MONTANA PUBLIC EMPLOYEES' RETIREMENT BOARD

TITLE: ACTUARIAL VALUATION ASSUMPTIONS AND METHODS

POLICY: BOARD Admin 09   **EFFECTIVE DATE: October 13, 2011**

I.   POLICY AND OBJECTIVES.   The objective of this policy is to adopt appropriate actuarial assumptions and methods for the actuarial valuations of the various defined benefit retirement systems 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 2009 experience study, the Board adopts the following actuarial assumptions and methods for all defined benefit retirement systems it administers:

A.   Net investment earnings assumption – 7.75%;

B.   General wage increase assumption – 4.00%;

C.   Actuarial cost method – entry age cost;

D.   Asset valuation method – 4-year smoothed market;

E.   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.

F.   Mortality assumption among contributing members, terminated vested members, service retired members and beneficiaries: RP-2000 Combined Healthy Male and Female Mortality Tables projected to 2015 with scale 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. Merit salary increase assumptions:

Years of Service	Annual Increase
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

3. Annual retirement rate assumptions:

Age	30+ Years Service and Age 60 with 25 Years	Other Retirements
<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

4. Annual rate of disablement assumptions:

Age	Rate
22	-
27	0.01%
32	0.01
37	0.04
42	0.10
47	0.13
52	0.25
57	0.36
62	0.00

5. Annual rate of other employment termination assumptions:

Service	Rate
0	25%
1	20
2	15
3	10
4	10
5-9	5
10-14	5
15+	2

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

6. 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. Assumed interest on member contributions – 3.5%;

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

3. Annual retirement rate assumptions:

Age	Rate
60	15%
61-64	5
65	15
66-69	5
70+	100%

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

4. Annual rate of disablement assumptions:

Age	Rate
22	-
27	-
32	0.01%
37	0.04
42	0.10
47	0.13
52	0.25
57	0.36
62	0.00

All disabilities are assumed to be non-duty related.

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

6. Probability of electing a refund of member contributions upon termination assumptions – 0%;

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

1. Assumed interest on member contributions – 3.5%;

2. Merit salary increase assumptions:

Years of Service	Annual Increase
1	7.3%
2	5.6
3	4.4
4	3.5
5	2.8
6	2.2
7	1.7
8	1.3
9	1.0
10	0.7
11-15	0.4
16-20	0.2
21 and over	0.0

3. Annual retirement rate assumptions:

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

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

4. Annual rate of disablement assumptions:

Age	Rate
22	-
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.

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

Service	Rate
0	12%
1-5	7.5
5-9	5
10-14	3
15+	1

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

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

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

D. **Sheriffs' Retirement System**

1. Assumed interest on member contributions – 3.5%;

2. Merit salary increase assumptions:

Years of Service	Annual Increase
1	7.3%
2	5.6
3	4.4
4	3.5
5	2.8
6	2.2
7	1.7
8	1.3
9	1.0
10	0.7
11-15	0.4
16-20	0.2
21 and over	0.0

3. Annual retirement rate assumptions:

Age	With 20 Years of Service
<50	10%
50-54	10
55-59	15
60-64	20
65+	100

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

4. Annual rate of disablement assumptions:

Age	Rate
22	-
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.

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

Service	Rate
0	20%
1	15
2	12
3	10
4	10
5-9	5
10-14	3
15+	2

6. 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. 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%;

2. Merit salary increase assumptions:

Years of Service	Annual Increase
1	7.3%
2	5.6
3	4.4
4	3.5
5	2.8
6	2.2
7	1.7
8	1.3
9	1.0
10	0.7
11-15	0.4
16-20	0.2
21 and over	0.0

3.   Annual retirement rate assumptions:

Age	Age 55 with 5 Years of Service	With 20 Years of Service
<50		0%
50-54		15
55	15%	25
56-59	5	25
60-61		15
62		40
62-64		15
65+		100

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

4.   Annual rate of disablement assumptions:

Age	Rate
22	-
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.

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

Service	Rate
0	25%
1	20
2	15
3	12
4	10
5-9	6
10-14	3
15+	2

6.   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.   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%;

2.   Merit salary increase assumptions:

Years of Service	Annual Increase
1	7.3%
2	5.6
3	4.4
4	3.5
5	2.8
6	2.2
7	1.7
8	1.3
9	1.0
10	0.7
11-15	0.4
16-20	0.2
21 and over	0.0

3.   Annual retirement rate assumptions:

Age	With 20 Years of Service
<50	12%
50-54	15
55-61	20
62+	100

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

4. Annual rate of disablement assumptions:

Age	Rate
22	-
27	0.25%
32	0.25
37	0.25
42	0.50
47	0.50
52	0.50
57	0.50
62	0.00

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

Service	Rate
0	15%
1	10
2	10
3	10
4	10
5-9	5
10-14	2
15+	1

6. 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	-

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. 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%;

2. Merit salary increase assumptions:

Years of Service	Annual Increase
1	7.3%
2	5.6
3	4.4
4	3.5
5	2.8
6	2.2
7	1.7
8	1.3
9	1.0
10	0.7
11-15	0.4
16-20	0.2
21 and over	0.0

3. Annual retirement rate assumptions:

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

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

4. Annual rate of disablement assumptions:

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

Service	Rate
0	4%
1	4
2	2
3	2
4	2
5-9	2
10-14	2
15+	1

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

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

H. Volunteer Firefighters' Compensation Act

1. Annual retirement rate assumptions:

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

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
<4	20%
4-9	15
10+	10

V. SYSTEM-SPECIFIC ACTUARIALLY EQUIVALENT EARLY RETIREMENT FACTORS.

A. **Public Employees' Retirement System**

The Board adopts the following appended tables effective October 1, 2011:

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 between July 1, 2007 and July 1, 2011; and

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

B. **Highway Patrol Officers' Retirement System**

Effective February 1, 2012, the Board adopts appended TABLE D: Actuarially Equivalent Early Retirement Factors for HPORS members.

C. **Sheriffs' Retirement System**

Effective February 1, 2012, the Board adopts appended TABLE E: Actuarially Equivalent Early Retirement Factors for SRS members.

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
        Amended October 13, 2011

TABLE A

AE ERF Factors
EFFECTIVE 10/1/2011   **For PERS members hired prior to 7/1/2007 apply the better of age or years of service**
Montana PERS

Actuarially Equivalent Early Retirement Factors   **3% GABA (Deferred to 60)**

Months:

Age	0	1	2	3	4	5	6	7	8	9	10	11	Years of service
50	0.387186	0.390229	0.393272	0.396315	0.399358	0.402401	0.405444	0.408487	0.411530	0.414573	0.417616	0.420659	20
51	0.423707	0.427071	0.430435	0.433799	0.437163	0.440527	0.443891	0.447255	0.450619	0.453983	0.457347	0.460711	21
52	0.464080	0.467805	0.471530	0.475255	0.478980	0.482705	0.486430	0.490155	0.493880	0.497605	0.501330	0.505055	22
53	0.508775	0.512905	0.517035	0.521165	0.525295	0.529425	0.533555	0.537685	0.541815	0.545945	0.550075	0.554205	23
54	0.558333	0.562920	0.567507	0.572094	0.576681	0.581268	0.585855	0.590442	0.595029	0.599616	0.604203	0.608790	24
55	0.613375	0.618478	0.623581	0.628684	0.633787	0.638890	0.643993	0.649096	0.654199	0.659302	0.664405	0.669508	25
56	0.674612	0.680300	0.685988	0.691676	0.697364	0.703052	0.708740	0.714428	0.720116	0.725804	0.731492	0.737180	26
57	0.742864	0.749215	0.755566	0.761917	0.768268	0.774619	0.780970	0.787321	0.793672	0.800023	0.806374	0.812725	27
58	0.819080	0.826187	0.833294	0.840401	0.847508	0.854615	0.861722	0.868829	0.875936	0.883043	0.890150	0.897257	28
59	0.904363	0.912333	0.920303	0.928273	0.936243	0.944213	0.952183	0.960153	0.968123	0.976093	0.984063	0.992033	29
60	1.000000												

TABLE B

AE ERF Factors
EFFECTIVE 10/1/2011   **For PERS members hired after 7/1/2007 apply the better of age or years of service**
Montana   PERS

Actuarially Equivalent Early Retirement Factors   1.5% GABA (Deferred to 60)

Months:

Age	0	1	2	3	4	5	6	7	8	9	10	11	Years of service
50	0.399697	0.402730	0.405763	0.408796	0.411829	0.414862	0.417895	0.420928	0.423961	0.426994	0.430027	0.433060	20
51	0.436097	0.439440	0.442783	0.446126	0.449469	0.452812	0.456155	0.459498	0.462841	0.466184	0.469527	0.472870	21
52	0.476207	0.479895	0.483583	0.487271	0.490959	0.494647	0.498335	0.502023	0.505711	0.509399	0.513087	0.516775	22
53	0.520467	0.524543	0.528619	0.532695	0.536771	0.540847	0.544923	0.548999	0.553075	0.557151	0.561227	0.565303	23
54	0.569383	0.573896	0.578409	0.582922	0.587435	0.591948	0.596461	0.600974	0.605487	0.610000	0.614513	0.619026	24
55	0.623536	0.628541	0.633546	0.638551	0.643556	0.648561	0.653566	0.658571	0.663576	0.668581	0.673586	0.678591	25
56	0.683590	0.689150	0.694710	0.700270	0.705830	0.711390	0.716950	0.722510	0.728070	0.733630	0.739190	0.744750	26
57	0.750310	0.756499	0.762688	0.768877	0.775066	0.781255	0.787444	0.793633	0.799822	0.806011	0.812200	0.818389	27
58	0.824574	0.831477	0.838380	0.845283	0.852186	0.859089	0.865992	0.872895	0.879798	0.886701	0.893604	0.900507	28
59	0.907406	0.915122	0.922838	0.930554	0.938270	0.945986	0.953702	0.961418	0.969134	0.976850	0.984566	0.992282	29
60	1.000000												

TABLE C

AE ERF Factors
EFFECTIVE 10/1/2011   **For PERS members hired on or after 7/1/2011 ERF is calculated only on age**
Montana PERS

Actuarially Equivalent Early Retirement Factors   1.5% GABA (Deferred to 65)

Age	Months: 0	1	2	3	4	5	6	7	8	9	10	11
55	0.373968	0.376970	0.379972	0.382974	0.385976	0.388978	0.391980	0.394982	0.397984	0.400986	0.403988	0.406990
56	0.409986	0.413321	0.416656	0.419991	0.423326	0.426661	0.429996	0.433331	0.436666	0.440001	0.443336	0.446671
57	0.450001	0.453713	0.457425	0.461137	0.464849	0.468561	0.472273	0.475985	0.479697	0.483409	0.487121	0.490833
58	0.494541	0.498681	0.502821	0.506961	0.511101	0.515241	0.519381	0.523521	0.527661	0.531801	0.535941	0.540081
59	0.544220	0.548848	0.553476	0.558104	0.562732	0.567360	0.571988	0.576616	0.581244	0.585872	0.590500	0.595128
60	0.599754	0.604939	0.610124	0.615309	0.620494	0.625679	0.630864	0.636049	0.641234	0.646419	0.651604	0.656789
61	0.661976	0.667800	0.673624	0.679448	0.685272	0.691096	0.696920	0.702744	0.708568	0.714392	0.720216	0.726040
62	0.731863	0.738421	0.744979	0.751537	0.758095	0.764653	0.771211	0.777769	0.784327	0.790885	0.797443	0.804001
63	0.810557	0.817961	0.825365	0.832769	0.840173	0.847577	0.854981	0.862385	0.869789	0.877193	0.884597	0.892001
64	0.899405	0.907788	0.916171	0.924554	0.932937	0.941320	0.949703	0.958086	0.966469	0.974852	0.983235	0.991618
65	1.000000											

TABLE D

AE ERF Factors

Montana HPORS

Actuarially Equivalent Early Retirement Factors

3% GABA (Deferred to 60)

	Months:										
Age	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
25	0.047797	0.048126	0.048455	0.048784	0.049113	0.049442	0.049771	0.050100	0.050429	0.050758	0.051087	0.051416
26	0.051740	0.052097	0.052454	0.052811	0.053168	0.053525	0.053882	0.054239	0.054596	0.054953	0.055310	0.055667
27	0.056021	0.056408	0.056795	0.057182	0.057569	0.057956	0.058343	0.058730	0.059117	0.059504	0.059891	0.060278
28	0.060670	0.061091	0.061512	0.061933	0.062354	0.062775	0.063196	0.063617	0.064038	0.064459	0.064880	0.065301
29	0.065721	0.066179	0.066637	0.067095	0.067553	0.068011	0.068469	0.068927	0.069385	0.069843	0.070301	0.070759
30	0.071211	0.071709	0.072207	0.072705	0.073203	0.073701	0.074199	0.074697	0.075195	0.075693	0.076191	0.076689
31	0.077181	0.077722	0.078263	0.078804	0.079345	0.079886	0.080427	0.080968	0.081509	0.082050	0.082591	0.083132
32	0.083675	0.084264	0.084853	0.085442	0.086031	0.086620	0.087209	0.087798	0.088387	0.088976	0.089565	0.090154
33	0.090742	0.091383	0.092024	0.092665	0.093306	0.093947	0.094588	0.095229	0.095870	0.096511	0.097152	0.097793
34	0.098438	0.099137	0.099836	0.100535	0.101234	0.101933	0.102632	0.103331	0.104030	0.104729	0.105428	0.106127
35	0.106822	0.107584	0.108346	0.109108	0.109870	0.110632	0.111394	0.112156	0.112918	0.113680	0.114442	0.115204
36	0.115960	0.116790	0.117620	0.118450	0.119280	0.120110	0.120940	0.121770	0.122600	0.123430	0.124260	0.125090
37	0.125925	0.126831	0.127737	0.128643	0.129549	0.130455	0.131361	0.132267	0.133173	0.134079	0.134985	0.135891
38	0.136800	0.137790	0.138780	0.139770	0.140760	0.141750	0.142740	0.143730	0.144720	0.145710	0.146700	0.147690
39	0.148675	0.149756	0.150837	0.151918	0.152999	0.154080	0.155161	0.156242	0.157323	0.158404	0.159485	0.160566
40	0.161650	0.162832	0.164014	0.165196	0.166378	0.167560	0.168742	0.169924	0.171106	0.172288	0.173470	0.174652
41	0.175837	0.177131	0.178425	0.179719	0.181013	0.182307	0.183601	0.184895	0.186189	0.187483	0.188777	0.190071
42	0.191363	0.192780	0.194197	0.195614	0.197031	0.198448	0.199865	0.201282	0.202699	0.204116	0.205533	0.206950
43	0.208366	0.209919	0.211472	0.213025	0.214578	0.216131	0.217684	0.219237	0.220790	0.222343	0.223896	0.225449
44	0.227003	0.228707	0.230411	0.232115	0.233819	0.235523	0.237227	0.238931	0.240635	0.242339	0.244043	0.245747
45	0.247450	0.249321	0.251192	0.253063	0.254934	0.256805	0.258676	0.260547	0.262418	0.264289	0.266160	0.268031
46	0.269905	0.271962	0.274019	0.276076	0.278133	0.280190	0.282247	0.284304	0.286361	0.288418	0.290475	0.292532
47	0.294589	0.296853	0.299117	0.301381	0.303645	0.305909	0.308173	0.310437	0.312701	0.314965	0.317229	0.319493
48	0.321756	0.324250	0.326744	0.329238	0.331732	0.334226	0.336720	0.339214	0.341708	0.344202	0.346696	0.349190
49	0.351689	0.354441	0.357193	0.359945	0.362697	0.365449	0.368201	0.370953	0.373705	0.376457	0.379209	0.381961
50	0.384711	0.387751	0.390791	0.393831	0.396871	0.399911	0.402951	0.405991	0.409031	0.412071	0.415111	0.418151
51	0.421192	0.424555	0.427918	0.431281	0.434644	0.438007	0.441370	0.444733	0.448096	0.451459	0.454822	0.458185
52	0.461551	0.465277	0.469003	0.472729	0.476455	0.480181	0.483907	0.487633	0.491359	0.495085	0.498811	0.502537
53	0.506267	0.510402	0.514537	0.518672	0.522807	0.526942	0.531077	0.535212	0.539347	0.543482	0.547617	0.551752
54	0.555891	0.560488	0.565085	0.569682	0.574279	0.578876	0.583473	0.588070	0.592667	0.597264	0.601861	0.606458
55	0.611058	0.616178	0.621298	0.626418	0.631538	0.636658	0.641778	0.646898	0.652018	0.657138	0.662258	0.667378
56	0.672498	0.678211	0.683924	0.689637	0.695350	0.701063	0.706776	0.712489	0.718202	0.723915	0.729628	0.735341
57	0.741052	0.747439	0.753826	0.760213	0.766600	0.772987	0.779374	0.785761	0.792148	0.798535	0.804922	0.811309
58	0.817697	0.824853	0.832009	0.839165	0.846321	0.853477	0.860633	0.867789	0.874945	0.882101	0.889257	0.896413
59	0.903569	0.911605	0.919641	0.927677	0.935713	0.943749	0.951785	0.959821	0.967857	0.975893	0.983929	0.991965
60	1.000000											

TABLE E

AE ERF Factors
Montana SRS   **Actuarially Equivalent Early Retirement Factors**   **3% GABA (Deferred to 60)**

Age	Months: 0	1	2	3	4	5	6	7	8	9	10	11
50	0.384711	0.387751	0.390791	0.393831	0.396871	0.399911	0.402951	0.405991	0.409031	0.412071	0.415111	0.418151
51	0.421192	0.424555	0.427918	0.431281	0.434644	0.438007	0.441370	0.444733	0.448096	0.451459	0.454822	0.458185
52	0.461551	0.465277	0.469003	0.472729	0.476455	0.480181	0.483907	0.487633	0.491359	0.495085	0.498811	0.502537
53	0.506267	0.510402	0.514537	0.518672	0.522807	0.526942	0.531077	0.535212	0.539347	0.543482	0.547617	0.551752
54	0.555891	0.560488	0.565085	0.569682	0.574279	0.578876	0.583473	0.588070	0.592667	0.597264	0.601861	0.606458
55	0.611058	0.616178	0.621298	0.626418	0.631538	0.636658	0.641778	0.646898	0.652018	0.657138	0.662258	0.667378
56	0.672498	0.678211	0.683924	0.689637	0.695350	0.701063	0.706776	0.712489	0.718202	0.723915	0.729628	0.735341
57	0.741052	0.747439	0.753826	0.760213	0.766600	0.772987	0.779374	0.785761	0.792148	0.798535	0.804922	0.811309
58	0.817697	0.824853	0.832009	0.839165	0.846321	0.853477	0.860633	0.867789	0.874945	0.882101	0.889257	0.896413
59	0.903569	0.911605	0.919641	0.927677	0.935713	0.943749	0.951785	0.959821	0.967857	0.975893	0.983929	0.991965
60	1.000000											

AE ERF Factors
Montana SRS   **Actuarially Equivalent Early Retirement Factors**   **1.5% GABA (Deferred to 60)**

Age	Months: 0	1	2	3	4	5	6	7	8	9	10	11
50	0.397347	0.400378	0.403409	0.406440	0.409471	0.412502	0.415533	0.418564	0.421595	0.424626	0.427657	0.430688
51	0.433713	0.437055	0.440397	0.443739	0.447081	0.450423	0.453765	0.457107	0.460449	0.463791	0.467133	0.470475
52	0.473812	0.477502	0.481192	0.484882	0.488572	0.492262	0.495952	0.499642	0.503332	0.507022	0.510712	0.514402
53	0.518093	0.522175	0.526257	0.530339	0.534421	0.538503	0.542585	0.546667	0.550749	0.554831	0.558913	0.562995
54	0.567074	0.571597	0.576120	0.580643	0.585166	0.589689	0.594212	0.598735	0.603258	0.607781	0.612304	0.616827
55	0.621348	0.626369	0.631390	0.636411	0.641432	0.646453	0.651474	0.656495	0.661516	0.666537	0.671558	0.676579
56	0.681596	0.687180	0.692764	0.698348	0.703932	0.709516	0.715100	0.720684	0.726268	0.731852	0.737436	0.743020
57	0.748602	0.754824	0.761046	0.767268	0.773490	0.779712	0.785934	0.792156	0.798378	0.804600	0.810822	0.817044
58	0.823271	0.830220	0.837169	0.844118	0.851067	0.858016	0.864965	0.871914	0.878863	0.885812	0.892761	0.899710
59	0.906659	0.914437	0.922215	0.929993	0.937771	0.945549	0.953327	0.961105	0.968883	0.976661	0.984439	0.992217
60	1.000000											