

MONTANA PUBLIC EMPLOYEES' RETIREMENT BOARD

TITLE: ACTUARIAL VALUATION ASSUMPTIONS AND METHODS

POLICY: BOARD Admin 09

EFFECTIVE DATE: July 1December 8, 20174

- I. **POLICY AND OBJECTIVES.**—The objectives of this policy ~~are is~~ to adopt appropriate actuarial assumptions, ~~and methods, and factors to conduct for~~ 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.~~the Board administers.~~
- II. **APPLICABILITY.** This policy applies to all defined benefit retirement systems administered by the Board.
- III. **UNIVERSAL ASSUMPTIONS FOR ACTUARIAL VALUATIONS.** Based on the 20~~17~~⁰⁹ 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.~~6~~⁷5%;
 - B. General wage increase assumption – ~~34.5~~³0%;
 - C. Adopted price inflation – 2.75%;
 - D. Assumed interest on member contributions – 2.75%;
 - ~~E.~~ G. Actuarial cost method – entry age cost;
 - ~~F.~~ D. Asset valuation method – 4-year smoothed market;
 - ~~E.~~ G. 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; and.
 - ~~F.~~ H. Mortality assumption among contributing members, terminated vested members, service retired members and beneficiaries: -RP-2000 Combined Employee and Annuitant Healthy ~~Male and Female~~ Mortality Tables projected to 20~~20~~¹⁵ with scale BB, set back one year for males~~AA~~. Mortality assumption among disabled members: ~~—~~RP-2000

Combined Healthy Male and Female Mortality tables with no projections.

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

A. Public Employees' Retirement System

~~1. Assumed interest on member contributions — 3.5%;~~

~~2.1.~~ Merit salary increase assumptions:

<u>Years of Service</u>	<u>Annual Increase</u>
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%

<u>Years of Service</u>	<u>Annual Increase</u>
1	6.00%
2	4.90
3	3.90
4	3.10
5	2.40
6	1.80
7	1.40
8	1.00
9	0.70
10	0.50
11-15	0.30
16-20	0.10
21 and over	0.00

~~23.~~ Annual retirement rate assumptions:

<u>Age</u>	<u>30+ Years Service and Age 60 with 25 Years</u>	<u>Other Retirements</u>
<50	10%	0%
50-54	10%	3%
55	15%	3%
56	15%	4%

57	15%	5%
58	15%	5%
59	15%	6%
60	15%	8%
61	15%	15%
62	25%	25%
63	15%	15%
64	15%	15%
65	30%	30%
66	30%	30%
67	25%	25%
68	25%	25%
69	25%	25%
70+	100%	100%

34. Annual rate of disablement assumptions:

Age	Rate
22	0.0% -
27	0.01% 0%
32	0.01%
37	0.04%
42	0.10%
47	0.13%
52	0.25%
57	0.36%
<u>60</u>	<u>0.00%</u>
62	0.00%

45. Annual rate of other employment termination assumptions:

Service	Rate
<u>0-1</u>	<u>30</u> 25 %
<u>1-2</u>	<u>22.5</u> 20 %
<u>2-3</u>	15%
<u>3-4</u>	<u>12.5</u> 10 %
<u>4-6</u>	10%
<u>6-75-9</u>	<u>8</u> 5 %
<u>7-1110-</u>	<u>6</u> 5 %

14	
<u>11-15+</u>	<u>4%2</u>
<u>15 +</u>	<u>2%</u>

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

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

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

B. Judges' Retirement System

~~1. Assumed interest on member contributions – 3.5%;~~

12. Merit salary increase assumptions – 0% for all years of service.;

23. Annual retirement rate assumptions:

Age	Rate
60	15%
61-64	<u>5%</u>
65	<u>15%</u>
66-69	<u>5%</u>
70+	100%

_____ ~~All v~~Vested terminations are assumed to retire ~~when first eligible for an~~ at their earliest at their earliest unreduced ~~benefit~~eligibility.;

34. Annual rate of disablement assumptions:

Age	Rate
22	0.0%
27	0.0%
32	0.01%
37	0.04%
42	0.10%
47	0.13%
52	0.25%
57	0.36%
<u>60</u>	<u>0.0%</u>
62	0.0%

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

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

56. Probability of electing a refund of member contributions upon termination assumptions: ~~—0%;~~

<u>Age at Termination</u>	<u>Non-vested</u>	<u>Vested</u>
<u>Under 35</u>	<u>100%</u>	<u>70%</u>
<u>35-39</u>	<u>100%</u>	<u>60%</u>
<u>40-44</u>	<u>100%</u>	<u>50%</u>
<u>45-49</u>	<u>100%</u>	<u>40%</u>
<u>50+</u>	<u>100%</u>	<u>0%</u>

C. Highway Patrol Officers’ Retirement System

~~1. Assumed interest on member contributions – 3.5%;~~

12. Merit salary increase assumptions:

Years of	Annual
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Service	Increase
<u>0-1</u>	<u>67.3%</u>
<u>1-2</u>	<u>45.7%</u> ⁶
<u>2-3</u>	<u>34.5%</u> ⁴
<u>3-4</u>	<u>23.7%</u> ⁵
<u>4-5</u>	<u>2.0%</u> ⁸
<u>5-6</u>	<u>12.4%</u> ²
<u>6-7</u>	<u>04.9%</u> ⁷
<u>7-8</u>	<u>04.5%</u> ³
<u>8-9</u>	<u>04.2%</u> ⁰
<u>9+10</u>	<u>0.0%</u> ⁷

23. Annual retirement rate assumptions:

Age	With 20 Years of Service
<50	12%
50-54	<u>16%</u>
55-59	<u>20%</u>
60+	<u>100%</u>

Vested terminations are assumed to retire at their earliest unreduced eligibility. All vested terminated members are assumed to retire when first eligible for an unreduced benefit.

34. Annual rate of disablement assumptions:

Age	Rate
<u>22</u>	<u>0.0%</u>
<u>27</u>	<u>0.10%</u>
<u>32</u>	<u>0.10%</u>
<u>37</u>	<u>0.10%</u>
<u>42</u>	<u>0.40%</u>
<u>47</u>	<u>0.40%</u>
<u>52</u>	<u>0.40%</u>
<u>57</u>	<u>0.40%</u>
<u>62</u>	<u>0.00%</u>

Age	Rate
<u>22</u>	<u>-</u>
<u>27</u>	<u>0.10%</u>
<u>32</u>	<u>0.10</u>
<u>37</u>	<u>0.10</u>
<u>42</u>	<u>0.40</u>
<u>47</u>	<u>0.40</u>
<u>52</u>	<u>0.40</u>
<u>57</u>	<u>0.40</u>
<u>62</u>	<u>0.00</u>

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

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

Service	Rate
<u>0-1</u>	12%
<u>1-45</u>	<u>7.5%</u>
<u>45-109</u>	<u>5%</u>
<u>10-154</u>	<u>3%</u>
15+	<u>1%</u>

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

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

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

7. DROP account assumptions: DROP accounts are assumed to earn the actuarial rate of return. 15% 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. Assumed interest on member contributions — 3.5%;~~

12. Merit salary increase assumptions:

Years of Service	Annual Increase
0-1	67.3%
1-2	45.7% ⁶
2-3	34.5% ⁴
3-4	23.7% ⁵
4-5	2.0% ⁸
5-6	12.4% ²
6-7	04.9% ⁷
7-8	04.5% ³
8-9	04.2% ⁰
9+10	0.0% ⁷

23. Annual retirement rate assumptions:

Age	With 20 Years of Service
<50	10%
55-59	15%
60-64	20%
65+	100%

~~Vested terminations are assumed to retire at their earliest unreduced eligibility. All vested terminated members are assumed to retire when first eligible for an unreduced benefit.~~

34. Annual rate of disablement assumptions:

Age	Rate
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22	0.0%
27	0.10%
32	0.10%
37	0.10%
42	0.40%
47	0.40%
52	0.40%
57	0.40%
62	0.00%

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

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

Service	Rate
0-1	25%
1-2	17%
2-3	15%
3-4	13%
4-5	11%
5-89	9%
8 10-114	5%
11-15+	42%
15+	3%

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

Age at Termination	Non-vested	Vested
Under 35	100%	70%
35-39	100%	60%
40-44	100%	50%

45-49	100%	40%
50+	100%	-

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

E. Game Wardens' and Peace Officers' Retirement System

1. Assumed interest on member contributions — 3.5%;

12. Merit salary increase assumptions:

Years of Service	Annual Increase
<u>0-1</u>	<u>6.3%</u>
<u>1-2</u>	<u>4.7%5.6</u>
<u>2-3</u>	<u>3.5%4.4</u>
<u>3-4</u>	<u>2.7%3.5</u>
<u>4-5</u>	<u>2.0%2.8</u>
<u>5-6</u>	<u>1.4%2.2</u>
<u>6-7</u>	<u>0.9%1.7</u>
<u>7-8</u>	<u>0.5%1.3</u>
<u>8-9</u>	<u>0.2%1.0</u>
<u>9+10</u>	<u>0.0%</u>

23. Annual retirement rate assumptions:

Age	Age 55 with 5 Years of Service	<u>Age 55 w</u> With 20 Years of Service
<50	<u>N/A</u>	0%
50-54	<u>N/A</u>	15%
55	15%	25%
56-59	5%	25%
60-61	15%	15%
62	40%	40%
<u>63-64</u>	<u>15%</u>	<u>15%</u>
65+	<u>100%</u>	<u>100%</u>

~~Vested terminations are assumed to retire at their earliest unreduced eligibility. All vested terminated members are assumed to retire when first eligible for an unreduced benefit.~~

34. Annual rate of disablement assumptions:

Age	Rate
22	0.0%
27	0.10%
32	0.10%
37	0.10%
42	0.40%
47	0.40%
52	0.40%
57	0.40%
62	0.00%

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

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

Service	Rate
0-1	27.5%
1-2	22.5%
2-3	18%
3-5	13%
5-104	7.5%
10-15 5-9	4%
15-20 10-44	3%
20 15+	2%

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

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

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

F. Municipal Police Officers' Retirement System

~~1.~~ ~~Assumed interest on member contributions — 3.5%;~~

12. Merit salary increase assumptions:

<u>Years of Service</u>	<u>Annual Increase</u>
<u>0-1</u>	<u>6.6%</u>
<u>1-2</u>	<u>4.9%</u>
<u>2-3</u>	<u>3.7%</u>
<u>3-4</u>	<u>2.8%</u>
<u>4-5</u>	<u>2.1%</u>
<u>5-6</u>	<u>1.5%</u>
<u>6-7</u>	<u>1.0%</u>
<u>7-8</u>	<u>0.6%</u>
<u>8-9</u>	<u>0.2%</u>
<u>9+</u>	<u>0.0%</u>

<u>Years of Service</u>	<u>Annual Increase</u>
<u>1</u>	<u>7.3%</u>
<u>2</u>	<u>5.6</u>
<u>3</u>	<u>4.4</u>
<u>4</u>	<u>3.5</u>
<u>5</u>	<u>2.8</u>
<u>6</u>	<u>2.2</u>
<u>7</u>	<u>1.7</u>
<u>8</u>	<u>1.3</u>
<u>9</u>	<u>1.0</u>
<u>10</u>	<u>0.7</u>

~~3-2.~~ Annual retirement rate assumptions:

Age	<u>Less than 20 Years of</u>	<u>With 20 or More Years of</u>
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	<u>Service</u>	Service
<50	<u>0%</u>	12%
50-54	<u>0%</u>	15%
55-61	<u>0%</u>	20%
62-64+	<u>0%</u>	100%
<u>65+</u>	<u>100%</u>	<u>100%</u>

Vested terminations are assumed to retire at their earliest unreduced eligibility. All vested terminated members are assumed to retire when first eligible for an unreduced benefit.

34. Annual rate of disablement assumptions:

Age	Rate
22	<u>0.0%-</u>
27	0.25%
32	<u>0.25%</u>
37	<u>0.50%25</u>
42	<u>0.50%</u>
47	<u>0.50%</u>
52	<u>0.50%</u>
57	<u>0.50%</u>
62	<u>0.00%</u>

5.

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

Service	Rate
<u>0-1</u>	<u>16%</u>
<u>1-2</u>	<u>13%</u>
<u>2-3</u>	<u>11%</u>
<u>3-4</u>	<u>9%</u>
<u>4-8</u>	<u>7%</u>
<u>8-10</u>	<u>5%</u>

<u>10+</u>	<u>2%</u>
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Service	Rate
0	15%
1	10
2	10
3	10
4	10
5-9	5
10-14	2

~~5.~~

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

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

67. DROP account assumptions: DROP accounts are assumed to earn the actuarial rate of return. 15% 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. Assumed interest on member contributions — 3.5%;~~

12. Merit salary increase assumptions:

<u>Years of Service</u>	<u>Annual Increase</u>
<u>0-1</u>	<u>6.3%</u>
<u>1-2</u>	<u>4.7%</u>
<u>2-3</u>	<u>3.5%</u>
<u>3-4</u>	<u>2.7%</u>
<u>4-5</u>	<u>2.0%</u>
<u>5-6</u>	<u>1.4%</u>
<u>6-7</u>	<u>0.9%</u>
<u>7-8</u>	<u>0.5%</u>
<u>8-9</u>	<u>0.2%</u>
<u>9+</u>	<u>0.0%</u>

<u>Years of Service</u>	<u>Annual Increase</u>
<u>1</u>	<u>7.3%</u>
<u>2</u>	<u>5.6</u>
<u>3</u>	<u>4.4</u>
<u>4</u>	<u>3.5</u>
<u>5</u>	<u>2.8</u>
<u>6</u>	<u>2.2</u>
<u>7</u>	<u>1.7</u>
<u>8</u>	<u>1.3</u>
<u>9</u>	<u>1.0</u>
<u>10</u>	<u>0.7</u>

~~3.~~

2. Annual retirement rate assumptions:

<u>Age</u>	<u>With 20 Years of Service</u>
<u><50</u>	<u>5%</u>
<u>50-54</u>	<u>10%</u>
<u>55-59</u>	<u>25%</u>
<u>60-62</u>	<u>50%</u>
<u>63+</u>	<u>100%</u>

<u>Age</u>	<u>With 20 Years of Service</u>
<u><50</u>	<u>5%</u>
<u>50-54</u>	<u>10</u>
<u>55-59</u>	<u>25</u>
<u>60-62</u>	<u>50</u>
<u>63+</u>	<u>100</u>

~~Vested terminations are assumed to retire at their earliest unreduced eligibility. All vested terminated members are assumed to retire when first eligible for an unreduced benefit.~~

34. Annual rate of disablement assumptions:

<u>Age</u>	<u>Rate</u>
22	0.0%
27	0.10%
32	0.10%
37	0.10%
42	0.50%
47	0.50%
52	0.50%
57	0.50%
62	0.00%

<u>Age</u>	<u>Rate</u>
22	-
27	0.10%
32	0.10
37	0.10
42	0.50
47	0.50
52	0.50
57	0.50
62	0.00

5.

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

<u>Service</u>	<u>Rate</u>
0-4	4.25%
4-7	3%

<u>7-11</u>	<u>2%</u>
<u>11+</u>	<u>1%</u>

Service	Rate
<u>0</u>	<u>4%</u>
<u>1</u>	<u>4</u>
<u>2</u>	<u>2</u>
<u>3</u>	<u>2</u>

56. ___—Probability of electing a refund of member contributions upon termination assumptions:

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

H. Volunteer Firefighters' Compensation Act

1. Annual retirement rate assumptions:

Age	10-19 Years Service	20 Years service
<55	0%	0%
55-59	<u>0%</u>	<u>40%</u>
60-69	<u>20%</u>	<u>40%</u>
70+	<u>100%</u>	<u>100%</u>

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

2. Annual rate of other employment termination assumptions:

Service	Rate
<u>0-6</u> ≤ 4	<u>32</u> 0%
<u>6</u> 4-89	<u>2</u> 15%
<u>8</u> -910+	<u>2</u> 1%40
<u>9</u> -10	<u>1</u> 7%
<u>10</u> -26	<u>1</u> 3%
<u>2</u> 6+	<u>1</u> 0%

V. SYSTEM-SPECIFIC ACTUARIALY EQUIVALENT AND ACTUARIAL COST FACTORSEARLY RETIREMENT FACTORS.

~~Early Retirement Factors are used to calculate a specific reduction to a members benefit. Multiple factors will be used to calculate the appropriate reduction based on the members exact age.~~

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, 2011 and receiving 3% GABA
2. TABLE: Actuarially Equivalent Early Retirement Factors for PERS members hired prior to July 1, 2011 and receiving 1.5% GABA
3. TABLE: Actuarially Equivalent Early Retirement Factors for PERS members hired after July 1, 2011 and receiving 1.5% GABA
4. TABLE: Actuarially Equivalent Early Retirement Factors for PERS members hired after July 1, 2011 and receiving 0%-1.5% GABA

Actuarial Cost Service Purchase Factors

5. TABLE: Actuarial Cost for Service Purchase for PERS members hired prior to July 1, 2007
6. TABLE: Actuarial Cost for Service Purchase for PERS members hired on or after July 1, 2007 and prior to July 1, 2013
7. TABLE: Actuarial Cost for Service Purchase for PERS members hired on or after July 1, 2013

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. Judge's 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

30. TABLE: JRS members with no GABA Coverage – 3.5% Salary Inflation

Option 3

31. TABLE: JRS members receiving 3% GABA

32. TABLE: JRS members with no GABA Coverage – 3.5% Salary Inflation

Option 4

33. TABLE: JRS members receiving 3% GABA

34. TABLE: JRS members with no GABA Coverage – 3.5% Salary Inflation

Non-duty related Disability Factors

35. TABLE: JRS members receiving 3% GABA

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 and prior to July 1, 2011

53. TABLE: Actuarially Equivalent Early Retirement Factors for SRS members hired on or after July 1, 2011

Actuarial Cost Service Purchase Factors

54.TABLE: Actuarial Cost for Service Purchase for SRS members hired prior to July 1, 2007

55.TABLE: Actuarial Cost for Service Purchase for SRS members hired on or after July 1, 2007

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

Early Retirement Factors

66. TABLE: Actuarially Equivalent Early Retirement Factors for GWPORS members hired prior to July 1, 2007

67. TABLE: Actuarially Equivalent Early Retirement Factors for GWPORS members hired on or after July 1, 2007 and prior to July 1, 2011

68. TABLE: Actuarially Equivalent Early Retirement Factors for PERS members hired on or after July 1, 2011

Actuarial Cost Service Purchase Factors

69. TABLE: Actuarial Cost for Service Purchase for GWPORS members hired prior to July 1, 2007

70. TABLE: Actuarial Cost for Service Purchase for GWPORS members hired on or after July 1, 2007

Optional Service Retirement Benefit Factors

Option 2

71. TABLE: GWPORS members hired prior to July 1, 2007

72. TABLE: GWPORS members hired on or after July 1, 2007

Option 3

73. TABLE: GWPORS members hired prior to July 1, 2007

74. TABLE: GWPORS members hired on or after July 1, 2007

Option 4

75. TABLE: GWPORS members hired prior to July 1, 2007

76. TABLE: GWPORS members hired on or after July 1, 2007

Non-duty Related Disability Factors

77.TABLE: GWPORS members hired prior to July 1, 2007

78.TABLE: GWPORS members hired on or after July 1, 2007

Death Benefit Factors

79.TABLE: Death Before Retirement Benefit of GWPORS members hired prior to July 1, 2007

80.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

81.TABLE: Actuarial Cost for Service Purchase for MPORS members hired prior to July 1, 1997 and electing to be covered by GABA

82.TABLE: Actuarial Cost for Service Purchase for MPORS members hired prior to July 1, 1997 and not receiving GABA – 3.5% salary inflation

83.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

84.TABLE: Actuarial Cost for Service Purchase for FURS members hired prior to July 1, 1997 and electing to be covered by GABA

85.TABLE: Actuarial Cost for Service Purchase for FURS members hired prior to July 1, 1997 and not receiving GABA – 3.5% salary inflation

86.TABLE: Actuarial Cost for Service Purchase for FURS members hired on or after July 1, 1997

~~A. Public Employees' Retirement System~~

- ~~1. TABLE A: Actuarially Equivalent Early Retirement Factors for PERS members hired prior to July 1, 2007; and~~
- ~~2. TABLE B: Actuarially Equivalent Early Retirement Factors for PERS members hired after July 1, 2007 (includes factors for members hired after July 1, 2011).~~

~~B. Judge's Retirement System~~

- ~~1. TABLE C: Actuarially Equivalent Factors for JRS members involuntarily removed from service after completing 5 years of membership service but before reaching normal retirement age.~~

~~C. Highway Patrol Officers' Retirement System~~

- ~~1. TABLE D: Actuarially Equivalent Factors For HPORS members hired prior to 7/1/2013~~
- ~~2. TABLE E: Actuarially Equivalent Factors for HPORS members hired on or after July 1, 2013~~

~~D. Sheriffs' Retirement System~~

- ~~1. TABLE F: Actuarially Equivalent Early Retirement Factors for SRS members hired before July 1, 2007.~~
- ~~2. TABLE G: Actuarially Equivalent Early Retirement Factors for SRS members hired on or after July, 1, 2007.~~

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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