Value of Assets		\$167,490,116
Actuarial Value of Assets	\$173,332,291	
Unfunded Actuarial Accrued Liability	\$9,901,493	\$166,360,812
Present Value of Accrued Benefits	\$179,662,705	\$326,981,944

<sup>1</sup> The 30-year Treasury rate at 09/0/2016 was chosen as the risk-free interest rate. To isolate the impact of the interest rate, all other assumptions are the same. See the [Assumptions and Methods](#) for other assumptions.

<sup>2</sup> The Normal Cost does not include any expense estimate or a reduction for estimated employee contributions.

**Standard deviation** is one way to measure the potential volatility risk in the current asset portfolio. For example, a standard deviation close to 0% would represent a portfolio with minimal volatility risk. For this plan, about two-thirds of your actual annual returns are likely to fall within a range of -3.05% to 16.55% (6.75% +/- 9.80%).

# Historical Results

	2014	2015	2016
<b>Plan Cost &amp; Funded Status Measures</b>			
<b>Funded Status of Accrued Benefits</b>			
Present Value of Accrued Benefits (PVAB)	\$151,668,364	\$161,178,009	\$179,662,705
Market Value of Assets (MVA)	160,770,276	158,607,927	167,490,116
<b>Under (Over)Funded PVAB</b>	<b>\$(9,101,912)</b>	<b>\$2,570,082</b>	<b>\$12,172,589</b>
<b>Accrued Benefit Funded Percentage</b>	<b>106%</b>	<b>98%</b>	<b>93%</b>
<b>Funded Status of Actuarial Accrued Liability</b>			
Actuarial Accrued Liability (AAL)	\$154,618,516	\$164,345,046	\$183,233,784
Actuarial Value of Assets	153,746,756	166,921,684	173,332,291
<b>Unfunded Actuarial Accrued Liability</b>	<b>\$871,760</b>	<b>\$(2,576,638)</b>	<b>\$9,901,493</b>
<b>Funded Percentage</b>	<b>99%</b>	<b>102%</b>	<b>95%</b>
<b>Normal Cost</b>			
Total Normal Cost (NC)	\$2,191,395	\$2,792,276	\$5,151,232
<b>Total NC as % of Projected Current Year Compensation</b>	<b>68.35%</b>	<b>81.58%</b>	<b>159.02%</b>
<b>Actuarially Determined Contribution (ADC)</b>			
Employer Normal Cost	\$2,191,395	\$2,792,276	\$5,151,232
Valuation Interest	169,833	209,421	347,708
15 year amortization of credit balance	1,487,379	2,265,022	2,922,725
Valuation interest on credit balance	115,272	169,877	197,284
<b>Expected Employer ADC</b>	<b>\$758,577</b>	<b>\$566,798</b>	<b>\$2,378,931</b>
<b>Actual Contributions</b>			
Actual Employer contributions	\$9,174,902	\$6,500,000	--
<b>Percentage of Employer's ADC paid</b>	<b>1,209%</b>	<b>1,147%</b>	<b>--</b>
Liability Interest Rate	7.75%	7.50%	6.75%
Projected Current Year Compensation	\$3,206,370	\$3,422,635	\$3,239,391

	2014	2015	2016
<b>Census at Beginning of Year</b>			
Number of Active Participants	43	39	39
Number of Terminated Vested Participants	285	272	255
Number of Disabled Participants	3	3	2
Number of Retirees	375	381	393
Total Participants	706	695	689
Prior Year Reported Payroll	\$3,163,848	\$3,280,160	\$3,441,627
<b>Plan Maturity Measures</b>			
Non-active Employees as a Percentage of Total	94%	94%	94%
In Pay Status PV Accrued Benefits as a Percentage of Total	77%	77%	77%
<b>Relative Size of Plan</b>			
Market Value of Assets (beginning of year)	\$160,770,276	\$158,607,927	\$167,490,116
as a Percent of Prior Year Reported Payroll	5,081%	4,835%	4,867%
Actuarial Accrued Liability (AAL)	\$154,618,516	\$164,345,046	\$183,233,784
as a Percent of Prior Year Reported Payroll	4,887%	5,010%	5,324%
Prior Year Benefits Paid	\$10,021,946	\$9,814,147	\$10,243,460
as a Percent of Prior Year Reported Payroll	317%	299%	298%
<b>Achievement of Economic Assumptions</b>			
Expected Rate of Return	7.75%	7.50%	6.75%
Actual Market Value Rate of Return	-1.11%	9.63%	--
Average Expected Salary Increase	4.71%	4.68%	0.00%
Average Actual Salary Increase	16.44%	4.92%	--
Liability Interest Rate	7.75%	7.50%	6.75%

## Historical Results

# Florida Disclosures

This section provides information as required by Part VII of Chapter 112, and by Chapter 60T-1 of the Florida Statutes. To the best of our knowledge, we have reflected in our calculations and assumptions, any event or trend which would materially increase plan costs.

This section also provides the information used to determine the Actuarially Determined Contribution (ADC). Please see [Summary of Results](#) of this valuation report for additional information.

## Comparative Summary of Principal Valuation Results

	<b>Actuarial Valuation Prepared as of</b>	
<b>Participant data</b>	<b>10/01/2016</b>	<b>10/01/2015</b>
Active members	39	39
Total annual payroll	\$3,441,627	\$3,280,160
Retired members and beneficiaries	393	381
Total annualized benefit	\$10,095,408	\$9,679,036
Disabled members receiving benefit	2	3
Total annualized benefit	\$24,192	\$32,806
Terminated vested members	255	272
Total annualized benefit	\$2,841,036	\$3,194,043

<b>Reconciliation of lives</b>	<b>Active</b>	<b>Inactive</b>	<b>Retired</b>
Total last valuation	39	275	381
New lives	0	1	0
Voluntary discontinuances	0	0	0
Vested terminations	0	0	0
Non-vested terminations	0	0	0
Retirements	0	-17	17
Deaths	0	-1	-7
Other:	0	-1	2
Total this Valuation	39	257	393

Please refer to the [Schedule of Active Participant Data](#) and [Census Characteristics](#) for demographic information such as the number of participants by age group, years of service, current year compensation, and projected normal retirement benefits. Please refer to [Benefit Cash Flows](#) for a projection of emerging liabilities/cash flow needs.

Total annual payroll Includes participants assumed to retire immediately who are not included in payroll used to calculate normal cost. Neither column includes the salary increase that is used to calculate normal cost.

## Assets

Since these funds are commingled with other funds in the general and separate accounts of the Principal Financial Group, it is not possible to identify specific investments as being made for a particular customer. Refer to the reconciliation of assets in this section.

### Actuarial Valuation Prepared as of

	<b>10/01/2016</b>	<b>10/01/2015</b>
<b>Market Value of Assets</b>		
Participants Fund <sup>1</sup>	\$0	\$0
Long-term Equity Investments	91,681,253	87,330,483
Short-term Investments	0	0
Real Estate	10,042,477	9,351,881
Bonds/Fixed Income	61,762,977	59,425,563
Other:	4,003,409	2,500,000
<b>Total</b>	<b>\$167,490,116</b>	<b>\$158,607,927</b>

### **Actuarial Value of Assets<sup>2</sup>**

Participants Fund <sup>1</sup>		
Long-term Equity Investments		
Short-term Investments		
Real Estate		
Bonds/Fixed Income		
Other		
<b>Total</b>	<b>\$173,332,291</b>	<b>\$166,921,684</b>

<sup>1</sup> The participant's fund under the FPI contract is included in total assets. These assets amounts do not include deposits received after the plan year-end.

<sup>2</sup> The actuarial value of assets used in determining annual funding requirements are determined as stated in the [Assumption and Methods](#) section report.

### **Three-year comparison of investment return.**

The actual percentage was calculated using the Form 5500 Schedule MB investment return method.

<b>Plan Year Beginning</b>	<b>Actual Return on Actuarial Basis</b>	<b>Actual Return on Market Basis</b>	<b>Assumed Return</b>
10/01/2015	7.62%	9.63%	7.50%
10/01/2014	8.83%	-1.11%	7.75%
10/01/2013	10.08%	8.90%	7.75%

Returns have been calculated including contribution receivables.

## Liabilities

### **Actuarial Valuation Prepared as of**

	<b>10/01/2016</b> After Assumption Change	<b>10/01/2016</b> Before Assumption Change	<b>10/01/2015</b>
<b>Present value of all future expected benefit payments:</b>			
Active Members			
Retirement benefits	\$19,455,132	\$17,098,110	\$15,255,474
Vesting benefits	3,050,144	2,575,874	2,651,793
Disability benefits	500,338	592,325	615,860
Death benefits	92,619	60,164	70,198
Return of contribution	0	0	0
Accumulated Leave	0	0	0
<b>Total</b>	<b>\$23,098,233</b>	<b>\$20,326,473</b>	<b>\$18,593,325</b>
Terminated vested members	\$24,410,455	\$21,538,595	\$24,073,127
Retired members and beneficiaries			
Retired (other than disabled) and beneficiaries	\$139,041,295	\$127,622,456	\$124,464,855
Disabled members	226,501	281,302	385,758
<b>Total</b>	<b>\$163,678,251</b>	<b>\$149,442,353</b>	<b>\$124,850,613</b>
<b>Total present value of all future benefit payments</b>	<b>\$186,776,484</b>	<b>\$169,768,826</b>	<b>\$167,517,065</b>
<b>Liabilities due and unpaid:</b>			
Initial Actuarial Accrued Liability	N/A	N/A	N/A
Unfunded Actuarial Accrued Liability (UAAL)	N/A	N/A	N/A

A list of liability bases is shown in [Schedule of Amortization Bases](#).

## Actuarial Present Value of Accrued Benefits

### Statement of actuarial value of all accrued benefits

	<b>Actuarial Valuation Prepared as of</b>		
	<b>10/01/2016</b>	<b>10/01/2016</b>	<b>10/01/2015</b>
	<b>After</b>	<b>Before</b>	
	<b>Assumption</b>	<b>Assumption</b>	
	<b>Change</b>	<b>Change</b>	
Vested Accrued Benefits			
Inactive members and beneficiaries	\$163,678,251	\$149,442,353	\$148,923,740
Active members (includes non-forfeitable accumulated member contributions in the amount of \$883,232)	15,398,318	13,662,980	11,813,331
Total value of all vested accrued benefits	\$179,076,569	\$163,105,333	\$160,737,071
Non-vested accrued benefits	\$586,136	\$543,021	\$440,938
<b>Total actuarial present value of all accrued benefits</b>	<b>\$179,662,705</b>	<b>\$163,648,354</b>	<b>\$161,178,009</b>

These values are based on the actuarial assumptions shown in the [Assumptions and Methods](#) section this report, except that the calculation of accrued benefits does not include a salary scale, (if any).

A statement of changes in total actuarial present value of all accrued benefits is shown in the [Present Value of Accrued Benefits](#) section of this report.

### 10/01/2016 Volatility Assumption

#### Statement of actuarial value of all accrued benefits

Vested Accrued Benefits	
Inactive members and beneficiaries	\$207,506,112
Active members	21,217,441
Total value of all vested accrued benefits	\$228,723,553
Non-vested accrued benefits	831,731
Total actuarial present value of all accrued benefits	\$229,555,284

The volatility interest rate used is 4.75% which is 2.00% lower than the valuation interest rate as directed in the new Florida Statutes. All other assumptions shown in the [Assumptions and Methods](#) section this report.

#### Florida Disclosures

## Pension Cost

### Actuarial Valuation Prepared as of

	<b>10/01/2017</b>	<b>10/01/2016</b>	<b>10/01/2015</b>
Normal Cost:			
Base Normal Cost	\$5,101,232	\$2,743,276	\$2,143,395
Administrative expenses	50,000	49,000	48,000
Total Normal Cost	\$5,151,232	\$2,792,276	\$2,191,395
Payment to amortize unfunded liability(ies)	0	0	0
<b>Expected plan sponsor contribution</b> (including normal cost, amortization payment and interest, as applicable)	\$2,378,931	\$566,798	\$758,577
As % of payroll	73.44%	16.56%	23.66%
<b>Amount to be contributed by members</b>	\$234,855	\$248,141	\$232,462
As % of payroll	7.25%	7.25%	7.25%

**For the 2017 plan year:**

Interest is based on 6.75%. A Credit Balance in the Minimum Funding Standard Account has been recognized in the amortization.

**For the current plan year:**

Interest is based on 7.50%. A Credit Balance in the Minimum Funding Standard Account has been recognized in the amortization.

**For the prior plan year:**

Interest is based on 7.75%. A Credit Balance in the Minimum Funding Standard Account has been recognized in the amortization.

**10/01/2016**  
**Volatility Assumption**

Normal Cost:	
Base Normal Cost	\$747,545
Administrative expenses	49,000
Amortizations	6,142,382
Total Normal Cost	\$7,619,247
Adjusted Normal Cost	
<b>Expected plan sponsor contribution</b>	<b>\$5,635,250</b>
(including normal cost, amortization payment and interest, as applicable)	
As % of payroll ( <a href="#">full payroll</a> )	164.65%
<b>Amount to be contributed by members</b>	<b>\$248,141</b>
As % of payroll	7.25%

The volatility interest rate used is 5.50% which is 2.00% lower than the valuation interest rate as directed in the new Florida Statutes. All other assumptions are as shown in the [Assumptions and Methods](#) section of this report.

**Plan Year Beginning**

	<b>10/01/2015</b>	<b>10/01/2014</b>
<b>Past Contributions</b>		
Required plan sponsor contribution	\$758,577	\$2,707,856
Required member contributions	232,462	234,578
Actual contributions made by		
Plan sponsor	6,500,000	9,174,902
Members	260,487	251,306
Other:		
<b>Net Actuarial gain(loss)</b> (if applicable)	N/A	N/A

## Other Disclosures

### **Actuarial Valuation Prepared as of**

	<b>10/01/2016</b>	<b>10/01/2015</b>
<b>Present values of active members:</b>		
Future salaries		
at attained age	\$16,685,971	\$17,980,519
at entry age	14,619,803	14,008,365
Future contributions		
at attained age	1,170,966	1,198,371
at entry age	1,025,970	979,635
<b>Present value of future contributions from other sources</b>	N/A	N/A
<b>Present value of future expected benefit payments for active members at entry age</b>	3,111,577	\$2,619,669

The numerical development of total normal cost for the current plan year is shown in the [Development of Normal Cost](#) section of this report.

Three year comparison of actual and assumed salary increases.

<b>Plan Year Beginning</b>	<b>Actual Increases</b>	<b>Assumed Increases</b>
10/01/2015	4.92%	4.68%
10/01/2014	16.44%	4.71%
10/01/2013	3.78%	4.67%

## Other Disclosures (Continued)

Changes in costs during the year due to a change in assumptions, cost method, benefits, or other, as specified. See the Present Value of Accrued Plans Benefits [section](#) of this report.

Cost of \$1.00/month Benefit on Normal Form

<b>Retirement Age</b>	<b><u>Valuation Assumptions</u><sup>1</sup></b>		<b><u>Contract Purchase Rates</u><sup>2</sup></b>		<b><u>Current Purchase Rates</u><sup>3</sup></b>	
	Male	Female	Male	Female	Male	Female
55	\$169.14	\$175.64	\$238.22	\$256.75	\$242.53	\$282.52
60	156.26	163.11	218.66	238.32	208.66	249.24
62	150.42	157.44	210.52	230.60	195.07	235.81

<sup>1</sup> Assumes 2.0% COLA.

<sup>2</sup> Rates guaranteed by the contract.

<sup>3</sup> Non-guaranteed rates in effect 10/01/2016. These rates may change daily.



#### For Additional Information

If you have any questions about the material covered in this report, please contact your Pension Actuarial Analyst, Gary R Peffer, by:

- Phone – -1 -800-557-6627 extension 49379, or 412-394-9379
- Email – – Peffer.Gary@principal.com

Insurance products and plan administrative services are provided by Principal Life Insurance Company a member of the Principal Financial Group® (The Principal®), Des Moines, IA 50392.