Provincial Judges and Applications Judges Registered Pension Plan

Actuarial Valuation as at March 31, 2024

Registration number: CRA 0927764

December 23, 2024

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Table of Contents

1. Executive Summary

Going Concern Funded Status	March 31, 2021 ($)	March 31, 2024 ($)
Going concern assets	166,102,000	183,656,000
Going concern liabilities		
Active members	53,210,000	47,659,000
Deferred vested members	0	101,000
Retired members and beneficiaries	114,110,000	118,334,000
Total liabilities	167,320,000	166,094,000
Actuarial excess (unfunded liability)	(1,218,000)	17,562,000
Going concern funded ratio	99.3%	110.6%

Government Contribution Requirements	March 31, 2021[1]	March 31, 2024[2]
Government normal actuarial cost as a percentage of capped pensionable salary	22.99%	19.50%
Unfunded liability amortization payments	$116,000	$0

Key Inputs	March 31, 2021	March 31, 2024
Discount rate	4.4%	5.2%
Inflation rate	2.0%	2.0%
Increase in pensionable salary	3.0% per year, 1st increase effective April 1, 2021	3.0% per year, 1st increase effective April 1, 2025
Maximum pension limit increase	2.75%	2.75%
Mortality	Males: 85% of 2014 CPM Public Table projected with Scale MI-2017 Females: 95% of 2014 CPM Public Table projected with Scale MI-2017	Males: 85% of 2014 CPM Public Table projected with Scale MI-2017 Females: 95% of 2014 CPM Public Table projected with Scale MI-2017
Retirement	100% at age 70	100% at age 70

[1] Assumed to be effective April 1, 2021, with the unfunded liability amortized over 14 years.
[2] Assumed to be effective April 1, 2024.

2. Introduction

We have been retained by the Alberta Pensions Services Corporation, the "Administrator" of the Provincial Judges and Applications Judges Registered Pension Plan (the "Plan"), on behalf of the Judges Pension Advisory Committee to conduct an actuarial valuation of the Plan as at March 31, 2024. The last complete valuation that was filed with the appropriate authorities was conducted as at March 31, 2021.

This report was prepared for its intended users, the Administrator, the Advisory Committee, the Government of Alberta (the "Government" or "employer"), and the Canada Revenue Agency ("CRA"), for the following purposes:

- to report on the financial condition of the Plan on a going concern basis;
- to determine the required contributions to the Plan under the statutory rules under *Alberta Regulation 196/2001, Provincial Judges and Applications Judges Registered and Unregistered Pension Plans,* as amended (the "*Regulation*");
- to determine the funded status of the Plan on a hypothetical wind-up basis; and
- to provide the information and the actuarial opinion required by the *Regulation* and the *Income Tax Act (Canada)*.

While the Plan is a "designated plan" as defined under Section 8515 of the *Income Tax Regulations,* we understand that the Plan has been granted an exemption from the requirement to conduct a valuation on the maximum funding valuation basis as prescribed under Section 8515. Therefore, we have not conducted a valuation on the maximum funding valuation basis, nor have we included the impact on contributions to the Plan.

While readers of this report may extend beyond the intended users noted above, notably Plan members, we shall not communicate the terms of our engagement or results of our work with other readers unless directed to do so by the Administrator. This report is not intended nor necessarily suitable for purposes other than those listed above.

Changes Since the Last Valuation

The last actuarial valuation of the Plan in which contribution rates were recommended was prepared as at March 31, 2021. Since the last actuarial valuation, the following changes have occurred:

1. The Order in Council 358/2022 established the salary rates for the period from April 1, 2017 to March 31, 2021.
2. The Order in Council 182/2023 established the salary rates for the period from April 1, 2021 to March 31, 2025.

3. The going concern economic assumptions were updated to reflect changes in expected future experience.
4. The hypothetical wind-up basis reflects market conditions as at the valuation date and follows the Canadian Institute of Actuaries' Guidance for Assumptions for Hypothetical Wind-up and Solvency Valuations Update – Effective March 31, 2024, and Applicable to Valuations with Effective Dates on or after March 31, 2024, and no later than June 29, 2024.

Details of the above changes that affect the funded status and required contributions are outlined in this report.

Terms of Engagement

This report has been prepared in accordance with the *Regulation*. No separate funding policy document exists.

Filings

In accordance with the *Regulation,* an actuarial valuation must be prepared for the Minister of Finance at least once every three years as at the effective date of the Plan and not more than three years after the last actuarial valuation. In the intervening period, contributions must be made in accordance with the last filed valuation. The next actuarial valuation should be prepared no later than as at March 31, 2027.

For an employer contribution to be eligible under a defined benefit provision, it must be recommended by an actuary in whose opinion the contribution is required to be made and the actuary's recommendation must be approved by the CRA. As such, in accordance with Section 147.2 of the *Income Tax Act (Canada)*, this entire valuation report must be filed with the CRA in support of eligibility of employer contributions should the Minister of Finance wish to have contributions be made in accordance with this report.

We will file this report with the appropriate authorities on the Minister of Finance's behalf, if instructed by the Advisory Committee.

3. Actuarial Opinion

This opinion is given with respect to the Provincial Judges and Applications Judges Registered Pension Plan. We conducted a valuation of the Plan as at March 31, 2024. The administrator has confirmed that, between March 31, 2024 (the effective date of the data provided) and the date of this report, no subsequent events nor any extraordinary changes to the membership that would materially affect the results of this valuation have occurred, except as indicated in this report.

In our opinion, for the purposes of this report:

- The membership data on which the valuation is based are sufficient and reliable for the purposes of the valuation.
- The assumptions are appropriate for the purposes of the valuation.
- The methods employed in the valuation are appropriate for the purposes of the valuation.

We hereby certify that, in our opinion, as at March 31, 2024:

1. With respect to the purpose of determining the Plan's funded status on a going concern basis:
   a. The Plan has a going concern surplus (excess of assets over liabilities) of $17,562,000, based on going concern assets of $183,656,000 and going concern liabilities of $166,094,000. The going concern funded ratio is 110.6%.
   b. There is no excess surplus as defined by Section 147.2(2) of the *Income Tax Act (Canada)*.
2. With respect to the purpose of determining the contribution requirements of the Plan:
   a. The Government's portion of the normal actuarial cost is estimated to be 19.50% of capped pensionable salary for the three years commencing April 1, 2024. The estimated Government portion of the normal actuarial costs for the three years following the valuation date, fiscal years ending in 2025, 2026, and 2027, are $3,969,000, $4,078,000, and $4,190,000, respectively. Details are shown in Section 6.1.
   b. As the Plan is fully funded on the going concern basis, no additional contributions are required to amortize any unfunded liability.
3. With respect to the purpose of determining the Plan's funded status on a hypothetical wind-up basis:
   a. The Plan has a hypothetical wind-up deficit of $10,491,000, determined as hypothetical wind-up assets of $182,831,000 less hypothetical wind-up liabilities of $193,322,000.
   b. The hypothetical wind-up funded ratio is 94.6%.
   c. The liabilities of the Plan would exceed the Plan's assets by $10,491,000 if the Plan were terminated and wound up on the valuation date.

4. We are not aware of any subsequent events, that have not already been taken into consideration, that could materially affect the results of this valuation.

5. The next valuation should be conducted no later than as at March 31, 2027.

This valuation was conducted in accordance with the statutory rules under *Alberta Regulation 196/2001, Provincial Judges and Applications Judges Registered and Unregistered Pension Plans,* as amended. Further, the calculations have been prepared in accordance with subsection 147.2(2) of the *Income Tax Act (Canada)*.

The content herein has been prepared exclusively from a financial viewpoint. This report does not constitute a legal opinion on the rights and duties of the Administrator, the Advisory Committee, or the members concerning the Plan.

Actuarial valuation results are estimates only and are based on assumptions and methods developed in accordance with actuarial standards of practice. Emerging experience differing from the assumptions used will result in gains or losses which will be revealed in future valuations, and which may affect future actuarial opinions.

This report has been prepared, and our opinions given, in accordance with accepted actuarial practice in Canada.

We would be pleased to discuss any questions the user may have regarding the valuation.

Gregory M. Heise
Fellow, Canadian Institute of Actuaries

Jian Zhang
Fellow, Canadian Institute of Actuaries

George & Bell Consulting Inc.
December 23, 2024

4. Going Concern Valuation Results

4.1 Going Concern Funded Status

The following table describes the Plan's funded status on a going concern basis. The going concern liabilities are based on the benefits earned up to the valuation date assuming the Plan continues indefinitely.

Going Concern Funded Status	March 31, 2021 ($)	March 31, 2024 ($)
Going concern assets	166,102,000	183,656,000
Going concern liabilities		
Active members	53,210,000	47,659,000
Deferred vested members	0	101,000
Retired members and beneficiaries	114,110,000	118,334,000
Total liabilities	167,320,000	166,094,000
Actuarial excess (unfunded liability)	**(1,218,000)**	**17,562,000**
Going concern funded ratio	**99.3%**	**110.6%**

4.2 Reconciliation of Funded Status

The following table reconciles the change in the funded status over the course of the inter-valuation period.

Reconciliation of Funded Status	($)
Actuarial excess (unfunded liability) at March 31, 2021	(1,218,000)
Expected interest	(168,000)
Amortization payments in inter-valuation period with interest	371,000
Contributions less than cost of benefits earned	(324,000)
Expected actuarial excess (unfunded liability) at March 31, 2024	(1,339,000)
Gain (loss) on investments	5,629,000
Experience gains and losses	
Retirement	339,000
Termination	153,000
Mortality	4,705,000
ITA limit higher than expected	(1,042,000)
Pension indexing higher than expected	(5,718,000)
Data corrections	(44,000)
Miscellaneous	1,000
Subtotal	(1,606,000)
Programming changes	(276,000)
Assumption changes	
Increase in discount rate from 4.4% to 5.2%	15,154,000
Subtotal	15,154,000
Actuarial excess (unfunded liability) at March 31, 2024	17,562,000

4.3 Reconciliation of Normal Actuarial Cost Rate

The table below identifies the main components of the changes in the normal actuarial cost rate (the rate of pensionable salary reflecting the cost of current service benefits accruing under the Plan) from the prior valuation to this valuation.

Reconciliation of Normal Actuarial Cost Rate	% of capped pensionable salary
Normal actuarial cost rate at March 31, 2021	22.99%
Demographic changes of Plan membership and economic experience	0.75%
Change in discount rate	(4.24)%
Normal actuarial cost rate at March 31, 2024	19.50%

5. Hypothetical Wind-up Valuation Results

5.1 Hypothetical Wind-up Funded Status

A solvency valuation is not required by the Act to assess the Plan's funded status should it wind-up on the valuation date; however, actuarial standards of practice require that the Plan's funded status on a hypothetical wind-up basis be determined.

The hypothetical wind-up funded status of the Plan is determined by reducing the market value of the assets by an allowance for estimated wind-up expenses and comparing the result to the actuarial liability for benefits earned up to the valuation date. Liabilities are determined assuming the Plan is terminated on the valuation date, with immediate settlement of obligations.

Based on the Plan's provisions, membership data, asset information, and hypothetical wind-up assumptions and methods described in the Appendices, the hypothetical wind-up funded status of the Plan is shown in the table below.

Hypothetical Wind-up Funded Status	March 31, 2021 ($)	March 31, 2024 ($)
Hypothetical wind-up assets		
Market value of assets	166,102,000	183,656,000
Expense allowance	(365,000)	(825,000)
Total assets	165,737,000	182,831,000
Hypothetical wind-up liabilities		
Active members	84,042,000	65,140,000
Deferred vested members	0	368,000
Retired members and beneficiaries	137,127,000	127,814,000
Total liabilities	221,169,000	193,322,000
Hypothetical wind-up excess (deficit)	(55,437,000)	(10,491,000)
Hypothetical wind-up funded ratio	74.9%	94.6%

6. Contribution Rates

6.1 Contribution Rate in Respect of Normal Actuarial Costs

The normal actuarial cost is the cost, on the going concern basis, of benefits accruing under the Plan as a result of service after the valuation date. Based on the Plan provisions, membership data, and going concern assumptions and methods described in the Appendices, the following table provides details on the breakdown of the normal actuarial cost, along with the resulting normal actuarial cost rate.

	April 1, 2024 to March 31, 2025 ($)	April 1, 2025 to March 31, 2026 ($)	April 1, 2026 to March 31, 2027 ($)
Normal actuarial cost	5,394,000	5,542,000	5,694,000
Less: Required member contributions	(1,425,000)	(1,464,000)	(1,504,000)
Government normal actuarial cost	3,969,000	4,078,000	4,190,000
Capped pensionable salary[1]	20,355,000	20,915,000	21,490,000
Total pensionable salary[2]	43,417,000	44,720,000	46,062,000
Government normal actuarial cost			
As a percentage of capped pensionable salary	19.50%	19.50%	19.50%
As a percentage of total pensionable salary	9.14%	9.12%	9.10%

[1] Excludes all members with no normal actuarial cost under the registered plan

[2] Includes all members

6.2 Amortization Payments

Amortization payments are contributions necessary to amortize any unfunded liability over an appropriate payment period. The amortization schedules as determined in the previous actuarial report were as follows:

Valuation Date at which Schedule Established	Commencement of schedule	Annual Payment ($)	End Date for Schedule	Present Value at Mar. 31, 2021[1] ($)
March 31, 2021	April 1, 2021	116,000	March 31, 2035	1,218,000

As at this valuation, there are no amortization payments required due to the actuarial excess. Accordingly, the above schedule has been eliminated.

6.3 Actuarial Excess Usage

Actuarial excess may be used by the Government to reduce its contributions or transfer the same to the general revenue fund. As at this valuation date, the Plan has going concern actuarial excess of $17,562,000 available for use.

[1] The present values were developed using the going concern discount rate of 4.4% per year, with payments assumed to be made monthly in arrears.

6.4 Minimum Required Government Contributions

The table below presents the development of the minimum required Government contribution for each of the plan years covered by this report. The required contributions determined in this valuation report are assumed to take effect April 1, 2024. The minimum required contributions to fund the normal actuarial cost are shown as a percentage of capped pensionable salary. The future minimum required contributions may be adjusted once the next actuarial funding recommendations are certified.

Government Contributions	April 1, 2024 to March 31, 2027
Normal actuarial cost as a percentage of capped pensionable salary	19.50%
Plus: Unfunded liability amortization payments	$0
Less: Permissible use of actuarial excess	$17,562,000

6.5 Maximum Permissible Contributions

The *Income Tax Act (Canada)* limits the amount of employer contributions that can remitted to the defined benefit provision of a registered pension plan to contributions recommended by an actuary as being required to fund the benefits provided under the Plan in respect of service rendered prior to the end of the contribution year. In making the recommendation, the actuary may ignore a certain amount of excess funding, and may include an allowance for cost-of-living increases that are reasonable to expect will be provided, whether or not those increases are stipulated in the Plan's provisions.

In general, the maximum is defined as 25% of the going concern actuarial liability (with allowances for cost-of living, if applicable).

As at the valuation date, the Plan does not have an excess surplus based on the valuation on a going concern basis; therefore, employer contributions are not affected by the prescribed excess surplus limit.

As the Plan has no excess surplus, the maximum permissible contribution for the plan year ending March 31, 2025 is 19.50% of capped pensionable salary.

Appendix A — Plan Provisions

A.1 Plan Provisions

This summary contains the main provisions of the Plan as at the valuation date. For a complete description, reference should be made to the statutory rules under Alberta Regulation 196/2001.

This summary does not constitute a legal interpretation of the Plan. All pertinent documents, acts, and regulations should be referred to for an interpretation in any specific circumstance.

Provision	Detail
Eligibility	Eligible participants include Provincial Judges and Applications Judges of the Province of Alberta.
Pensionable Salary	Pensionable salary for pensionable service before 1992 is defined as the participant's actual salary. Pensionable salary for pensionable service after 1991 is capped and determined as the participant's actual salary limited to the amount in any year which results in the maximum defined benefit for that year under the *Income Tax Regulations (Canada)*. Pensionable salary is $nil when the participant has reached the latest pension accrual date as defined under the *Income Tax Act (Canada)*. Pensionable salary for service after December 31, 1991 is capped. For service after December 31, 1991 and before January 1, 2004, the capped salary is limited to $86,111. The capped salary increases in accordance with the provisions of the *Income Tax Act (Canada)*. For years after 2003, the capped salary is as follows:

Year	Capped Salary ($)	Year	Capped Salary ($)
2004	91,667	2015	140,945
2005	100,000	2016	144,500
2006	105,556	2017	145,722
2007	111,111	2018	147,222
2008	116,667	2019	151,278
2009	122,222	2020	154,611
2010	124,722	2021	162,278
2011	127,611	2022	171,000
2012	132,334	2023	175,334
2013	134,834	2024	180,500
2014	138,500	2025+	Indexed to Average Industrial Wage

Benefits cease to accrue when the member has reached the maximum benefit accrual percentage (70%) or when the participant has reached the latest pension accrual date as defined under the *Income Tax Act (Canada)*.

Provision	Detail
Pensionable Service	Pensionable service, as defined under the provisions of the Plan, is not capped. However, pensionable service is zero and benefits cease to accrue when the participant has reached the maximum benefit accrual percentage (70%) or the latest pension accrual date as defined under the *Income Tax Act (Canada)*.
Retirement Age	Participants are eligible to retire under the Plan if they have attained age 55 and have at least five years of pensionable service.
Retirement Benefit	The annual pension payable at retirement is determined as 2.0% of highest average pensionable salary, multiplied by years of pensionable service. For retirements prior to April 1, 2006, highest average pensionable salary is the participant's average annual salary in the five consecutive years of pensionable service in which such average is the highest. For retirements after March 31, 2006, highest average pensionable salary is the participant's average annual salary in the three consecutive years of pensionable service in which such average is the highest.
Early Retirement	For service prior to January 1, 1992, if a participant has attained the age of 55 and accrued five years of service, there is no reduction in the participant's pension upon retirement. For service after December 31, 1991 and before April 1, 1998, if the participant has accrued 80 points (that is, attained age (at least 55) plus pensionable service is greater than or equal to 80) or has attained age 60 with at least five years of pensionable service, no reduction is applied. Otherwise, the retirement pension is reduced by 3% for each year that the participant's early retirement age precedes the earlier of age 60 and the age at which 80 points would be reached (based on pensionable service to the date of termination). For service after March 31, 1998, there is no reduction to the pension upon the later of the participant accruing 80 points (that is, attained age (at least 55) plus pensionable service is greater than or equal to 80) or attaining age 60. The pension would also be unreduced upon attaining the maximum accrual age. Otherwise, the retirement pension is reduced by 3% for each year that the participant's early retirement age precedes the later of age 60 and the age at which 80 points would be reached (based on pensionable service to the date of termination).
Benefits on Disability	If the participant is not receiving benefits from an LTD plan and the participant is permanently and totally disabled, the participant is entitled to an immediate unreduced pension based on pensionable service and salary to the date of disability. If the participant is partially disabled, the pension is reduced in accordance with the Registered Plan rules.

Provision	Detail	
Normal Form of Pension	**Service Pre-1992:** The normal form of pension for a participant who does not have a pension partner at retirement is payable for life. Upon the participant's death, pension payments cease. The normal form of pension for a participant who has a pension partner at retirement is a joint form with a 75% survivor pension payable to the pension partner. Upon the death of the participant, the pension partner will continue to receive a pension equal to 75% of the participant's pension. **Service Post-1991:** The normal form of pension for a participant who does not have a pension partner at retirement is a lifetime pension. Upon the participant's death, monthly payments cease. The normal form of pension for a participant who has a pension partner at retirement is a pension payable for the lifetime of the participant. Upon the participant's death, a survivor pension equal to 2/3 of the participant's pension is payable to the pension partner for the remaining lifetime of the pension partner.	
Pre-Retirement Death Benefits	**Service Pre-1992:**	**Benefit**
	No pension partner and member less than 55 and less than 2 years pensionable service	Refund of contributions with interest
	No pension partner and member greater than 55 or more than 2 years pensionable service	Pension payable on a 10-year term basis or based on member's choice
	Pension Partner	Unreduced pension for life in the amount of 75% of the normal pension
	Service Post-1991	**Benefit**
	No pension partner and member less than 55 and less than 2 years pensionable service	Refund of contributions with interest
	No pension partner and member greater than 55 or more than 2 years pensionable service	Pension payable on a 10-year term basis or based on member's choice
	Pension Partner, member with less than 2 years of pensionable service	Refund of contributions with interest
	Pension Partner, member with 2 or more years of pensionable service	Lifetime pension amount equal to 2/3 of the normal pension
Termination Benefits	**Pre-1992 Pension:**	Deferred pension
	Post-1991 Pension:	
	Less than 2 years of pensionable service	Refund of contributions with interest
	2 or more year of pensionable service	Either refund of contributions with interest or a deferred pension

Provision	Detail
Cost-of-Living Increases	For participants who terminated before April 1, 2009, cost-of-living increases are based on 60% of the increase in the Alberta CPI and apply to both deferred pensions and pensions-in-payment. For participants who terminated after March 31, 2009, cost-of-living increases are based on 100% of the increase in the Alberta CPI and apply to both deferred pensions and pensions-in-payment.
Member Contributions	Members contribute 7% of their capped pensionable salary. Contributions cease a) after a benefit accrual percentage of 70% is earned determined as: • 2.0% of years of pensionable service prior to April 1, 1998, plus • 2.67% of years of pensionable service between April 1, 1998 to March 31, 2000, plus • 3.0% of years of pensionable service from April 1, 2000 or b) after a member reaches the latest pension accrual date whichever of those events occurs first.
Government Contributions	The Government contributes the total normal actuarial cost, less member contributions. In addition, the Government will make unfunded liability amortization payments in order to amortize any unfunded liability in accordance with the *Employment Pension Plans Regulation*.
Plan termination	If the plan were to be terminated, the Government would continue to pay the promised benefits.

Appendix B — Plan Membership

B.1 Source of Data

Alberta Pensions Services Corporation (APSC) provides administration services to the Plan and maintains pension records of Plan members on behalf of the Administrator. The relevant information to carry out this valuation was provided by APSC. We have reviewed the data to ensure its sufficiency and reliability, and consistency with the data used in the last valuation. Specific tests included:

1. A member by member reconciliation of the membership group from March 31, 2021 to March 31, 2024.
2. Tests for reasonableness of the data elements of the record of each individual entitled to or potentially entitled to a benefit under the Plan, including, but not limited to:
    a. Comparison of changes in age, salaries, and pensionable service
    b. Comparison of the terminated and retired members with the files used for the prior valuation and the retirements, terminations, and deaths that occurred during the inter-valuation period
    c. Validation with APSC regarding all inconsistencies in comparison with the data used for the previous actuarial valuation, with adjustments made where necessary
    d. Comparison of the data provided with information contained in the Plan's financial statements.

The results of the above tests demonstrate that the membership data is substantially complete.

In addition, due to the nature of the financial information provided, it was not possible to trace any lump sum refunds individually. However, the effect of this omission was not material to the results of the valuation.

Active member salary rates used for the year following the valuation date were based on their position as provided by APSC and the salary rates described in the *Provincial Court Judges and Applications Judges Compensation Regulation*, as at April 1, 2024. The following table summarizes the salaries used:

Position	Salary ($)
Judge	$348,102.00
Assistant Chief Judge	$365,507.10
Deputy Chief Judge	$374,209.65
Chief Judge	$382,912.20

The capped salary rate for each active member for the year following the valuation date was the last capped salary rate shown in the table under section A.1, pro-rated for 9 months, and 3 months at the next calendar year's rate, estimated using the expected rate of escalation in the maximum pension limit.

The membership data is sufficient and reliable for the purposes of this valuation.

B.2 Summary of Membership Data

There were the following members as of the current and last valuation dates:

Active Members

Membership Summary	March 31, 2021	March 31, 2024
Number of members	122	124
Average age	61.6	61.5
Average credited service	8.8	8.1
Total pre-1992 credited service	3.3	3.3
Total post-1991 credited service	1,068.9	999.8
Average capped pensionable salary	$163,394	$181,741
Average expected pensionable salary	$305,415	$350,137
Percent female	40.2%	41.9%
Number of members accruing benefits	116	114

Deferred Vested Members

Membership Summary	March 31, 2021	March 31, 2024
Number of members	0	1
Average age	n/a	*
Average annual pension	n/a	*
Percent female	n/a	100.0%

**Not shown for confidentiality reasons.*

Retired Members

Membership Summary	March 31, 2021	March 31, 2024
Number of members	134	145
Average age	76.4	76.8
Average annual pension	$51,541	$54,461
Percent female	19.4%	24.1%

Beneficiaries

Membership Summary	March 31, 2021	March 31, 2024
Number of members	51	48
Average age	82.9	82.1
Average annual pension	$44,990	$48,094
Percent female	96.1%	93.8%

B.3 Changes in Membership Data

The following table shows the changes in the Plan membership since the last valuation date:

Reconciliation of Membership Data	Active Members	Deferred Vested Members	Retirees and Beneficiaries	Total
As at March 31, 2021	122	0	185	307
New entrants	32	0	0	32
Retirements	(28)	0	28	0
Deaths – paid out	(1)	0	0	(1)
Terminations - deferred	(1)	1	0	0
Deaths or expiry of guarantee	0	0	(20)	(20)
As at March 31, 2024	124	1	193	318

B.4 Active Members — Detail

Distribution of Pensionable Salary and Service

Age	Under 5	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	Total
Under 50	9						9
	$350,036						$350,036
50 – 54	8	3					11
	$348,102	$348,102					$348,102
55 – 59	9	14	4	2			29
	$348,102	$349,345	$354,629	$348,102			$349,602
60 - 64	12	10	13	1			36
	$348,102	$351,583	$352,119	$365,507			$351,003
65 +	3	11	16	4	3	2	39
	$348,102	$351,267	$351,365	$348,102	$348,102	$348,102	$350,333
Total	41	38	33	7	3	2	124
	$348,527	$350,392	$352,058	$350,588	$348,102	$348,102	$350,137

Each cell shows: Number of members
Average annual pensionable salary

B.5 Retirees & Beneficiaries — Detail

Distribution of Annual Pension

Age	Retired Members & Beneficiaries
Under 60	2 $16,934
60 – 64	8 $32,818
65 – 69	15 $44,193
70 – 74	45 $48,694
75 – 79	47 $48,611
80 – 84	42 $66,268
85 – 89	19 $65,237
90 +	15 $49,825
Total	193 $52,878

Each cell shows: Number of members
Average annual pension

Appendix C — Assets

C.1 Plan Asset Information

Plan assets are held in trust and managed by Alberta Investment Management Corporation. The fund is audited annually by the Auditor General of Alberta. The asset data required for the valuation in respect of the Plan's trust fund was taken from the Plan's audited financial statements at March 31, 2024.

The asset value has been tested and reconciled with the value at the last valuation. The benefits paid from the fund have also been examined and tested against the membership data.

C.2 Statement of Plan Assets and Asset Mix

A breakdown of the market value of the fund as at the valuation date, with the last valuation shown for comparison, is shown in the following table:

	March 31, 2021		March 31, 2024	
Asset Class	Amount ($)	Asset Mix (%)	Amount ($)	Asset Mix (%)
Cash	0	0.0%	216,000	0.1%
Fixed Income	56,671,000	34.1%	62,455,000	34.0%
Equities	70,180,000	42.2%	71,820,000	39.1%
Inflation sensitivity	38,695,000	23.3%	48,469,000	26.4%
Strategic and currency investments	779,000	0.5%	622,000	0.4%
Subtotal	166,325,000	100.0%	183,582,000	100.0%
Adjustments				
Accounts Receivable	123,000		125,000	
Accounts Payable	(346,000)		(51,000)	
Subtotal	(223,000)		74,000	
Total	166,102,000		183,656,000	

C.3 Changes to the Plan Assets

The following table shows the changes to the market value of the assets during the inter-valuation period:

Beginning of Period	April 1, 2021 ($)	April 1, 2022 ($)	April 1, 2023 ($)
Opening Asset Value	166,102,000	175,361,000	174,099,000
Contributions			
Employee	1,374,000	1,460,000	1,439,000
Employer	4,666,000	4,848,000	4,845,000
Subtotal	6,040,000	6,308,000	6,284,000
Benefit Payments			
Retirement benefits	(8,856,000)	(9,248,000)	(9,464,000)
Death benefits	(446,000)	(452,000)	(469,000)
Termination benefits	0	0	0
Subtotal	(9,302,000)	(9,700,000)	(9,933,000)
Expenses			
Investment expenses	(1,083,000)	(1,012,000)	(1,086,000)
Non-investment expenses	(240,000)	(227,000)	(186,000)
Subtotal	(1,323,000)	(1,239,000)	(1,272,000)
Investment Earnings	13,844,000	3,369,000	14,478,000
Closing Asset Value	175,361,000	174,099,000	183,656,000
End of Period	**March 31, 2022**	**March 31, 2023**	**March 31, 2024**

C.4 Long Term Asset Mix

The Advisory Committee has adopted an investment policy that includes the following long-term asset mix:

Asset Class	Target %
Fixed Income	**35.0%**
Cash & Money market	0.5%
Fixed Income	34.5%
Inflation Sensitive	**25.0%**
Real Estate	15.0%
Infrastructure	9.0%
Timberlands	1.0%
Equity	**40.0%**
Canadian equities	15.0%
Global equities	25.0%
Total	100.0%

C.5 Fund Rates of Return

The rate of return history of the market value of assets, net of all expenses, is shown below.

Year	Market Value
2015	12.6%
2016	1.8%
2017	10.7%
2018	6.2%
2019	6.9%
2020	(6.4%)
2021	17.0%
2022	7.6%
2023	1.2%
2024	7.7%
3-Yr. Ann.	5.5%

Appendix D — Actuarial Methods

D.1 Actuarial Cost Method — Going Concern Valuation

The projected unit credit actuarial cost method has been used for this valuation, as was the case in the previous valuation. Under this method, the going concern liabilities at the valuation date are the actuarial present value of benefits in respect of service prior to the valuation date, but based on pensionable salary projected to retirement. The normal actuarial cost is the present value, at the middle of the ensuing year, of benefits that accrue to active members in the ensuing year, again based on projected pensionable salary.

The pattern of future contributions necessary to pre-fund future benefit accruals for any one particular individual will increase gradually as a percentage of his or her pensionable salary as the individual approaches retirement. For a stable population (i.e., one where the demographics of the group remain relatively constant from year to year), the normal actuarial cost will remain relatively level as a percentage of pensionable salary.

An actuarial excess is the excess of the going concern assets over the going concern liabilities; an unfunded liability is the excess of the going concern liabilities over the going concern assets.

D.2 Actuarial Cost Method — Hypothetical Wind-up Valuation

Actuarial standards require the disclosure of the Plan's financial position at the valuation date on a hypothetical wind-up basis. The accrued benefit actuarial cost method was used to determine the liabilities. Under this method, the liabilities are equal to the actuarial present value of all benefits earned by members for services period to the valuation date assuming the Plan is wound up on the valuation date. The Plan is not required to fund any deficit on a hypothetical wind-up basis.

D.3 Asset Valuation Method — Going Concern and Hypothetical Wind-up Valuations

The actuarial value of the assets used to determine the going concern and hypothetical wind-up funded statuses is equal to the market value, adjusted for amounts payable and receivable. With respect to the hypothetical wind-up valuation, a further adjustment was made for assumed wind-up expenses. This method is the same as the one used in the last valuation.

Appendix E — Actuarial Assumptions

E.1 Actuarial Assumptions — Going Concern Valuation

The going concern valuation is based on the assumption that the Plan will continue to operate indefinitely into the future. At each valuation, past experience is compared to the assumptions made at the last valuation to determine if, together with known changes to plan provisions, investment policy, and expectations of future trends, the assumptions should be changed.

In this valuation, we reviewed the history of experience gains and losses and have provided a rationale for any assumption changes from the prior valuation which are described below. Emerging experience differing from these assumptions will result in experience gains and losses that will be revealed in future valuations.

The actuarial assumptions used in this and the last valuations are summarized in the following table. All rates and percentages are annualized unless otherwise noted.

Going Concern Assumptions	March 31, 2021	March 31, 2024
Economic		
Discount rate	4.4%	5.2%
Margin for adverse deviation	0.3%, inherent in discount rate	0.3%, inherent in discount rate
Inflation rate	2.0%	2.0%
Increases in pensionable salary	3.0% per year; 1st increase effective April 1, 2021	3.0% per year; 1st increase effective April 1, 2025
YMPE and Maximum Pension Limit	2.75%	2.75%
Cost-of-living adjustments	**Termination date:** Prior to April 1, 2009: 1.2% After March 31, 2009: 2.0%	**Termination date:** Prior to April 1, 2009: 1.2% After March 31, 2009: 2.0%
Investment expenses	0.5% inherent in discount rate	0.5% inherent in discount rate
Non-investment expenses	0.1% inherent in discount rate	0.1% inherent in discount rate

Going Concern Assumptions	March 31, 2021	March 31, 2024
Demographic		
Pre-retirement mortality	None	None
Post-retirement mortality	Males: 85% of CPM Public Table projected with Scale MI-2017 Females: 95% of CPM Private Table projected with Scale MI-2017	Males: 85% of CPM Public Table projected with Scale MI-2017 Females: 95% of CPM Private Table projected with Scale MI-2017
Termination	No rates	No rates
Disability	No rates	No rates
Proportion of vested terminated members electing a deferred annuity	100%	100%
Retirement	100% at age 70	100% at age 70
Proportion of members with spouses	90% married; actual marital status for retired members	90% married; actual marital status for retired members
Spousal age differential	Male spouse 4 years older	Male spouse 4 years older

Further detail concerning these assumptions is summarized below.

Economic assumptions

Inflation Rate

As the level of inflation influences the rate of increase in several economic factors that affect the Plan, it is necessary for the going-concern valuation to have an assumption regarding the future inflation rate. As at the last valuation, the inflation rate is assumed to be 2.0% per year. This assumption is considered to be best estimate considering current economic and financial market conditions.

Discount rate

The primary economic assumption used in the going concern valuation is the discount rate, which is the rate of return that the fund is expected to earn over the long term. In this valuation, we have used a discount rate of 5.2% per year. At the last valuation, the assumed discount rate was 4.4% per year.

Discount rate	%
Expected inflation	2.0
Expected real return	3.3
Value added for rebalancing/diversification	0.4
Value added for active management	0.4
Expected investment expenses	(0.5)
Expected non-investment expenses	(0.1)
Margin for adverse deviation	(0.3)
Discount rate	5.2

In deriving the discount rate, we have assumed that the assets would be invested according to the Plan's Statement of Investment Policies and Goals revised at November 18, 2020.

The expected returns for the fund were estimated using our expected returns for applicable asset classes taking into account the target asset mix as outlined under the Plan's investment policy. Return assumptions for all asset classes are based on long-term expectations of at least 25 years.

The frequency of rebalancing the fund's weight in each asset class to its target in the investment policy, the weights themselves, and the time horizon, will all influence the long-term return. The long-term return is also influenced by the diversification of the fund. The expected effect of rebalancing and diversification on the fund's return was estimated based on a log-normal distribution.

A provision has been considered in the discount rate to consider the added value associated with active management for traditional asset classes. This provision is less than the estimated fees corresponding to active management for those asset classes.

The rate of return has been adjusted to consider expected investment management expenses on traditional asset classes. No investment management expenses have been considered for non-traditional asset classes as the expected real returns for those classes are assumed to be net of investment management fees.

Increases to average wages

As the rate of increase in average wages in the economy influences the rates of increase in the YMPE, maximum pension limit, member salaries, and other economic factors that affect the Plan, it is necessary for the going concern valuation to have an assumption regarding the future increases in average wages. Average wages are assumed to increase at 2.75% per year. This assumption is considered best estimate and is comprised of an annual increase of 2.0% on account of inflation, plus a best-estimate assumed increase of 0.75% on account of productivity.

The previous valuation used the same assumption.

Increases in pensionable salary

As the benefits paid to a member from the Plan are dependent on the member's future pensionable salary, it is necessary for the going concern valuation to have an assumption regarding the future increases in such salary. All active members' pensionable salaries are capped with reference to the *Income Tax Act (Canada)* limit and pensionable salary is assumed to increase at 3.0% per year, with the first increase taking effect one year after the valuation date.

The previous valuation assumed the first increase to pensionable salary would occur on April 1, 2021 at 3.0% per year, and annually per year thereafter.

Cost of living adjustments ("COLA")

As the Plan's benefits are increased after termination/retirement based on inflation, it is necessary to make an assumption regarding the rate of COLA that will be applied in the future. As at the last valuation, it has been assumed that COLA will be applied at 60% of the assumed inflation rate of 2.0%, or 1.2% per year for members who terminated prior to April 1, 2009 and 100% of the assumed inflation rate of 2.0% for member who terminated after March 31, 2009.

Demographic assumptions

Members may cease active status as a result of death, retirement, termination of membership, or disability and may cease to be entitled to monthly pension payments as a result of death.

Mortality

For this valuation, the gender-distinct mortality rates have been assumed to be in accordance with:

- for males, 85% of the Canadian Pensioner Mortality (CPM) 2014 – Public Sector Males mortality table with future improvements in mortality in accordance with Scale MI-2017; and
- for females, 95% of the Canadian Pensioner Mortality (CPM) 2014 – Public Sector Females mortality table with future improvements in mortality in accordance with the Scale MI-2017.

The same assumptions were used at the previous valuation. No pre-retirement mortality was assumed.

Retirement

A member's benefit entitlement under the Plan is dependent on when the member decides to commence, or is deemed to commence, to receive a pension from the Plan (referred to as "retirement" from the Plan). Accordingly, an assumption with respect to when a member is expected to retire from the Plan has been made.

For both this and the previous valuation, active and deferred vested members are assumed to retire at age 70. Retirements are assumed to occur at the beginning of each year with no retirements assumed to occur in the first year after the valuation date.

Termination

No allowance for termination of employment prior to retirement has been made as it would not have a material impact on the results. This is the same assumption as was used at the prior valuation.

Disability

We have made no allowance for the occurrence of disability before retirement. To the extent that members do become disabled before retirement, there may be an experience gain or loss.

Proportion of vested terminated members electing a lump sum payment versus a deferred annuity

We have assumed that 100% of members will elect a deferred annuity on termination. This is the same assumption as was used at the prior valuation.

Proportion of members with spouses and spousal age difference

Under the Plan terms, the value of pre-retirement death benefits depends on the existence and age of a surviving spouse. It has again been assumed that 90% of members are married to a spouse of the opposite gender, with the male spouse being 4 years older than the female spouse. Actual marital status is used for retired members.

Expenses

Expenses relating to investment management fees and certain administration and consulting fees incurred in relation to the Plan are paid from the Plan's assets. Consequently, it is appropriate that an assumption regarding such expenses be made.

Administration and custodial expenses charged to the fund have been in the range of 0.1% to 0.2% of pensionable salary over the past few years. Investment expenses charged to the fund have been, on average, 0.61% over the past 6 years; however, we expect these to trend down. A best estimate allowance for non-investment expenses of 0.1% per year and investment expenses of 0.5% per year have been included in the discount rate. The previous valuation included an allowance in the discount rate of 0.1% per year for non-investment expenses and 0.5% per year for investment expenses.

E.2 Actuarial Assumptions — Hypothetical Wind-up Valuation

The following table provides the assumptions used in the hypothetical wind-up valuation. Further, the termination scenario used in the hypothetical wind-up valuations includes the following assumptions:

- Plan wind-up would not result from Government insolvency.
- All assets could be realized at their reported market values.

We have determined the hypothetical wind-up valuation liabilities with the presumption that:

- the plan is terminated and wound up on the valuation date, and
- the plan's liabilities are settled immediately.

The following summarizes the prescribed assumptions, methods and benefits that make up the hypothetical wind-up basis for the Plan at the valuation date. Judgement must be exercised in setting certain assumptions, especially as related to determining:

- the proportion of the Plan's benefits expected to be settled by way of annuity purchase and by way of lump sum transfer; and
- the hypothetical annuity purchase rates at the valuation date.

Consequently, if the Plan was terminated and settled on the valuation date, these hypothetical wind-up liabilities may be different than the Plan's actual termination liabilities. Such differences may be attributed to:

- differences between the actual and assumed proportion of benefits being settled by annuity purchase and lump sum transfer; and
- an actual annuity purchase rate that is different than the rates assumed to be representative of the annuity market on the valuation date.

Hypothetical Wind-up Assumptions	March 31, 2021	March 31, 2024
Discount Rates		
Lump sum transfers	n/a	n/a
Annuity Purchases	**Termination date:** Prior to April 1, 2009: 1.03% After March 31, 2009: (0.28%)	**Termination date:** Prior to April 1, 2009: 2.86% After March 31, 2009: 1.50%
Mortality	2014 Canadian Pensioner Mortality Combined Table with fully generational projection using Scale CPM-B	2014 Canadian Pensioner Mortality Combined Table with fully generational projection using Scale CPM-B
Retirement	• Members who are entitled to retire from the Plan and commence an immediate pension on the valuation date are assumed to do so; All other members are assumed to retire at age 55	• Members who are entitled to retire from the Plan and commence an immediate pension on the valuation date are assumed to do so; • All other members are assumed to retire at age 55
Termination	100% of members are assumed to elect a deferred annuity	100% of members are assumed to elect a deferred annuity
Wind-up expenses	$365,000	$825,000

Settlement Upon Plan Wind-up

It is assumed that all active and deferred vested members over age 55 will choose an immediate annuity, reduced accordingly for early retirement. Those members that are currently in receipt of an immediate pension are assumed to have an immediate annuity purchased on their behalf.

Active and deferred vested members under age 55 have been assumed to elect a deferred annuity commencing at age 55.

Discount Rates and Mortality

We have assumed that no members elect a lump sum transfer and, as such, have made no assumptions regarding the discount rate and mortality to be applied.

The assumptions used to value the benefits of members and beneficiaries settled by the purchase of annuities with an insurance company are in accordance with the Canadian Institute of Actuaries in their *Guidance on Assumptions for Hypothetical Wind-up and Solvency Valuations Update- Effective March 31, 2024 and Applicable to Valuations with Effective Dates on or after March 31, 2024 and no later than June 29, 2024*.

No Margin for Adverse Deviation

As specified by the Standards of Practice of the Canadian Institute of Actuaries, the hypothetical wind-up assumptions do not include a margin for adverse deviations.

Expenses

Allowance has been made for administrative, actuarial, investment and legal costs which would be incurred if the Plan were to be wound up. It is assumed that all benefits would be fully settled two years after the valuation date. Expenses related to the resolution of any surplus and deficit issues have not been considered. The amount of expenses is only an approximation and may differ significantly from real expenses incurred on Plan wind-up. The assumption was increased at this valuation from $365,000 to $825,000.

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Appendix F — Data Certificate

Administrator Certification

With respect to the actuarial valuation conducted on the Provincial Judges and Applications Judges Registered Pension Plan as at March 31, 2024, we hereby confirm that, to the best of our knowledge based on reporting prepared by and provided to us by Alberta Pensions Services Corporation:

- The data regarding Plan members and beneficiaries provided to George & Bell Consulting Inc. constitutes a complete and accurate description of the information contained in our files.
- There are no subsequent events nor any extraordinary changes to the membership, between March 31, 2024 and the report date, which would materially affect the results.

Date: January 15, 2025

Name (Printed): Kathryn Miller

Title: Interim VP, Pensions Services

Signature: