Retirement Income Plan for
General Employees of City of
Pembroke Pines
4-27083

Actuarial valuation report

for the plan year beginning 10/01/2020
and ending 09/30/2021

Principal®

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This report is for the defined benefit retirement plan named on the report cover. It may only be provided to other parties in its entirety and should not be altered. 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 this Fiscal Year end, the Actuarial Value of Assets exceed the Actuarial Accrued Laiiblity. The ADC represents this years Normal cost and expected Administrative expenses. For a complete schedule of the cash due and received by the plan, see the Contribution schedule.

The actuarially determined contribution is

$364,567

- See Funding calculations for details.
- We have received $0 in employer contributions for the current plan year.
- Contributing less than the actuarially determined contribution amount will increase your next year's amount.

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 decreased from $1,671,161 for 2020 to $364,567 for 2021.

- The asset return for the prior year was greater than last year's assumed interest rate.
- The net effect of the assumption changes has decreased your actuarially determined contribution.

You can compare your contributions to the actuarially determined contribution for each year in the Historical results section at the back of this report.

Contact your pension actuarial analyst, Gary R Peffer, at

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- 412-394-9379

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

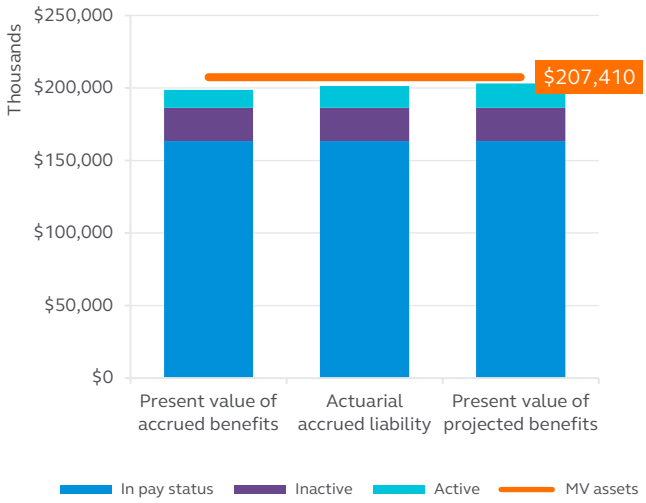
The table below compares the plan's 10/01/2020 market value of assets (the solid line) to 10/01/2020 plan liabilities measured using the assumptions we have made about future events. The liabilities assume:

- No one will enter the plan after the valuation date.
- Your asset allocation will remain the same with a return of 6.00% 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.



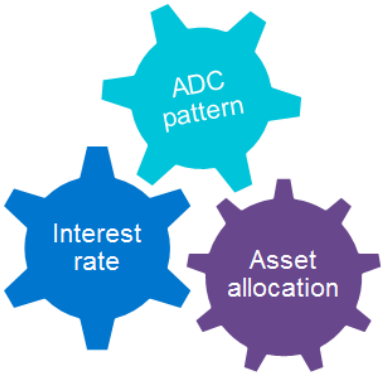
Considerations

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 contribution (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 and 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.

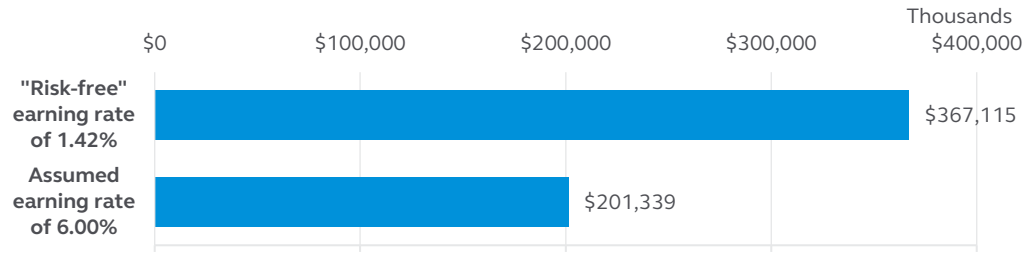
Asset allocations and interest rates

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
Expected future returns (interest rates) based on	Your plan's asset allocation	Conservative interest rates such as U.S. Treasury instruments (not your plan's investment allocation)
Current effect	Lower ADC	Higher ADC
Later effect	Potentially higher ADC if returns fall below that assumed	Potentially lower ADC 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.

Actuarial accrued liability



As you can see above, higher expected returns generate a lower benefit liability. The additional assumed returns between funding basis (6.00%) and risk-free basis (1.42%) are referred to as "risk premium". The $165,776,634 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 2019 plan year is $3,500,000.
- No cash contributions have been received yet for the current plan year.
- Employee contributions of $161,054 have been received for the 2019 plan year and $24,479 employee contributions have been received through 12/14/2020 for the 10/01/2020 plan year.

Paid or date due	Plan year beginning 2019	Plan year beginning 2020	Plan year beginning 2021
12/23/2019	$875,000		
03/17/2020	$875,000		
06/09/2020	$875,000		
09/23/2020	$875,000		
09/30/2021		$1,671,161	
09/30/2022			$364,567

Blue shading shows employer contribution due for current plan year.

Funding calculations

Actuarially determined contribution for Fiscal Year ending 09/30/2022

The actuarially determined contribution (ADC) consists of three parts:

1. Normal cost - the cost attributed to the current year (due to the continued accrual of plan benefits for active employees) and plan expenses.

2. Amortization of any unfunded accumulated past costs (unfunded actuarial accrued liability).

3. Interest on 1 and 2 above to the end of the plan year.

Employer normal cost	$343,931*
Plus amortization amounts	0
Plus valuation interest to the end of the plan year	364,567

Your actuarially determined contribution (ADC) is $364,567

* For this Fiscal Year end, the Actuarial Value of Assets exceed the Actuarial Accrued Liability. The ADC represents this year's Normal cost and expected Administrative expenses.

Development of total normal cost for fiscal year ending 09/30/2020

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 is shared by the employer and the employees based on plan provisions.

Normal cost (Net)	$250,104
Plus estimated expenses	62,000
Total normal cost	$312,104*
Plus amortization charges	0
Minus amortization credits	0
Employer normal cost	$312,104

Development of total normal cost for fiscal year ending 09/30/2021

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 is shared by the employer and the employees based on plan provisions.

Employer normal cost	$312,104
Plus adjustment for salary increase (3.96%)	12,359
Plus adjustment for interest (6.00%)	19,468
Total normal cost for 09/30/2021 FYE	$343,931

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	$14,927,845
Inactive participants	22,957,883
Participants and beneficiaries in pay status	163,452,781
Actuarial accrued liability	$201,338,509

* For this Fiscal Year end, the Actuarial Value of Assets exceed the Actuarial Accrued Laiiblity. The ADC represents this years Normal cost and expected Administrative expenses.

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.

Actual unfunded actuarial accrued liability (before changes)		
Actuarial accrued liability	$206,143,543	
Less actuarial value of assets	203,214,350	
Preliminary 10/01/2020 unfunded actuarial accrued liability		**$2,929,193**

Final unfunded actuarial accrued liability (after changes)		
Actuarial accrued liability after assumption changes	$201,338,509	
Less actuarial value of assets	203,214,350	
10/01/2020 unfunded actuarial accrued liability after changes		**$(1,875,841)**

Change in unfunded actuarial accrued liability due to:	(Gain)/loss
Change in assumptions	$(4,805,034)

Your 10/01/2020 unfunded actuarial accued liability is $(1,875,841)

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 10/01/2020 and later.

- Initial unfunded actuarial accrued liability: 12 years
- Experience gains/losses: 12 years.
- Amendments: 12 years
- Assumption changes: 12 years

Date created	Reason	Initial balance	Remaining years	Outstanding balance	Annual amortization
10/01/2020	N/A	0	0	0	0
Total				**0**	**0**

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 2020 plan year are not included.

Both market value and actuarial value for the 2020 plan year are shown below.

Market value of assets

Investments held by Principal	$207,406,146
2019 contributions received on or after 10/01/2020	4,036
Total market value of assets	**$207,410,182**

Actuarial value of assets

Your plan uses an asset smoothing method for the actuarial value instead of the market value. Using this method allows you to soften the volatility of assets from year to year. The actuarial value of assets is used to calculate your actuarially determined contribution (ADC).

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

Adjusted market value of investments held by Principal	$203,210,314
2019 contributions received on or after 10/01/2020	4,036
Total actuarial value	**$203,214,350**

The actuarial value of plan assets is **$203,214,350**

Calculation of adjusted market value

To determine the actuarial value of Investments held by Principal, we 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.

1 Determine excess appreciation/(shortfall)

Compare actual to expected assets

Market value of assets as of 2019	$197,950,983
Contributions/transfers	3,661,054
Benefit payments	(11,830,697)
Expenses	(61,199)
Expected 6.00% interest on above items	11,582,387
Expected value of assets as of 10/01/2020	$201,302,528
Market value as of 10/01/2020	$207,410,182
Current year excess appreciation/(shortfall)	**6,107,654**
25% of current year excess appreciation/(shortfall)	1,526,914

2 Allocate deferred appreciation/(shortfall)

	Plan year			
Allocation year	**2017**	**2018**	**2019**	**2020**
2017	$2,303,521			
2018	2,303,520	$650,191		
2019	2,303,520	650,191	$(517,550)	
2020	2,303,520	650,191	(517,550)	$1,526,914
2021		650,190	(517,549)	1,526,914
2022			(517,549)	1,526,913
2023				1,526,913
Total		$2,600,763	$(2,070,198)	$6,107,654
Deferred		650,190	(1,035,098)	4,580,740
Adjustment to market value (sum of deferred amounts)				$4,195,832

3 Adjust market value for deferred amounts

Market value as of 10/01/2020	$207,410,182
Adjustment to market value (sum of deferred amounts)	4,195,832
Adjusted value of investments	$203,214,350

Data and assumptions

Census characteristics

	10/01/2019	10/01/2020	Change
Number of covered participants			
Actives	26	21	-5
Terminated vested	222	193	-29
Disabled	0	0	+0
Retirees	420	423	+3
Total	668	637	-31
Average age			
Actives	51.4	52.0	+0.6
Terminated vested	50.8	50.8	+0.0
Disabled	N/A	N/A	N/A
Retirees	68.4	68.8	+0.4
All	61.9	62.8	+0.9
Reported annual payroll			
Actives	$2,425,558	$2,002,799	-17.4%
Average pay per active	93,291	95,371	+2.2%
Average years of service			
Actives	16.2	17.0	+4.9%
Monthly projected retirement benefits			
Actives	$180,019	$148,209	-17.7%
Terminated vested	189,858	184,007	-3.1%
Disabled	0	0	+0.0%
Retirees	964,130	993,783	+3.1%

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

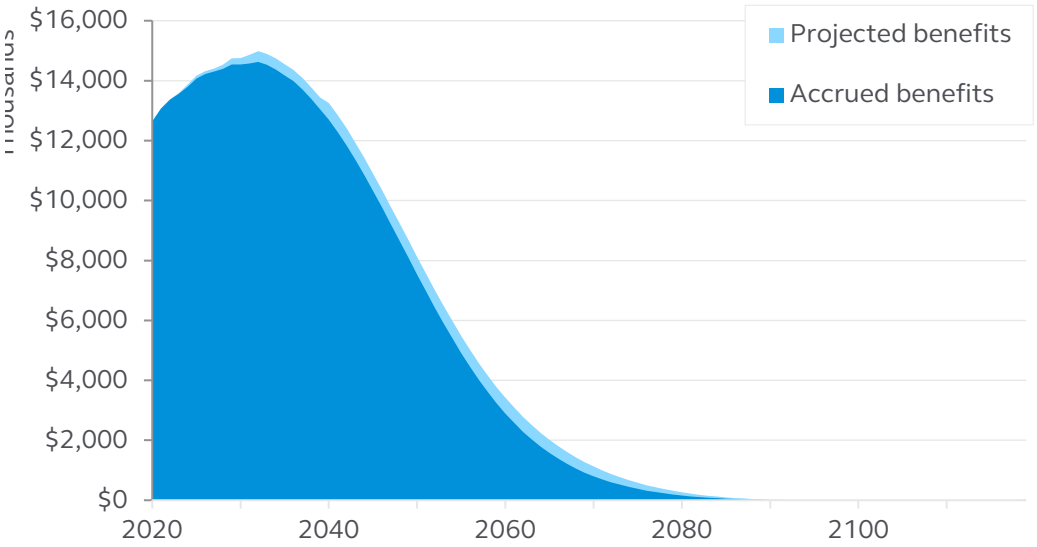
Benefit cash flows are the benefit payments expected to be paid from your plan assets. We provide cash flows to help you calculate and understand your plan obligations and the future liquidity needs of the plan.

You can compare your cash flows to the 10/01/2020 market value of assets, $207,410,182, 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.

Benefit cash flow detail

Year	Accrued benefit cash flow	Projected benefits cash flow	Year	Accrued benefit cash flow	Projected benefits cash flow	Year	Accrued benefit cash flow	Projected benefits cash flow
2020	12,636,622	12,636,622	2053	5,904,215	6,487,933	2086	42,130	75,493
2021	13,063,633	13,072,310	2054	5,396,492	5,976,457	2087	32,164	58,233
2022	13,363,670	13,381,097	2055	4,911,433	5,486,339	2088	24,077	43,996
2023	13,560,548	13,579,295	2056	4,451,438	5,019,899	2089	17,653	32,521
2024	13,794,487	13,863,585	2057	4,018,450	4,579,007	2090	12,647	23,467
2025	14,074,371	14,171,358	2058	3,613,919	4,165,048	2091	8,824	16,474
2026	14,221,351	14,321,067	2059	3,238,738	3,778,870	2092	5,977	11,218
2027	14,303,571	14,404,630	2060	2,893,046	3,420,568	2093	3,929	7,406
2028	14,394,166	14,533,176	2061	2,576,177	3,089,463	2094	2,502	4,730
2029	14,536,063	14,740,918	2062	2,287,102	2,784,542	2095	1,537	2,911
2030	14,541,123	14,750,224	2063	2,024,579	2,504,581	2096	907	1,722
2031	14,575,487	14,858,807	2064	1,787,209	2,248,240	2097	517	986
2032	14,625,172	14,983,261	2065	1,573,494	2,014,128	2098	288	550
2033	14,530,054	14,893,730	2066	1,381,696	1,800,654	2099	156	299
2034	14,371,508	14,738,325	2067	1,210,083	1,606,284	2100	82	157
2035	14,175,626	14,546,231	2068	1,057,070	1,429,690	2101	42	80
2036	13,985,637	14,360,852	2069	921,129	1,269,618	2102	21	40
2037	13,711,088	14,090,963	2070	800,684	1,124,728	2103	11	21
2038	13,401,498	13,786,072	2071	694,168	993,667	2104	5	11
2039	13,050,264	13,439,596	2072	600,071	875,093	2105	2	4
2040	12,708,230	13,264,081	2073	516,982	767,744	2106	0	0
2041	12,291,332	12,853,926	2074	443,682	670,594	2107	0	0
2042	11,843,052	12,412,203	2075	379,092	582,772	2108	0	0
2043	11,364,132	11,934,310	2076	322,322	503,612	2109	0	0
2044	10,860,014	11,434,472	2077	272,567	432,546	2110	0	0
2045	10,333,392	10,911,665	2078	229,119	369,095	2111	0	0
2046	9,788,674	10,370,232	2079	191,349	312,799	2112	0	0
2047	9,230,767	9,815,018	2080	158,728	263,264	2113	0	0
2048	8,664,966	9,251,250	2081	130,689	219,868	2114	0	0
2049	8,096,927	8,684,509	2082	106,667	181,944	2115	0	0
2050	7,532,163	8,120,231	2083	86,176	148,957	2116	0	0
2051	6,975,636	7,563,299	2084	68,807	120,455	2117	0	0
2052	6,431,718	7,017,972	2085	54,237	96,100	2118	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

Plan eligibility

Class	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. 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. 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.

Normal retirement benefit

Age	The later of attained age 55 or ten years vesting service.
Form	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).
Amount (accrued benefit)	2.85% of average compensation multiplied by accrual service. Maximum benefit is 80% of average compensation (28.07 years). Reduce by the amount of deferred monthly retirement benefit in which the participant has received a single sum payment under the plan. Benefit is frozen effective 07/01/2010 for those covered under the bargaining agreement.

Early retirement benefit

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

Late retirement benefit

Age	No maximum age.
Form	Same as normal retirement benefit.
Amount	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.

Termination benefit

Vesting percentage	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.
Form	Same as normal retirement benefit with income deferred until normal retirement date.
Amount	Equal to the sum of (a) The amount of retirement annuity which could be purchased on his normal retirement date by his participant's required contribution account. (b) Vesting percentage times the excess of the pension benefit as of the date of termination over (a) above. 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.

Disability benefit

Eligibility	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.
Form	Monthly income payable until normal retirement, death, or recovery and a deferred annuity payable at the Normal Retirement Date.
Amount	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. For a non-service related disability, the accrued benefit on date of disability.

Contributions

Salary reduction contribution

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.

Effective 07/01/2010, 0% of monthly earnings will be deducted for those covered under the bargaining agreement.

Death benefit

Greater of A or B

A. Single sum death benefit

Form Single sum.

Amount Participant's accumulation on date of death.

B. Pre-retirement death benefit

Age Attained age 50.

Service Five years of service.

Form Monthly annuity payable to spouse.

Amount 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.

Deferred retirement option plan

Eligibility	An active participant first becomes eligible to elect the DROP on the first day of the month on or after reaching normal retirement date.
Election	An election to participant 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.
Form	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.
Amount	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. 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.

Optional forms of benefit

- A monthly income to the employee for life. No benefits are payable at death.
- A monthly income to the employee for life, with a 5, 10, or 15 year period where payments continue to the beneficiary.
- 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.
- A monthly income to the employee for life, with a 50%, 66 2/3%, 75%, or100% of the monthly benefit paid to the surviving spouse.

Cost of living adjustment

Amount

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.

Effective 10/01/2004 the cost of living adjustment was increased to 3.0%.

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.

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.

Early retirement window

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.

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.

Definitions

Average compensation

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.

Participant's required contribution account

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.

Required contribution accrued benefit

Monthly retirement benefit under normal form accrued by an active participant payable at normal retirement date that is derived from their required contributions.

Accrual service

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 economic assumptions rely on the Principal RAS Long-Term Capital Market Assumptions (CMA) May 2020. 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 Markets Assumptions May 2020 for additional information.

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 base table has been changed from RP-2000 to PubG-2010.
- The mortality improvement scale has been changed to MP-2018.

Net effect of assumption changes

The net effect of the assumption changes is to decrease the actuarially determined contribution.

Method changes

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

Assumptions selected by actuary

Liability interest	During benefit payment period 6.00% Before benefit payment period 6.00% 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.
Asset return	6.00% for the current plan year. 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. See liability interest rate for how this rate was determined.

Interest rate for employee accumulations	5.00%.
Retirement cost of living adjustment	3.00% & 2.00% per year depending on location. See Plan Provision for additional information.
Expected expense	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.
Retirement	Active and inactive participants are assumed to retire at normal retirement age as defined in Plan provisions. This assumption is based on the results of recent experience analysis and anticipated future experience.
Inflation	2.25% increase per year. See Long-Term Capital Market Assumptions link.
Upcoming salary increases	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. Note: not used for Plan accounting calculations.

Age	Upcoming increase
25	6.68%
40	5.22%
55	4.38%

	Expected salary increase is composed of salary inflation, a real wage growth and a merit increase.
Compensation limit increase	2.25% increase per year. Compensation limit increase should be consistent with the inflation assumption.

Mortality

Based on PubG-2010 General below median base rate mortality table projected to future years with historical and assumed mortality improvement (MI) rates using the MP-2018 mortality improvement scale.

Base rates

Before benefit payment period
PubG-2010 Below Median Employee, male and female, male set back 1 year

During benefit payment period

- Retirees- PubG-2010 Below Median Healthy Retiree base table, male and female, male set back 1 year
- Contingent survivor – same as retirees above (Pub 2010 "Approach 1", see rationale below).
- Disabled Retiree – PubG-2010 Disabled Retiree base table, male and female set forward 3 years for both male and female. Participants in pay status who cannot be identified as disabled use the same table as retirees.

The Society of Actuaries is an actuarial organization that periodically reviews mortality data and publishes mortality tables and improvement scales. PubG-2010 is the baseline mortality rate table underlying the SOA Pub-2010 experience study published in January 2019.

Pub-2010 section 12.4.2 provided three approaches for designated beneficiaries in the calculation of joint-and-survivor annuities. We believe "Approach 1" is reasonable for this plan and has been selected due to data limitations in identifying contingent survivors. In addition, we believe beneficiary mortality isn't materially different while both participants are alive.

Mortality improvement (MI)
MP-2018 is the improvement scale use on the 2019 State of Florida Valuation.

Disability

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.

Withdrawal	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.
Marriage	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.
Form of benefit	Participants are assumed to receive their benefits on the normal form at the assumed retirement age.

Methods selected by plan sponsor

Actuarial value of plan assets	The market value of the Principal 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 accounts.
Actuarial cost method	The **entry age normal (EAN)** cost method is used for this valuation.

Methods selected by actuary

Retirees	Assets and liabilities for current and future retirees are included.
Vested benefits	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 2019 plan year.
- information for any retirees, beneficiaries, and alternate payees being paid by Principal Life Insurance Co as of the last day of the 2019 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 2019 plan year by Principal 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.
- various models, internal and external, which were used for their intended purposes. Underlying data, assumptions, methodologies, model inputs and resulting outputs have been reviewed and are reasonable. There are no known weaknesses or material inconsistencies.

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.

12/31/2020

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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.

	10/01/2020	10/01/2019
Present value of vested benefits		
Participants in pay status	$163,452,781	$164,829,026
Inactive participants	22,957,883	23,976,638
Active participants	11,880,865	13,646,765
Total	$198,291,529	$202,452,429
Present value of nonvested benefits		
Participants in pay status	$0	$0
Inactive participants (not in pay status)	0	0
Active participants	393,345	400,134
Total	$393,345	$400,134
Total present value of accumulated plan benefits	$198,684,874	$202,852,563
Value of future service and compensation	4,508,618	5,961,915
Total present value of projected plan benefits	$203,193,492	$208,814,478

Change in present value of accumulated plan benefits

Present value of accumulated plan benefits as of 10/01/2019	**$202,852,563**
Increase (decrease) during the year due to:	
Increase for interest due to decrease in the discount period	11,821,403
Benefits paid	(11,830,697)
Benefits accumulated and plan experience	543,602
Change in assumptions	(4,701,997)
Present value of accumulated plan benefits as of 10/01/2020	**$198,684,874**

Risk assessment and historical information

Risk assessment

All defined benefit plans are exposed to risk. While some risks are within the control of the plan sponsor, others are influenced by outside economic and demographic conditions. Below are descriptions of some risk factors and consequences. It's not intended to be a comprehensive summary, but highlights issues many plan sponsors face. If you'd like to understand these risks more fully or are interested in additional analysis, please contact us.

Potential risks

Investment risk
Lower than expected investment returns could increase future actuarially determined contributions (ADC) and the ability to pay benefits. See Risk-free results where we also explain risk premium and how standard deviation is a way to measure potential volatility risk.

Interest rate risk
The interest rate used to discount plan benefits is a significant driver in the projection of plan liabilities. When interest rates decrease or increase, liabilities move in the opposite direction. See Risk-free results for alternative results using a different interest rate.

Asset/liability mismatch
Plan liabilities will fluctuate due to changes in assumed interest rates while asset values will change based on actual market returns and the plan's asset allocation. Liabilities and assets could potentially move in different directions or magnitudes due to risks associated with interest rates and investments. This mismatch could lead to significant changes in ADC and funded status. Studies such as Asset Liability Modeling on current and alternative liability driven investing strategies can assist with quantifying this mismatch risk.

Longevity and other demographic risks
Plan liabilities are based on several demographic assumptions as disclosed in the Assumptions and methods. When actual plan experience differs from these expectations, the resulting gains and losses will impact future liability.

Contribution risk
Every pension plan should have a strategy for determining annual pension contributions. Contributing the ADC may or may not allow a plan sponsor to achieve their goals. For example, funding to 100% of obligations for benefits (using assumptions consistent with median expectations about future economic conditions) might require contributions in excess of the ADC. A specific contribution strategy should be implemented and reassessed periodically.

Intergenerational equity risk
Intergenerational equity refers to the desire for the full cost of pensions be paid by those receiving the benefits. Fully funding pension benefits over the average future service period reasonably aligns the cost with those who benefit from those services.

As a result, the amortization of future gains/losses due to experience, assumptions, and benefit changes should consider the average working life time of current employees. See Schedule of amortization bases for amortization periods for the plan.

Risk considerations

Below are some aspects of the plan as you consider plan risk.

Assumptions

We use assumptions to estimate the future experience of your plan. To the extent actual experience differs from these assumptions, plan results (such as ADC or funded ratio) may be impacted. Some examples include:

Assumed interest rates. Your ADC is determined using interest rates selected based on long-term geometric return on plan assets. If these returns are not realized, the ADC may increase in future years.

Demographic assumptions (such as mortality, withdrawal, retirement, and disability rates). Your plan's experience relative to the demographic assumptions could impact the cost of the plan.

Future new participants are not included.

Salary growth for future years.

Plan expenses for the upcoming year.

Plan assets

Asset values are reflected as of the valuation date. Future results will be impacted by actual market return on investments.

The actuarial value of assets is smoothed by spreading the expected market value minus the actual market value over four years.

Contributions

Typically, the plan sponsor contributes the ADC or more. This contribution policy may not be enough to cover future benefit obligations.

Key measures

Please see the historical results section of this report for key measures. We suggest you review these measures annually to ensure they meet the goals of the defined benefit plan and organization.

Achievement of economic assumptions

If the **actual market value rate of return** on plan assets differs than the **expected return**, the ADC will increase or decrease.

The actual return on assets has been volatile; the return for some years exceeded the expectation and at other times the return was less than expected. The return for the 2019 year was 9.13% compared to an expected return of 6.00%. The four-year smoothing of investment gains and losses has added some stability to the ADC.

Ratio of normal cost to compensation

This ratio can be used to assess the cost of benefits attributed to a year to the participants' projected compensation for that year.

The ratio of current year normal cost to projected current year compensation is 26.33%. This ratio will fluctuate since it's impacted by salary experience, demographic changes, economic conditions, and other factors. If you anticipate changes to your workforce or salary structure, consider an estimate to determine the impact on plan funding.

Percentage of employer's ADC paid

This percentage is a measure of the extent to which the amount required to ensure funding goals (based on the plan's assumptions and methods) has been paid.

The plan sponsor usually contributes the ADC or more.

Plan maturity

Plan maturity measures assess the changing maturity profile of the plan and can indicate the level of reliance on active employees to absorb adverse experience.

Non-active employees as a percentage of total for the current year is 97%.

In pay status PV accrued benefits as a percentage of total is 82%.
A higher ratio is indicative of a more mature plan, typically resulting in:

- less sensitivity to liability interest rate changes
- greater volatility due to actual mortality experience

Annuity purchases could help alleviate risk associated with the retired portion of your plan liability. If you are considering an annuity purchase, please contact us to discuss potential costs and savings.

Market value of assets as a percentage of reported payroll is 10,356% for the current year.

Actuarial accrued liability (AAL) as a percentage of reported payroll is 10,053% for the current year.

Prior year benefits paid as a percentage of reported payroll is 591% for the current year.

Risk-free results

In the Asset allocation, interest rates and actuarially determined contributions, 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.

Risk premium

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".

Assets

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.

Results

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 plan's investment returns fall short of the funding basis interest rate, additional contributions will likely be needed.

	Funding basis (ADC)	Risk-free basis
Interest rate	**6.00%**	**1.42%**[1]
Standard deviation	**10.25%**	**- - -**
Normal cost[2]	$364,058	$1,415,407
Actuarial accrued liability	$201,338,509	$367,115,143
Market value of assets	N/A	$207,410,182
Actuarial value of assets	$203,214,350	N/A
Unfunded actuarial accrued liability	$(1,875,841)	$159,704,961
Present value of accrued benefits	$198,684,874	$361,817,398

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 -4.25% to 16.25% (6.00% -/+ 10.25%)

[1] The 30-year Treasury rate at 09/30/2020 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.

[2] The normal cost does not include any expense estimate or a reduction for estimated employee contributions.

Historical results

	2014	2015
Funded status of accrued benefits		
Present value of accrued benefits (PVAB)	$151,668,364	$161,178,009
Market value of assets (MVA)	160,770,276	158,607,927
Under (over) funded PVAB	$(9,101,912)	$2,570,082
Accrued benefit funded percentage	106%	98%
Funded status of actuarial accrued liability		
Actuarial accrued liability (AAL)	$154,618,516	$164,345,046
Actuarial value of assets	153,746,756	166,921,684
Unfunded actuarial accrued liability	$871,760	$(2,576,638)
Funded percentage	99%	102%
Normal cost		
Total normal cost (NC)	$2,191,395	$2,792,276
Total NC as % of projected current year compensation	68.35%	81.58%
Actuarially determined contribution (ADC) (per valuation date)		
Employer normal cost	$2,191,395	$2,792,276
Valuation interest	169,833	209,421
15-year amortization of credit balance	1,487,379	2,265,002
Valuation interest on credit balance	115,272	169,877
Expected employer ADC	$758,577	$566,798
Actual contributions		
Actual employer contributions	$9,174,902	$6,500,000
Percentage of employer's ADC paid	1,209%	1,147%
Liability Interest Rate	7.75%	7.50%
Projected current year compensation	$3,206,370	$3,422,635

	2016	2017	2018	2019	2020
Funded status of accrued benefits					
Present value of accrued benefits (PVAB)	$179,662,705	$182,889,177	$184,665,357	$202,852,563	$198,684,874
Market value of assets (MVA)	167,490,116	179,828,476	188,877,505	197,950,983	207,410,182
Under (over) funded PVAB	$12,172,589	$3,060,701	$(4,212,148)	$4,901,580	$(8,725,308)
Accrued benefit funded percentage	93%	98%	102%	98%	104%
Funded status of actuarial accrued liability					
Actuarial accrued liability (AAL)	$183,233,784	$186,049,047	$187,935,989	$206,425,337	$201,338,509
Actuarial value of assets	173,332,291	176,005,417	182,111,690	195,899,730	203,214,350
Unfunded actuarial accrued liability	$9,901,493	$10,043,630	$5,824,299	$10,525,607	$(1,875,841)
Funded percentage	95%	95%	97%	95%	101%
Normal cost					
Total normal cost (NC)	$5,151,232	$5,810,663	$5,953,872	$1,576,567	$343,931
Total NC as % of projected current year compensation	159.02%	193.67%	200.77%	68.19%	20.45%
Actuarially determined contribution (ADC)					
Employer normal cost	$5,151,232	$5,810,663	$5,953,872	$1,576,567	$343,931
Valuation interest	347,708	392,220	401,886	94,594	20,636
15-year amortization of credit balance	2,922,725	3,318,783	3,852,581	0	0
Valuation interest on credit balance	197,284	224,018	260,049	0	0
Expected employer ADC	$2,378,931	$2,660,082	$2,243,128	$1,671,161	$364,567
Actual contributions					
Actual employer contributions	$2,500,068	$5,500,000	$10,000,000	$3,500,000	--
Percentage of employer's ADC paid	105%	207%	446%	209%	--
Liability interest rate	6.75%	6.75%	6.75%	6.00%	6.00%
Projected current year compensation	$3,239,391	$3,000,274	$2,965,553	$2,312,126	$1,682,060

	2014	2015
Census at beginning of year		
Number of active participants	43	39
Number of terminated vested participants	285	272
Number of disabled participants	3	3
Number of retirees	375	381
Total participants	706	695
Prior year reported payroll	$3,163,848	$3,280,160
Plan maturity measures		
Non-active employees as a percentage of total	94%	94%
In pay status PV accrued benefits as a percentage of total	77%	77%
Market value of assets (beginning of year)	160,770,276	158,607,927
as a percent of prior year reported payroll	5,081%	4,835%
Actuarial accrued liability (AAL)	$154,618,516	$164,345,046
as a percent of prior year reported payroll	4,887%	5,010%
Prior year benefits paid	$10,021,946	$9,814,147
as a percent of prior year reported payroll	317%	299%
Achievement of economic assumptions		
Expected rate of return	7.75%	7.50%
Actual market value rate of return	-1.11%	7.88%
Average expected salary increase	4.71%	4.68%
Average actual salary increase	16.44%	4.92%
Liability interest rate	7.75%	7.50%

	2016	2017	2018	2019	2020
Census at beginning of year					
Number of active participants	39	35	34	26	21
Number of terminated vested participants	255	245	233	222	193
Number of disabled participants	2	1	0	0	0
Number of retirees	393	399	408	420	423
Total participants	689	680	675	668	637
Prior year reported payroll	$3,441,627	$3,148,593	$3,128,143	$2,425,558	$2,002,799
Plan maturity measures					
Non-active employees as a percentage of total	94%	95%	95%	96%	97%
In pay status PV accrued benefits as a percentage of total	77%	79%	80%	81%	82%
Market value of assets (beginning of year)	$167,490,116	$179,828,476	$188,877,505	$197,950,983	$207,410,182
as a percent of prior year reported payroll	4,867%	5,711%	6,038%	8,161%	10,356%
Actuarial accrued liability (AAL)	$183,233,784	$186,049,047	$187,935,989	$206,425,337	$201,338,509
as a percent of prior year reported payroll	5,324%	5,909%	6,008%	8,510%	10,053%
Prior year benefits paid	$10,243,459	$10,560,812	$11,074,842	$11,436,533	$11,830,697
as a percent of prior year reported payroll	298%	335%	354%	472%	591%
Achievement of economic assumptions					
Expected rate of return	6.75%	6.75%	6.75%	6.00%	6.00%
Actual market value rate of return	12.32%	8.15%	5.51%	9.13%	--
Average expected salary increase	4.70%	4.66%	4.67%	4.63%	0.00%
Average actual salary increase	2.48%	4.25%	5.33%	3.25%	--
Liability interest rate	6.75%	6.75%	6.75%	6.00%	6.00%

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

	Actuarial valuation prepared as of	
Participant data	10/01/2020	10/01/2019
Active members	21	26
Total annual payroll	$2,002,799	$2,425,558
Retired members and beneficiaries	423	420
Total annualized benefit	$11,925,396	$11,569,560
Disabled members receiving benefit	N/A	N/A
Total annualized benefit	N/A	N/A
Terminated vested members	193	222
Total annualized benefit	$2,208,084	$2,278,296

Reconciliation of lives	Active	Inactive	Retired
Total last valuation	**26**	**222**	**420**
New lives	0	0	0
Voluntary discontinuances	0	0	0
Vested terminations	-1	1	0
Non-vested terminations	0	0	0
Retirements	-4	-8	12
Deaths	0	0	-11
Other:	0	-22	2
Total this valuation	**21**	**193**	**423**

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:	10/01/2020	10/01/2019
Market value of assets		
Participants Fund1	$0	$0
Long-term Equity Investments	113,837,339	102,974,929
Short-term Investments	0	0
Real Estate	12,040,123	11,508,441
Bonds/Fixed Income	81,528,684	76,963,961
Other:	4,036	6,503,652
Total	$207,410,182	$197,950,983

Actuarial value of assets[2]		
Participants Fund1		
Long-term Equity Investments		
Short-term Investments		
Real Estate		
Bonds/Fixed Income		
Other		
Total	$203,214,350	$195,899,730

[1] 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.

[2] 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.

Plan year beginning	Actual return on actuarial basis	Actual return on market basis	Assumed return
10/01/2019	8.11%	9.13%	6.00%
10/01/2018	8.31%	5.51%	6.75%
10/01/2017	6.63%	8.15%	6.75%

Based on current assumptions, the market value of assets is projected to last until the plan year beginning 10/01/2033 assuming 0% return on assets. The market value of assets is projected to last until the plan year beginning 10/01/2110 assuming 6.00% return on assets.

Liabilities

Actuarial valuation prepared as of:	**10/01/2020** after asumption change	**10/01/2020** before assumption change	**10/01/2019**
Present value of all future expected benefit payments:			
Active members			
Retirement benefits	$14,168,154	$14,673,271	$16,728,237
Vesting benefits	2,228,276	2,315,249	2,822,829
Disability benefits	340,283	316,537	390,492
Death benefits	46,115	57,086	67,256
Return of contribution	0	0	0
Accumulated leave	0	0	0
Total	**$16,782,828**	**$17,362,143**	**$20,008,814**
Terminated vested members			
Total	**$22,957,883**	**$23,751,387**	**$23,976,638**
Retired members and beneficiaries			
Retired (other than disabled) and beneficiaries	$163,452,781	$166,949,603	$164,829,026
Disabled members	0	0	0
Total	**$163,452,781**	**$166,949,603**	**$164,829,026**
Total present value of all future benefit payments	**$203,193,492**	**$208,063,133**	**$208,814,478**
Liabilities due and unpaid:			
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

Actuarial valuation prepared as of:	**10/01/2020** after assumption change	**10/01/2020** before assumption change	**10/01/2019**
Vested accrued benefits			
Inactive members and beneficiaries	$186,410,664	$190,700,990	$188,805,664
Active members (includes non-forfeitable accumulated member contributions in the amount of $411,778)	11,880,865	12,282,066	13,646,765
Total	**$198,291,529**	**$202,983,056**	**$202,452,429**
Non-vested accrued benefits			
Total	**$393,345**	**$403,815**	**$400,134**
Total actuarial present value of all accrued benefits	**$198,684,874**	**$203,386,871**	**$202,852,563**

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.

Statement of actuarial value of all accrued benefits

Actuarial valuation prepared as of:	**10/01/2020** volatility assumption[1]
Vested accrued benefits	
Inactive members and beneficiaries	$233,956,525
Active members	16,547,488
Total	**$250,504,013**
Non-vested accrued benefits	
Total	**566,315**
Total actuarial present value of all accrued benefits	**$251,070,328**

[1] The volatility interest rate used is 4.00% which is 2.00% lower than the valuation interest rate as directed in the Florida Statutes. All other assumptions are as shown in the Assumptions and methods section of this report.

Pension cost

Actuarial valuation prepared as of:	10/01/2021 after asumption change	10/01/2021 before assumption change	10/01/2020
Base Normal Cost	$250,104	$262,284	$1,512,567
Administrative expenses	62,000	62,000	64,000
Total Normal Cost	312,104	324,284	1,576,567
Payment to amortize unfunded liability(ies)	0	536,176	0
Interest & salary adjustments	52,463	120,782	94,594
Expected plan sponsor contribution (including normal cost, amortization payment and interest, as applicable)	$364,567	$981,242	$1,671,161
As % of payroll	21.67%	58.34%	72.28%
Amount to be contributed by members	121,949	121,949	167,629
As % of payroll	7.25%	7.25%	7.25%

For the 2021 plan year:
Interest is based on 6.00%.

For the prior plan year:
Interest is based on 6.75% before changes and 6.00% after changes.

	10/01/2020 volatility assumption[1]
Base normal cost	$512,730
Administrative expenses	62,000
Total normal cost	574,730
Payment to amortize unfunded liability(ies)	5,466,394
Interest & salary adjustments	751,706
Expected plan sponsor contribution (including normal cost, amortization payment and interest, as applicable)	6,792,830
As % of payroll (full payroll)	403.84%
Amount to be contributed by members	121,949
As % of payroll	7.25%

[1]The volatility interest rate used is 4.00% 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	10/01/2019	10/01/2018
Past contributions		
Required plan sponsor contribution	$2,243,128	$2,660,082
Required member contributions	215,003	217,520
Actual contributions made by		
Plan sponsor	3,500,000	10,000,000
Members	161,054	202,595
Other	0	0
Net actuarial gain(loss) (if applicable)	N/A	N/A

Other disclosures

Actuarial valuation prepared as of:	**10/01/2020** after assumption change	**10/01/2020** before assumption change	**10/01/2019**
Present values of active members:			
Future salaries			
at attained age	$8,922,854	$8,918,210	$11,249,551
at entry age	11,278,603	7,533,218	9,502,046
Future contributions			
at attained age	628,382	628,055	792,237
at entry age	794,283	530,518	669,171
Present value of future contributions from other sources	N/A	N/A	N/A
Present value of future expected benefit payments for active members at entry age	$2,598,223	$1,554,840	$2,037,927

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.

Plan year beginning	Actual increases	Assumed increases
10/01/2019	3.25%	4.63%
10/01/2018	5.33%	4.67%
10/01/2017	4.25%	4.66%

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

Retirement Age	Valuation assumptions[1]		Contract purchase rates[2]		Current purchase rates[3]	
	Male	Female	Male	Female	Male	Female
55	$194.17	$210.76	$238.22	$256.75	$254.62	$298.90
60	178.14	194.61	218.66	238.32	217.68	261.99
62	171.02	187.15	210.52	230.60	203.00	247.24

[1] Assumes 2.0% COLA.

[2] Guaranteed rates by the contract.

[3] Non-guaranteed rates in effect 10/01/2020. These rates may change daily.

Actuarial value of assets under Flexible Pension Investment contract

	Grouped FPI
Balance as of 10/01/2019	$195,899,730
Additions	
Contributions	$3,661,054
Interest, dividends & fund earnings	17,690,041
Total additions	$21,351,095
Withdrawals	
Expenses charged	$61,199
Benefit payments	11,830,697
Total withdrawals	$11,891,896
Actuarial valuation market value spread adjustment	(2,144,579)
Balance as of 10/01/2020	$203,214,350

Schedule of active participant data

Years of credited service

Attained Age	Years of credited service																			
	Under 1		1 to 4		5 to 9		10 to 14		15 to 19		20 to 24		25 to 29		30 to 34		35 to 39		40 & up		Total	
	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.
Under 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	1	120,533	1	128,361	0	0	0	0	0	0	0	0	0	0	0	0	2	124,447
35 to 39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40 to 44	0	0	0	0	0	0	0	0	1	144,036	1	149,110	0	0	0	0	0	0	0	0	2	146,573
45 to 49	0	0	0	0	1	44,611	0	0	1	91,734	1	164,959	0	0	0	0	0	0	0	0	3	100,435
50 to 54	0	0	0	0	1	149,477	0	0	1	110,362	5	102,012	0	0	3	74,639	0	0	0	0	10	99,382
55 to 59	0	0	0	0	2	67,607	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	67,607
60 to 64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65 to 69	0	0	0	0	0	0	0	0	1	43,707	0	0	0	0	0	0	0	0	0	0	1	43,707
70 & up	0	0	0	0	0	0	0	0	0	0	1	78,470	0	0	0	0	0	0	0	0	1	78,470
Total	0	0	0	0	5	89,967	1	128,361	4	97,460	8	112,825	0	0	3	74,639	0	0	0	0	21	99,741