

# MONTANA PUBLIC EMPLOYEES' RETIREMENT BOARD

**TITLE: ACTUARIAL VALUATION ASSUMPTIONS AND METHODS**

**POLICY: BOARD Admin 09**

**EFFECTIVE DATE: July 1, 2022**

- I. POLICY AND OBJECTIVES.** The objectives of this policy are to adopt appropriate actuarial assumptions, methods, and factors to conduct the annual actuarial valuations of the various defined benefit retirement systems and to determine actuarial equivalency for benefits paid and actuarial cost for service purchased within each system.
- II. APPLICABILITY.** This policy applies to all defined benefit retirement systems administered by the Board.
- III. UNIVERSAL ASSUMPTIONS FOR ACTUARIAL VALUATIONS.** Based on the 2022 experience study, the Board adopts the following actuarial assumptions and methods for all defined benefit retirement systems it administers:
  - A. Net investment earnings assumption – 7.30%;
  - B. General wage increase assumption – 3.50%;
  - C. Payroll growth assumption – 3.25%;
  - D. Adopted price inflation – 2.75%;
  - E. Assumed interest on member contributions – STIP Interest;
  - F. Actuarial cost method – entry age cost;
  - G. Asset valuation method – 4-year smoothed market;
  - H. Probability of marriage assumption – 100% of all non-retired members are assumed to be married. Male spouses are assumed to be three years older than female spouses for all systems except JRS. Male spouses are assumed to be four years older than female spouses in the JRS.

IV. **SYSTEM-SPECIFIC ACTUARIAL VALUATION ASSUMPTIONS.** The Board adopts the following system-specific actuarial valuation assumptions:

A. **Public Employees' Retirement System**

1. **Mortality Assumption among contributing members:** PUB 2010 General Amount Weighted Employee Mortality Table projected to 2021 for males and females. Projected generationally using MP-2021.
2. **Mortality Assumption among disabled members:** PUB 2010 General Amount Weighted Disabled Retiree Mortality Table with ages set forward 1 year for males and females.
3. **Mortality Assumption among beneficiaries:** PUB 2010 General Amount Weighted Contingent Survivor Mortality Table projected to 2021 with ages set forward 1 year for males and females. Projected generationally using MP-2021.
4. **Mortality Assumption among service retired members:** PUB 2010 General Amount Weighted Healthy Retiree Mortality Table projected to 2021 with ages set forward 1 year and adjusted 104% for males and 103% for females. Projected generationally using MP-2021.
5. Merit salary increase assumptions:

<b>Years of Service</b>	<b>Annual Increase</b>
0-1	4.8%
1-2	3.8%
2-3	2.8%
3-4	2.0%
4-5	1.4%
5-6	0.8%
6-7	0.4%
7-8	0.0%
8 & Over	0.00%

6. Annual retirement rate assumptions:

<b>Age</b>	<b>30+ Years Service or Age 60 with 25 Years</b>	<b>Other Retirements</b>
<50	10%	0%
50-54	15.8%	4.5%
55	15.8%	5.5%
56	15.8%	6%

57	15.8%	6%
58	15.8%	6%
59	15.8%	7%
60	15.8%	9%
61	15.8%	9%
62	22%	15%
63	22%	15%
64	22%	15%
65	35%	30%
66	35%	30%
67	35%	25%
68	30%	25%
69	30%	25%
70+	100%	100%

7. Annual rate of disablement assumptions:

<b>Age</b>	<b>Rate</b>
22	0.0%
27	0.04%
32	0.04%
37	0.04%
42	0.16%
47	0.40%
52	0.71%
57	1.00%
60	1.44%
62	0.00%

8. Annual rate of other employment termination assumptions:

<b>Service</b>	<b>Rate</b>
0-1	35%
1-2	27%
2-3	18%
3-4	14%
4-6	11%
6-7	10%
7-8	9%
8-9	8%
9-10	7%
10-12	6%

12-14	5%
14-15	4.5%
15 +	3%

No terminations are assumed after age 50 with 5 years of service for either male or female.

9. Probability of electing a refund of member contributions upon termination assumptions:

Age at Termination	Non-vested	Vested
Under 35	100%	60%
35-39	100%	50%
40-44	100%	45%
45-49	100%	35%
50+	100%	30%

## B. Judges' Retirement System

1. **Mortality Assumption among contributing members:** PUB 2010 General Amount Weighted Employee Mortality Table projected to 2021 for males and females. Projected generationally using MP-2021.
2. **Mortality Assumption among disabled members:** PUB 2010 General Amount Weighted Disabled Retiree Mortality Table projected to 2021 with ages set forward 1 year for males and females.
3. **Mortality Assumption among beneficiaries:** PUB 2010 General Amount Weighted Contingent Survivor Mortality Table projected to 2021 with ages set forward 1 year for males and females. Projected generationally using MP-2021.
4. **Mortality Assumption among service retired members:** PUB 2010 General Amount Weighted Healthy Retiree Mortality Table projected to 2021 with ages set forward 1 year and adjusted 104% for males and 103% for females. Projected generationally using MP-2021.
5. Merit salary increase assumptions – 0% for all years of service.

6. Annual retirement rate assumptions:

<b>Age</b>	<b>Rate</b>
60-64	10%
65-69	20%
70 & Over	100%

Vested terminations are assumed to retire at their earliest unreduced eligibility.

7. Annual rate of disablement assumptions:

<b>Age</b>	<b>Rate</b>
22	0.0%
27	0.04%
32	0.04%
37	0.04%
42	0.16%
47	0.40%
52	0.71%
57	1.00%
60	1.44%
62	0.0%

10% of disabilities are assumed to be duty-related and 90% are assumed to be non-duty related.

8. Annual rate of other employment terminations assumptions for all members – 0% for all years of service.

9. Probability of electing a refund of member contributions upon termination assumptions:

<b>Age at Termination</b>	<b>Non-vested</b>	<b>Vested</b>
Under 35	100%	0%
35-39	100%	0%
40-44	100%	0%
45-49	100%	0%
50+	100%	0%

## C. Highway Patrol Officers' Retirement System

1. **Mortality Assumption among contributing members:** PUB 2010 Safety Amount Weighted Employee Mortality Table projected to 2021 for males and females. Projected generationally using MP-2021.
2. **Mortality Assumption among disabled members:** PUB 2010 Safety Amount Weighted Disabled Retiree Mortality Table projected to 2021, set forward one year for males
3. **Mortality Assumption among beneficiaries:** PUB 2010 Safety Amount Weighted Contingent Survivor Mortality Table projected to 2021, set forward one year for males. Projected generationally using MP-2021.
4. **Mortality Assumption among service retired members:** PUB 2010 Safety Amount Weighted Healthy Retiree Mortality Table projected to 2021, set forward one year for males and adjusted 105% for males and 100% for females. Projected generationally using MP-2021.
5. Merit salary increase assumptions:

Years of Service	Annual Increase
0-1	6.4%
1-2	4.7%
2-3	3.6%
3-4	2.7%
4-5	2.0%
5-6	1.4%
6 and Over	1.0%

6. Annual retirement rate assumptions:

Age	Less than 26 years of service	26 or more years of service
<50	35%	55%
50-54	35%	55%
55-59	35%	55%
60+	35%	100%

Vested terminations are assumed to retire at their earliest unreduced eligibility.

7. Annual rate of disablement assumptions:

<b>Age</b>	<b>Rate</b>
22	0.0%
27	1.1%
32	1.1%
37	1.1%
42	3.7%
47	3.7%
52	3.7%
57	3.6%
62	0.00%

Seventy-five percent of all disabilities are assumed to be duty-related.

8. Annual rate of other employment terminations assumptions for all members:

<b>Service</b>	<b>Rate</b>
0-1	12%
1-4	7.5%
4-10	5%
10-15	3%
15+	1%

9. Probability of electing a refund of member contributions upon termination assumptions:

<b>Age at Termination</b>	<b>Non-vested</b>	<b>Vested</b>
Under 35	100%	40%
35-39	100%	40%
40-44	100%	40%
45-49	100%	30%
50+	100%	-

10. Seventy percent of deaths are assumed to be duty related.

11. DROP account assumptions: DROP accounts are assumed to earn the actuarial rate of return. 50% of all active members are assumed to elect to enter the DROP for each of the first six years following DROP eligibility. These members are assumed to elect to participate in the DROP plan for five years or until age 60 if earlier. Members who have elected to participate in the DROP are assumed to remain in the DROP until the end of the DROP period elected, unless they die or become disabled while in the DROP.

#### D. Sheriffs' Retirement System

1. **Mortality Assumption among contributing members:** PUB 2010 Safety Amount Weighted Employee Mortality Table projected to 2021 for males and females. Projected generationally using MP-2021.
2. **Mortality Assumption among disabled members:** PUB 2010 Safety Amount Weighted Disabled Retiree Mortality Table projected to 2021, set forward one year for males
3. **Mortality Assumption among beneficiaries:** PUB 2010 Safety Amount Weighted Contingent Survivor Mortality Table projected to 2021, set forward one year for males. Projected generationally using MP-2021.
4. **Mortality Assumption among service retired members:** PUB 2010 Safety Amount Weighted Healthy Retiree Mortality Table projected to 2021, set forward one year for males and adjusted 105% for males and 100% for females. Projected generationally using MP-2021.
5. Merit salary increase assumptions:

Years of Service	Annual Increase
0-1	6.4%
1-2	4.7%
2-3	3.6%
3-4	2.7%
4-5	2.0%
5-6	1.4%
6 +	1.0%

6. Annual retirement rate assumptions:

Age	With 20 Years of Service
<55	19%
55-59	29%
60-64	29%
65+	100%

Vested terminations are assumed to retire at their earliest unreduced eligibility.

7. Annual rate of disablement assumptions:

<b>Age</b>	<b>Rate</b>
22	0.0%
27	1.1%
32	1.1%
37	1.1%
42	3.7%
47	3.7%
52	3.7%
57	3.6%
62	0.00%

Seventy-five percent of all disabilities are assumed to be duty related.

8. Annual rate of other employment termination assumptions for all members:

<b>Service</b>	<b>Rate</b>
0-1	24%
1-2	21%
2-3	18%
3-4	16%
4-5	14%
5-6	12%
6-7	10%
7-8	9%
8-10	8%
10-13	7%
13-15	6%
15+	5%

9. Probability of electing a refund of member contributions upon termination assumptions:

<b>Age at Termination</b>	<b>Non-vested</b>	<b>Vested</b>
Under 35	100%	70%
35-39	100%	60%
40-44	100%	50%
45-49	100%	40%
50+	100%	-

10. Ten percent of all member deaths are assumed to be duty-related.

## E. Game Wardens' and Peace Officers' Retirement System

1. **Mortality Assumption among contributing members:** PUB 2010 Safety Amount Weighted Employee Mortality Table projected to 2021 for males and females. Projected generationally using MP-2021.
2. **Mortality Assumption among disabled members:** PUB 2010 Safety Amount Weighted Disabled Retiree Mortality Table projected to 2021, set forward one year for males
3. **Mortality Assumption among beneficiaries:** PUB 2010 Safety Amount Weighted Contingent Survivor Mortality Table projected to 2021, set forward one year for males. Projected generationally using MP-2021.
4. **Mortality Assumption among service retired members:** PUB 2010 Safety Amount Weighted Healthy Retiree Mortality Table projected to 2021, set forward one year for males and adjusted 105% for males and 100% for females. Projected generationally using MP-2021.
5. Merit salary increase assumptions:

Years of Service	Annual Increase
0-1	6.4%
1-2	4.7%
2-3	3.6%
3-4	2.7%
4-5	2.0%
5-6	1.4%
6+	1.0%

6. Annual retirement rate assumptions:

Age	Age 55 with 5 Years of Service	Age 55 with 20 Years of Service
<50	N/A	0%
50-54	N/A	15%
55	15%	18%
56-59	5%	18%
60	15%	18%
61	15%	41%
62	40%	50%
63	15%	35%
64	15%	20%
65+	100%	100%

Vested terminations are assumed to retire at their earliest unreduced eligibility.

7. Annual rate of disablement assumptions:

<b>Age</b>	<b>Rate</b>
22	0.0%
27	0.11%
32	0.11%
37	0.11%
42	0.37%
47	0.37%
52	0.37%
57	0.36%
62	0.00%

Seventy-five percent of all disabilities are assumed to be duty-related.

8. Annual rate of other employment termination assumptions for all members:

<b>Service</b>	<b>Rate</b>
0-1	30%
1-2	23%
2-3	17%
3-5	13%
5-6	9.3%
6-9	8.8%
10-11	7.5%
11-13	5.0%
13-14	4%
14 and Over	3%

9. Probability of electing a refund of member contributions upon termination assumptions:

<b>Age at Termination</b>	<b>Non-vested</b>	<b>Vested</b>
Under 35	100%	70%
35-39	100%	60%
40-44	100%	50%
45-49	100%	40%
50+	100%	-

Ten percent of all member deaths are assumed to be duty-related.

## F. Municipal Police Officers' Retirement System

1. **Mortality Assumption among contributing members:** PUB 2010 Safety Amount Weighted Employee Mortality Table projected to 2021 for males and females. Projected generationally using MP-2021.
2. **Mortality Assumption among disabled members:** PUB 2010 Safety Amount Weighted Disabled Retiree Mortality Table projected to 2021, set forward one year for males
3. **Mortality Assumption among beneficiaries:** PUB 2010 Safety Amount Weighted Contingent Survivor Mortality Table projected to 2021, set forward one year for males. Projected generationally using MP-2021.
4. **Mortality Assumption among service retired members:** PUB 2010 Safety Amount Weighted Healthy Retiree Mortality Table projected to 2021, set forward one year for males and adjusted 105% for males and 100% for females. Projected generationally using MP-2021.
5. Merit salary increase assumptions:

Years of Service	Annual Increase
0-1	6.4%
1-2	4.7%
2-3	3.6%
3-4	2.7%
4-5	2.0%
5-6	1.4%
6 and Over	1.0%

6. Annual retirement rate assumptions:

Age	Less than 26 Years of Service	26 or More Years of Service
<50	26%	42%
50-54	26%	42%
55-61	26%	42%
62-64	26%	42%
65+	100%	100%

Vested terminations are assumed to retire at their earliest unreduced eligibility.

7. Annual rate of disablement assumptions:

<b>Age</b>	<b>Rate</b>
22	0.0%
27	0.11%
32	0.11%
37	0.11%
42	0.37%
47	0.37%
52	0.37%
57	0.36%
62	0.00%

8. Annual rate of other employment termination assumptions for all members:

<b>Service</b>	<b>Rate</b>
0-1	16%
1-2	13%
2-3	10%
3-4	8%
4-8	7%
8-12	5%
12-13	3%
13 and Over	2%

9. Probability of electing a refund of member contributions upon termination assumptions:

<b>Age at Termination</b>	<b>Non-vested</b>	<b>Vested</b>
Under 35	100%	60%
35-39	100%	10%
40-44	100%	10%
45-49	100%	10%
50+	100%	-

10. DROP account assumptions: DROP accounts are assumed to earn the actuarial rate of return. 50% of all active members are assumed to elect to enter the DROP for each of the first six years following DROP eligibility. These members are assumed to elect to participate in the DROP plan for five years or until age 60 if earlier. Members who have elected to participate in the DROP are assumed to remain in the DROP until

the end of the DROP period elected, unless they die or become disabled while in the DROP.

## G. Firefighters' Unified Retirement System

1. **Mortality Assumption among contributing members:** PUB 2010 Safety Amount Weighted Employee Mortality Table projected to 2021 for males and females. Projected generationally using MP-2021.
2. **Mortality Assumption among disabled members:** PUB 2010 Safety Amount Weighted Disabled Retiree Mortality Table projected to 2021, set forward one year for males
3. **Mortality Assumption among beneficiaries:** PUB 2010 Safety Amount Weighted Contingent Survivor Mortality Table projected to 2021, set forward one year for males. Projected generationally using MP-2021.
4. **Mortality Assumption among service retired members:** PUB 2010 Safety Amount Weighted Healthy Retiree Mortality Table projected to 2021, set forward one year for males and adjusted 105% for males and 100% for females. Projected generationally using MP-2021.
5. Merit salary increase assumptions:

Years of Service	Annual Increase
0-1	6.4%
1-2	4.7%
2-3	3.6%
3-4	2.7%
4-5	2.0%
5-6	1.4%
6+	1.0%

6. Annual retirement rate assumptions:

Age	With 20 Years of Service
<50	16%
50-54	16%
55-60	25%
61-62	40%
63+	100%

Vested terminations are assumed to retire at their earliest unreduced eligibility.

7. Annual rate of disablement assumptions:

<b>Age</b>	<b>Rate</b>
22	0.0%
27	0.11%
32	0.11%
37	0.11%
42	0.37%
47	0.37%
52	0.37%
57	0.36%
62	0.00%

8. Annual rate of other employment termination assumptions for all members:

<b>Service</b>	<b>Rate</b>
0-1	9.0%
1-2	7%
2-3	5%
3-4	4%
4-5	3%
5-12	2%
12+	1%

9. Probability of electing a refund of member contributions upon termination assumptions:

<b>Age at Termination</b>	<b>Non-vested</b>	<b>Vested</b>
Under 35	100%	50%
35-39	100%	20%
40-44	100%	20%
45-49	100%	20%
50+	100%	-

## H. Volunteer Firefighters' Compensation Act

1. **Mortality Assumption among contributing members:** PUB 2010 Safety Amount Weighted Employee Mortality Table projected to 2021 for males and females. Projected generationally using MP-2021.
2. **Mortality Assumption among disabled members:** PUB 2010 Safety Amount Weighted Disabled Retiree Mortality Table projected to 2021, set forward one year for males
3. **Mortality Assumption among beneficiaries:** PUB 2010 Safety Amount Weighted Contingent Survivor Mortality Table projected to 2021, set forward one year for males. Projected generationally using MP-2021.
4. **Mortality Assumption among service retired members:** PUB 2010 Safety Amount Weighted Healthy Retiree Mortality Table projected to 2021, set forward one year for males and adjusted 105% for males and 100% for females. Projected generationally using MP-2021.
5. Annual retirement rate assumptions:

<b>Age</b>	<b>10-19 Years Service</b>	<b>20 Years service</b>
<55	0%	0%
55-59	0%	32%
60-69	20%	32%
70+	100%	100%

All vested terminated members are assumed to retire when first eligible for an unreduced benefit.

6. Annual rate of other employment termination assumptions:

<b>Service</b>	<b>Rate</b>
0-6	30%
6-8	25%
8-9	21%
9-10	17%
10-26	13%
26+	10%

**V. SYSTEM-SPECIFIC ACTUARILY EQUIVALENT AND ACTUARIAL COST FACTORS.**

The Board adopts the following appended tables:

**A. Public Employees' Retirement System**

**Early Retirement Factors**

1. [TABLE](#): Actuarially Equivalent Early Retirement Factors for PERS members hired prior to July 1, 2007
2. [TABLE](#): Actuarially Equivalent Early Retirement for PERS members hired on or after July 1, 2007 and prior to July 1, 2013
3. [TABLE](#): Actuarially Equivalent Early Retirement Factors for PERS members hired on or after July 1, 2013

**Actuarial Cost Service Purchase Factors**

4. [TABLE](#): Actuarial Cost for Service Purchase for PERS members hired prior to July 1, 2011 and receiving 3% GABA
5. [TABLE](#): Actuarial Cost for Service Purchase for PERS members hired prior to July 1, 2011 and receiving 1.5% GABA
6. [TABLE](#): Actuarial Cost for Service Purchase for PERS members hired after July 1, 2011 and receiving 1.5% GABA
7. [TABLE](#): Actuarial Cost for Service Purchase for PERS members hired after July 1, 2011 and receiving 0%-1.5% GABA

**Optional Service Retirement Benefit Factors**

Option 2

8. [TABLE](#): PERS members hired prior to July 1, 2007
9. [TABLE](#): PERS members hired on or after July 1, 2007 and prior to July 1, 2013
10. [TABLE](#): PERS members hired on or after July 1, 2013

### Option 3

11. [TABLE](#): PERS members hired prior to July 1, 2007
12. [TABLE](#): PERS members hired on or after July 1, 2007 and prior to July 1, 2013
13. [TABLE](#): PERS members hired on or after July 1, 2013

### Option 4

14. [TABLE](#): PERS members hired prior to July 1, 2007
15. [TABLE](#): PERS members hired on or after July 1, 2007 and prior to July 1, 2013
16. [TABLE](#): PERS members hired after on or after July 1, 2013

## **Money Purchase Benefit**

17. [TABLE](#): Money Purchase Factor Table for PERS members hired prior to July 1, 2007
18. [TABLE](#): Money Purchase Factor Table PERS members hired on or after July 1, 2007 and prior to July 1, 2013
19. [TABLE](#): Money Purchase Factor Table PERS members hired on or after July 1, 2013

## **Death Benefit Factors**

### **Death Annuity**

20. [TABLE](#): Optional Non-Increasing Death Annuity (No GABA)

### **Survivorship Benefit**

21. [TABLE](#): Survivorship Benefit for PERS members hired prior to July 1, 2011 and receiving a 3% GABA
22. [TABLE](#): Survivorship Benefit for PERS members hired prior to July 1, 2011 and receiving a 1.5% GABA
23. [TABLE](#): Survivorship Benefit for PERS members hired on or after July 1, 2011 and receiving a 1.5% GABA

24. [TABLE](#): Survivorship Benefit for PERS members hired on or after July 1, 2011 and receiving a 0-1.5% GABA

## B. Judges' Retirement System

### Involuntary Retirement Factors

25. [TABLE](#): Actuarially Equivalent Factors for JRS members involuntarily removed from service after completing 5 years of membership service but before reaching normal retirement age or discontinued from service after completing 12 years of service credit but before reaching normal retirement age – 3% GABA

26. [TABLE](#): Actuarially Equivalent Factors for JRS members involuntarily removed from service after completing 5 years of membership service but before reaching normal retirement age or discontinued from service after completing 12 years of service credit but before reaching normal retirement age – NO GABA – 3.5% Salary Inflation

### Actuarial Cost Service Purchase Factors

27. [TABLE](#): Actuarial Cost for Service Purchase for JRS members receiving 3% GABA; and

28. [TABLE](#): Actuarial Cost for Service Purchase for JRS members with no GABA Coverage – 3.5% Salary Inflation.

### Optional Service Retirement Benefit Factors

#### Option 2

29. [TABLE](#): JRS members receiving 3% GABA; and

30. [TABLE](#): JRS members with no GABA Coverage – 3.5% Salary Inflation.

#### Option 3

31. [TABLE](#): JRS members receiving 3% GABA; and

32. [TABLE](#): JRS members with no GABA Coverage – 3.5% Salary Inflation.

#### Option 4

33. [TABLE](#): JRS members receiving 3% GABA; and

34. [TABLE](#): JRS members with no GABA Coverage – 3.5% Salary Inflation.

## **Non-duty related Disability Factors**

35. [TABLE](#): JRS members receiving 3% GABA; and
36. [TABLE](#): JRS members with no GABA Coverage – 3.5% Salary Inflation.

## **Death Benefit Factors**

37. [TABLE](#): Death from Other than Employment Survivorship Benefit – GABA 3%
38. [TABLE](#): Death from Other than Employment Survivorship Benefit – NO GABA – 3.5% Salary Inflation

## **C. Highway Patrol Officers' Retirement System**

### **Early Retirement Factors**

39. [TABLE](#): Actuarially Equivalent Early Retirement Factors For HPORS members hired prior to July 1, 2013
40. [TABLE](#): Actuarially Equivalent Early Retirement Factors For HPORS members hired prior to July 1, 2013 and not electing GABA – 3.5% salary inflation
41. [TABLE](#): Actuarially Equivalent Early Retirement Factors for HPORS members hired on or after July 1, 2013

### **Actuarial Cost Service Purchase Factors**

42. [TABLE](#): Actuarial Cost for Service Purchase for HPORS members hired prior to July 1, 2013
43. [TABLE](#): Actuarial Cost for Service Purchase for HPORS members hired prior to July 1, 2013 and not electing GABA – 3.5% salary inflation
44. [TABLE](#): Actuarial Cost for Service Purchases for HPORS members hired on or after July 1, 2013

## **Non-duty related Disability Factors**

45. [TABLE](#): HPORS members hired prior to July 1, 2013
46. [TABLE](#): HPORS members hired prior to July 1, 2013 and not receiving GABA – 3.5% salary inflation

47. [TABLE](#): HPORS members hired on or after July 1, 2013

### **Non-Duty Death Survivorship Benefit Factors**

48. [TABLE](#): HPORS members hired prior to July 1, 2013

49. [TABLE](#): HPORS members hired prior to July 1, 2013 and not receiving GABA – 3.5% salary inflation

50. [TABLE](#): HPORS members hired on or after July 1, 2013

## **D. Sheriffs' Retirement System**

### **Early Retirement Factors**

51. [TABLE](#): Actuarially Equivalent Early Retirement Factors for SRS members hired prior to July 1, 2007

52. [TABLE](#): Actuarially Equivalent Early Retirement Factors for SRS members hired on or after July 1, 2007

### **Actuarial Cost Service Purchase Factors**

53. [TABLE](#): Actuarial Cost for Service Purchase for SRS members hired prior to July 1, 2007

54. [TABLE](#): Actuarial Cost for Service Purchase for SRS members hired on or after July 1, 2007 and prior to July 1, 2011

55. [TABLE](#): Actuarial Cost for Service Purchase for SRS members hired on or after July 1, 2011

### **Optional Service Retirement Benefit Factors**

#### Option 2

56. [TABLE](#): SRS members hired prior to July 1, 2007

57. [TABLE](#): SRS members hired on or after July 1, 2007

#### Option 3

58. [TABLE](#): SRS members hired prior to July 1, 2007

59. [TABLE](#): SRS members hired on or after July 1, 2007

#### Option 4

60. [TABLE](#): SRS members hired prior to July 1, 2007
61. [TABLE](#): SRS members hired on or after July 1, 2007

#### **Non-duty related Disability Factors**

62. [TABLE](#): SRS members hired prior to July 1, 2007
63. [TABLE](#): SRS members hired on or after July 1, 2007

#### **Death Benefit Factors**

64. [TABLE](#): Death Before Retirement Benefit for SRS members hired prior to July 1, 2007
65. [TABLE](#): Death Before Retirement Benefit for SRS members hired on or after July 1, 2007

### **E. Game Wardens' and Peace Officers' Retirement System**

#### **Actuarial Cost Service Purchase Factors**

66. [TABLE](#): Actuarial Cost for Service Purchase for GWPORS members hired prior to July 1, 2007
67. [TABLE](#): Actuarial Cost for Service Purchase for GWPORS members hired on or after July 1, 2007 and prior to July 1, 2011
68. [TABLE](#): Actuarial Cost for Service Purchase for GWPORS members hired on or after July 1, 2011

#### **Optional Service Retirement Benefit Factors**

#### Option 2

69. [TABLE](#): GWPORS members hired prior to July 1, 2007
70. [TABLE](#): GWPORS members hired on or after July 1, 2007

### Option 3

71. [TABLE](#): GWPORS members hired prior to July 1, 2007
72. [TABLE](#): GWPORS members hired on or after July 1, 2007

### Option 4

73. [TABLE](#): GWPORS members hired prior to July 1, 2007
74. [TABLE](#): GWPORS members hired on or after July 1, 2007

### **Non-Duty Related Disability Factors**

75. [TABLE](#): GWPORS members hired prior to July 1, 2007
76. [TABLE](#): GWPORS members hired on or after July 1, 2007

### **Death Benefit Factors**

77. [TABLE](#): Death Before Retirement Benefit of GWPORS members hired prior to July 1, 2007
78. [TABLE](#): Death Before Retirement Benefit of GWPORS members hired on or after July 1, 2007

## **F. Municipal Police Officers' Retirement System**

### **Actuarial Cost Service Purchase Factors**

79. [TABLE](#): Actuarial Cost for Service Purchase for MPORS members hired prior to July 1, 1997 and electing to be covered by GABA
80. [TABLE](#): Actuarial Cost for Service Purchase for MPORS members hired prior to July 1, 1997 and not receiving GABA – 3.5% salary inflation
81. [TABLE](#): Actuarial Cost for Service Purchase for MPORS members hired on or after July 1, 1997

## **G. Firefighters' Unified Retirement System**

### **Actuarial Cost Service Purchase Factors**

82. [TABLE](#): Actuarial Cost for Service Purchase for FURS members hired prior to July 1, 1997 and electing to be covered by GABA
83. [TABLE](#): Actuarial Cost for Service Purchase for FURS members hired prior to July 1, 1997 and not receiving GABA – 3.5% salary inflation
84. [TABLE](#): Actuarial Cost for Service Purchase for FURS members hired on or after July 1, 1997

## **VI. CROSS REFERENCE GUIDE**

The following laws, rules or policies may contain provisions that pertain to the actuarial valuation assumptions relied on by the Board. The list should not be considered exhaustive - other policies may apply.

Article VIII, § 15, Montana Constitution  
§ 19-2-403, MCA

## **VII. HISTORY**

Board Admin 09 Actuarial Assumptions and Methods  
Originally Approved February 14, 2008  
Amended June 10, 2010  
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