Chapter Ret 4

ACTUARIAL TABLES

Ret 4.01 Tables and procedures. The tables and procedures contained in this chapter, submitted by the actuary, are approved for use in making actuarial computations.

Ret 4.011 Life annuity. The following basic table, herein termed "Table E-Life—Employe Life Annuity", shall be used to compute the monthly annuity authorized by section 66.906 (2), Wis. Stats., which can be provided by each $1,000 of available accumulated credits as provided below:

Rule Ret 4.011
TABLE E—LIFE
EMPLOYE LIFE ANNUITY

Age	Monthly Life Annuity Purchased by Each $1,000 of Accumulated Credits		
	Employer Factors	Normal Factors	Additional Factors
55	$ 5.746	$ 5.589	$ 5.446
56	5.878	5.709	5.556
57	6.019	5.836	5.663
58	6.169	5.966	5.790
59	6.329	6.110	5.909
60	6.502	6.268	6.047
61	6.686	6.426	6.179
62	6.885	6.601	6.333
63	7.098	6.786	6.497
64	7.327	6.984	6.673
65	7.573	7.196	6.837
66	7.836	7.422	7.033
67	8.119	7.665	7.243
68	8.423	7.925	7.466
69	8.751	8.205	7.668
70	9.108	8.504	7.918
71	9.494	8.823	8.186
72	9.908	9.135	8.497
73	10.353	9.497	8.748
74	10.829	9.886	9.074
75	11.340	10.303	9.425
76	11.890	10.750	9.714
77	12.478	11.229	10.111
78	13.105	11.671	10.481
79	13.770	12.211	10.942
80	14.471	12.793	11.297
81	15.208	13.313	11.748
82	15.983	13.978	12.141
83	16.801	14.564	12.658
84	17.664	15.182	13.222
85	18.578	16.012	13.700

(1) Table E-Life may be extended as required to other ages on the same actuarial basis as the values published herein.

(2) The amount of monthly annuity provided by accumulated prior service credits and municipality credits shall be computed by application of the employer credit factor at the age of the annuitant on the date the annuity begins.

(3) The amount of monthly annuity provided by accumulated normal credits and additional credits shall be computed by application of the normal and additional factors, respectively, at the age of the annuitant on the date the annuity begins.

Ret. 4.012 Employe 180 payment annuity. The following basic table, herein termed "Table E-180—Employe 180 Month Certain", shall be used to compute the annuity authorized by section 66.906 (3) (a) to (d) inclusive, Wis. Stats., which is the actuarial equivalent of an annuity payable under section 66.906 (2):

Rule Ret 4.012
TABLE E—180
EMPLOYE 180 MONTH CERTAIN

Amount of Optional Annuity Actuarially Equivalent to Ordinary Annuity	
Age	Reduction Factors
55	.9346
56	.9269
57	.9185
58	.9090
59	.8985
60	.8869
61	.8740
62	.8599
63	.8444
64	.8278
65	.8101
66	.7912
67	.7709
68	.7494
69	.7264
70	.7029
71	.6786
72	.6538
73	.6285
74	.6030
75	.5770
76	.5519
77	.5273
78	.5035
79	.4807
80	.4587
81	.4377
82	.4176
83	.3984
84	.3794
85	.3617

(1) Table E-180 may be extended as required to other ages on the same actuarial basis as the values published herein.

(2) The amount of annuity with a guarantee of 180 monthly payments shall be computed by application to the amount of annuity payable if no optional form is elected, of the Table E-180 factor at the age of the annuitant on the date the annuity begins.

History: 1–2–56; am. Register, November, 1957, No. 23, eff. 12–31–57; r. and recr., Register, June, 1967, No. 138, eff. 7–1–67.

Ret 4.013 Employe 120 payment annuity. The following basic table, herein termed "Table E-120—Employe 120 Month Certain", shall be used to compute the annuity authorized by section 66.906 (3) (f), Wis. Stats., which is the actuarial equivalent of an annuity payable under section 66.906 (2):

Rule Ret 4.013
TABLE E—120
EMPLOYE 120 MONTH CERTAIN

Amount of Optional Annuity Actuarially Equivalent to Ordinary Annuity

Age	Reduction Factors
55	.9787
56	.9754
57	.9716
58	.9673
59	.9624
60	.9568
61	.9503
62	.9430
63	.9345
64	.9252
65	.9149
66	.9035
67	.8906
68	.8763
69	.8599
70	.8424
71	.8233
72	.8028
73	.7808
74	.7574
75	.7325
76	.7073
77	.6819
78	.6564
79	.6312
80	.6063
81	.5819
82	.5580
83	.5346
84	.5112
85	.4889
86	.4673
87	.4464
88	.4263

(1) Table E-120 may be extended as required to other ages on the same actuarial basis as the values published herein.

(2) The amount of annuity with a guarantee of 120 monthly payments shall be computed by application to the amount of annuity payable if no optional form is elected, of the Table E-120 factor at the age of the annuitant on the date the annuity begins.

History: 1–2–56; am. Register, November, 1957, No. 23, eff. 12–31–57; r. and recr., Register, June, 1967, No. 138, eff. 7–1–67.

Ret 4.014 Employe joint annuity. The following basic table, herein termed "Table J—Joint Survivorship", shall be used to compute the annuity authorized by section 66.906 (3a), Wis. Stats., which is the actuarial equivalent of an annuity payable under section 66.906 (2).

Age of Beneficiary	Amount of Optional Annuity Actuarially Equivalent to Ordinary Annuity									
	Age of Employe									
	55	56	57	58	59	60	61	62	63	64
15 years less	.7419	.7335	.7249	.7160	.7069	.6976	.6880	.6782	.6681	.6581
14 years less	.7474	.7392	.7308	.7222	.7133	.7042	.6949	.6853	.6755	.6657
13 years less	.7531	.7451	.7369	.7285	.7199	.7110	.7020	.6927	.6832	.6736
12 years less	.7590	.7512	.7433	.7351	.7267	.7181	.7093	.7004	.6911	.6819
11 years less	.7651	.7575	.7498	.7419	.7338	.7255	.7170	.7083	.6994	.6905
10 years less	.7713	.7640	.7566	.7490	.7411	.7331	.7249	.7165	.7079	.6994
9 years less	.7777	.7707	.7636	.7562	.7487	.7410	.7331	.7250	.7168	.7086
8 years less	.7844	.7776	.7707	.7637	.7565	.7491	.7415	.7338	.7259	.7181
7 years less	.7912	.7847	.7781	.7714	.7645	.7574	.7502	.7429	.7354	.7279
6 years less	.7981	.7919	.7857	.7792	.7727	.7660	.7591	.7522	.7451	.7381
5 years less	.8052	.7993	.7934	.7873	.7811	.7747	.7683	.7618	.7550	.7484
4 years less	.8124	.8069	.8013	.7955	.7897	.7837	.7777	.7715	.7652	.7590
3 years less	.8198	.8146	.8093	.8089	.7985	.7929	.7872	.7815	.7756	.7699
2 years less	.8273	.8224	.8175	.8125	.8074	.8022	.7969	.7916	.7861	.7809
1 year less	.8349	.8303	.8258	.8211	.8164	.8116	.8068	.8019	.7968	.7920
Same	.8426	.8384	.8341	.8299	.8255	.8211	.8167	.8122	.8076	.8032
1 year more	.8503	.8464	.8426	.8387	.8347	.8307	.8267	.8227	.8185	.8146
2 years more	.8581	.8545	.8510	.8475	.8439	.8403	.8367	.8331	.8294	.8259
3 years more	.8658	.8626	.8595	.8563	.8531	.8499	.8467	.8435	.8403	.8373
4 years more	.8736	.8707	.8679	.8651	.8623	.8595	.8567	.8540	.8512	.8487
5 years more	.8812	.8787	.8763	.8738	.8714	.8689	.8666	.8643	.8620	.8600
6 years more	.8888	.8866	.8845	.8824	.8803	.8783	.8764	.8745	.8727	.8711
7 years more	.8963	.8944	.8927	.8909	.8892	.8876	.8860	.8846	.8831	.8820
8 years more	.9037	.9021	.9006	.8992	.8979	.8966	.8955	.8945	.8933	.8925
9 years more	.9109	.9096	.9085	.9074	.9064	.9055	.9047	.9040	.9032	.9025
10 years more	.9179	.9169	.9161	.9153	.9147	.9141	.9136	.9132	.9126	.9122

Rule Ret 4.014
TABLE J—JOINT SURVIVORSHIP (Continued)

| Age of Beneficiary | Amount of Optional Annuity Actuarially Equivalent to Ordinary Annuity | | | | | | | | | |
| | Age of Employe | | | | | | | | | |
	65	66	67	68	69	70	71	72	73	74
15 years less	.6479	.6377	.6273	.6168	.6059	.5952	.5845	.5738	.5632	.5527
14 years less	.6558	.6459	.6358	.6256	.6150	.6046	.5942	.5839	.5736	.5634
13 years less	.6641	.6545	.6447	.6348	.6245	.6145	.6044	.5944	.5845	.5747
12 years less	.6726	.6634	.6539	.6444	.6344	.6247	.6151	.6055	.5959	.5864
11 years less	.6816	.6726	.6636	.6544	.6448	.6355	.6262	.6169	.6078	.5987
10 years less	.6908	.6822	.6736	.6647	.6556	.6466	.6377	.6289	.6201	.6115
9 years less	.7004	.6922	.6839	.6755	.6667	.6582	.6497	.6413	.6330	.6248
8 years less	.7103	.7025	.6946	.6866	.6783	.6702	.6621	.6542	.6464	.6387
7 years less	.7206	.7132	.7057	.6981	.6902	.6825	.6750	.6675	.6602	.6531
6 years less	.7311	.7241	.7171	.7100	.7025	.6953	.6882	.6813	.6745	.6680
5 years less	.7419	.7354	.7288	.7221	.7151	.7084	.7019	.6955	.6894	.6835
4 years less	.7529	.7468	.7407	.7345	.7280	.7219	.7159	.7102	.7046	.6993
3 years less	.7642	.7586	.7529	.7472	.7412	.7357	.7303	.7252	.7202	.7154
2 years less	.7756	.7705	.7653	.7602	.7548	.7498	.7450	.7405	.7360	.7316
1 year less	.7872	.7826	.7780	.7734	.7685	.7641	.7600	.7559	.7519	.7478
Same	.7990	.7948	.7907	.7867	.7824	.7786	.7749	.7713	.7676	.7639
1 year more	.8108	.8072	.8036	.8002	.7965	.7931	.7899	.7866	.7832	.7799
2 years more	.8227	.8196	.8166	.8137	.8104	.8075	.8046	.8016	.7987	.7957
3 years more	.8346	.8320	.8295	.8271	.8242	.8216	.8190	.8164	.8138	.8112
4 years more	.8465	.8444	.8423	.8402	.8377	.8354	.8332	.8309	.8286	.8263
5 years more	.8582	.8565	.8548	.8530	.8508	.8489	.8470	.8451	.8431	.8411
6 years more	.8697	.8684	.8670	.8655	.8636	.8620	.8604	.8588	.8571	.8555
7 years more	.8809	.8798	.8787	.8775	.8759	.8746	.8733	.8720	.8707	.8693
8 years more	.8916	.8908	.8900	.8891	.8878	.8868	.8858	.8847	.8837	.8827
9 years more	.9020	.9014	.9008	.9002	.8992	.8984	.8977	.8969	.8962	.8956
10 years more	.9118	.9115	.9112	.9108	.9100	.9095	.9091	.9086	.9082	.9079

TABLE J—JOINT SURVIVORSHIP (Continued)

Age of Beneficiary	Amount of Optional Annuity Actuarially Equivalent to Ordinary Annuity									
	Age of Employe									
	75	76	77	78	79	80	81	82	83	84
15 years less	.5420	.5320	.5225	.5136	.5054	.4980	.4913	.4853	.4801	.4749
14 years less	.5530	.5434	.5342	.5257	.5180	.5109	.5047	.4993	.4946	.4899
13 years less	.5646	.5553	.5466	.5385	.5311	.5246	.5189	.5140	.5099	.5056
12 years less	.5767	.5678	.5595	.5519	.5450	.5391	.5339	.5296	.5258	.5219
11 years less	.5894	.5810	.5731	.5660	.5597	.5543	.5497	.5458	.5424	.5387
10 years less	.6026	.5947	.5873	.5808	.5751	.5702	.5660	.5625	.5594	.5560
9 years less	.6165	.6090	.6022	.5963	.5911	.5867	.5829	.5797	.5768	.5737
8 years less	.6308	.6240	.6178	.6124	.6077	.6037	.6002	.5972	.5947	.5918
7 years less	.6458	.6396	.6340	.6290	.6247	.6210	.6178	.6151	.6129	.6102
6 years less	.6614	.6557	.6506	.6460	.6420	.6386	.6357	.6333	.6313	.6289
5 years less	.6774	.6722	.6674	.6632	.6595	.6564	.6538	.6517	.6501	.6479
4 years less	.6937	.6889	.6845	.6806	.6773	.6744	.6721	.6703	.6689	.6669
3 years less	.7102	.7058	.7017	.6981	.6951	.6926	.6906	.6890	.6879	.6861
2 years less	.7268	.7227	.7189	.7157	.7130	.7107	.7090	.7077	.7068	.7054
1 year less	.7433	.7395	.7361	.7332	.7308	.7289	.7274	.7264	.7258	.7247
Same	.7597	.7563	.7533	.7507	.7485	.7469	.7457	.7450	.7448	.7440
1 year more	.7761	.7730	.7703	.7680	.7661	.7648	.7639	.7636	.7637	.7633
2 years more	.7922	.7894	.7870	.7850	.7835	.7825	.7819	.7820	.7825	.7825
3 years more	.8080	.8056	.8035	.8018	.8006	.7999	.7998	.8002	.8012	.8016
4 years more	.8235	.8214	.8196	.8183	.8174	.8171	.8174	.8183	.8196	.8204
5 years more	.8386	.8368	.8354	.8344	.8339	.8340	.8347	.8360	.8378	.8389
6 years more	.8532	.8518	.8507	.8501	.8501	.8506	.8517	.8534	.8555	.8570
7 years more	.8674	.8664	.8657	.8655	.8659	.8668	.8683	.8703	.8728	
8 years more	.8811	.8805	.8802	.8804	.8812	.8825	.8843	.8867		
9 years more	.8944	.8941	.8943	.8949	.8960	.8977	.8998			
10 years more	.9071	.9072	.9078	.9088	.9103	.9122				

(1) Table J may be extended as required to other ages on the same actuarial basis as the values shown herein.

(2) The amount of a joint survivorship annuity shall be determined by the application to the amount which would be payable, if no optional form is elected, of the Table J factor based on the ages of the participant and his beneficiary on the date the annuity begins.

Ret 4.015 Employe integrated annuity. The optional integrated annuity authorized by section 66.906 (3b), Wis. Stats., shall be computed as follows:

(1) For purposes of determining benefits under the optional integrated annuity, the estimated primary social security benefit is to be determined as follows:

(a) *Taxable wages.* Determine the total wages paid by all employing municipalities upon which social security old age benefit taxes have been paid in each calendar year from January 1, 1951 to the first day of the year in which the employe attains age 65, or age 62 if a woman, provided that if the applicant shall offer the board official information from the social security administration that his taxable wages for any such year exceed the amount as otherwise determined, the larger amount shall be accepted for the purposes of this rule.

(b) *Taxable period.* Compute the number of months (any fraction of a month to be considered a month) elapsing from January 1, 1951 to the first day of the year in which the employe attains age 65, or age 62 if a woman. If the result is less than 18 months, use 18 months.

(c) *Drop-out period.* Eliminate a period of calendar years in the taxable period not to exceed 5 years, when taxable earnings are lowest. Notwithstanding the above, the taxable wages and the number of months in any year shall not be eliminated in making the calculation if such elimination would result in dividing by a period less than 18 months.

(d) *Average monthly wage.* Divide (a) the sum of the taxable wages in the taxable period, by (b) the number of months in the taxable period, after excluding the taxable wages and the months in the drop-out period to ascertain the average monthly wage. If (b) is less than 18, it should be taken as 18. Eliminate cents from the result.

(e) *Monthly primary social security benefit.* Ascertain the benefit as determined from the table of retirement benefits issued by the U. S. Bureau of Old Age, Survivors and Disability Insurance on the basis of the average monthly wage.

(2) Determine the actuarial equivalent factor to be used for the employe from Table E-1 Integrated interpolating for the exact age on the first day the annuity is to begin.

TABLE E-1 INTEGRATED

Exact Age Annuity Begins	Actuarial Equivalent Factor
55	45.616%
56	48.905
57	52.516
58	56.491
59	60.881
60	65.742
61	71.143
62	77.165
63	83.902
64	91.468
65	100.000

(3) Multiply the estimated primary social security benefit at age 65 by the actuarial equivalent factor.

(4) Determine the ordinary retirement annuity under section 66.906 (2), Wis. Stats.

(5) Determine the sum of the results obtained in items 3 and 4.

(6) If the amount in item 5 exceeds the estimated primary social security benefit at age 65, item 1, by at least $10.00, the amount in item 5 is payable monthly during life and terminating with the payment due in the month in which the participant attains age 65, and the amount payable during life thereafter will equal the amount payable prior to age 65 reduced by the estimated primary social security benefit, item 1.

(7) If the amount in item 5 does not exceed the estimated primary social security benefit at age 65, item 1, by at least $10.00, the amount payable prior to age 65 will be determined as follows:

(a) Subtract $10.00 from the ordinary retirement annuity, item 4.

(b) Subtract the actuarial equivalent factor, item 2, from 100%.

(c) Divide the amount obtained in (a) by the amount obtained in (b) and add $10.00 to the result.

(d) The result in paragraph (c) is payable monthly during life and terminating with the payment due in the month in which the participant attains age 65, and the amount payable for life thereafter will be $10.00 a month.

History: 1–2–56; am. (1) (a), (b), (c) and (2), Register, November, 1957, No. 23, eff. 12–31–57; am. (1) (a), Register, October, 1959, No. 46, eff. 11–1–59; am. (2), Register, December, 1965, No. 120, eff. 1–1–66; am. (2) (table only), and (4), Register, June, 1967, No. 138, eff. 7–1–67.

Ret 4.016 Formula early retirement annuity. The annuity in the normal form beginning prior to the normal retirement date of a participant which is the actuarial equivalent of a formula annuity deferred to the normal retirement date shall be computed as follows:

(1) Determine pursuant to section 66.906 (2) (c) 3. Wis. Stats., the formula annuity which would be payable to the participant if deferred to his normal retirement age.

(2) Determine the commuted value of the amount of death benefit payable with respect to the deferred formula annuity if the death of the participant occurs prior to its commencement as follows:

(a) The amount equal to the death benefit which would be payable pursuant to section 66.908 (2) (a), exclusive of any amount provided by accumulated additional credits, if the death of the partici-

pant occurred on the date as of which his early retirement annuity begins; reduced (increased) by the amount equal to 200% of the excess (deficiency) defined in section 66.906 (2) (c) 2.; or

(b) The amount equal to the accumulated normal credits of the participant as of the date as of which his early retirement annuity begins, reduced (increased) by the amount equal to 100% of the excess (deficiency) defined in section 66.906 (2) (c) 2.

(c) Paragraph (a) shall be applicable if the beneficiary to whom a death benefit would be payable is a spouse, parent, child (including legally adopted child), grandchild, brother, or sister of the participant who was designated as a beneficiary on the last date for which the participant was paid; and the participant has credit for at least 60 calendar quarter years;

(d) Paragraph (b) shall be applicable if paragraph (a) is not applicable.

(3) Compute the early annuity in the normal form actuarially equivalent to the deferred annuity as follows:

(a) Compute to the nearest $\frac{1}{10}$ year the age of the participant as of the date the early retirement annuity begins.

(b) Determine the Table E—Early factors applicable to the participant according to his normal retirement age and the age determined under par. (a). If the latter is a fractional age compute the factors by linear interpolation.

Rule Ret 4.016

TABLE E—EARLY

Early Retirement Annuity Factors

Age	Normal Retirement Age—65		Normal Retirement Age—60	
	Formula Annuity Reduction Factors	Probability of Death	Formula Annuity Reduction Factors	Probability of Death
65	1.00000	.00000		
64	.91468	.01680		
63	.83902	.03180		
62	.77165	.04526		
61	.71143	.05739		
60	.65742	.06837	1.00000	.00000
59	.60881	.07835	.92314	.01284
58	.56491	.08743	.85402	.02457
57	.52516	.09572	.79166	.03528
56	.48905	.10327	.73522	.04505
55	.45616	.11015	.68401	.05395
54	.42614	.11641	.63742	.06203
53	.39867	.12210	.59493	.06994
52	.37347	.12725	.55609	.07594
51	.35031	.13190	.52051	.08187
50	.32899	.13609	.48784	.08718
49	.30932	.13984	.45780	.09191
48	.29114	.14320	.43011	.09611
47	.27431	.14618	.40456	.09982
46	.25871	.14883	.38093	.10309
45	.24422	.15117	.35904	.10596
44	.23074	.15325	.33874	.10847
43	.21819	.15509	.31988	.11068
42	.20649	.15673	.30233	.11262
41	.19556	.15821	.28598	.11436
40	.18534	.15956	.27073	.11594
39	.17577	.16080	.25648	.11740
38	.16680	.16195	.24314	.11875
37	.15838	.16302	.23065	.12000
36	.15048	.16401	.21894	.12116
35	.14304	.16493	.20794	.12223
34	.13604	.16579	.19761	.12324
33	.12945	.16660	.18789	.12418
32	.12324	.16735	.17874	.12505
31	.11737	.16805	.17011	.12588

(c) Multiply the formula annuity determined under (1) by the Formula Annuity Reduction Factor determined under (3) (b), rounding the product to three decimal places.

(d) Compute the present value of pre-retirement cash refund feature of deferred annuity by multiplying commuted value determined under (2) by the Probability of Death factor determined under (3) (b).

(e) Compute the annuity which can be provided by accumulated employer credits in the amount equal to the present value determined under (3) (d) by applying Wis. Adm. Code section Ret. 4.011 and rounding the result to three decimal places.

(f) Compute the early retirement annuity under section 66.906 (2) (c) 3. by adding the amounts determined under (3) (c) and (3) (e).

History: Cr. Register, December, 1965, No. 120, eff. 1–1–66; am. (3) (b), (table only), Register, June, 1967, No. 138, eff. 7–1–67.

Ret 4.017 History: Cr. Register, December, 1965, No. 120, eff. 1–1–56; r. Register, June, 1967, No. 138, eff. 7–1–67.

Ret 4.021 Disability annuity. For the purpose of computing disability annuities authorized by section 66.907 (2), Wis. Stats., the factors in section Ret 4.011, Table E-Life, shall be used.

Ret 4.022 Disability annuity OASDI offset. Disability annuities granted under Chapter 262 of the Laws of 1955 (to participants who actually worked after 6/25/55 but not after 9/30/57) will be reduced pursuant thereto effective as follows:

(1) For annuitants who were age 50 or over on 7/1/57, the reduction is effective as of 7/1/57 unless the annuitant has submitted evidence that he does not qualify for disability benefits or for old-age benefits as a retired worker under OASDI.

(2) For annuitants who attain age 50 after 7/1/57, the reduction will be effective as of the first day of the month in which age 50 is attained, in the same manner as under (1).

(3) The Fund will forward an Evidence of Eligibility form to the annuitant which he must sign giving his consent to release of the requested information by OASDI to the Fund.

(4) Periodically, but not less than once a year, a recheck will be made of the eligibility of all annuitants aged 50 or over and previously ineligible for OASDI payments. If the annuitant fails to sign and return the Evidence of Eligibility form within 30 days, the annuity will be reduced immediately.

(5) If evidence of ineligibility is received after an annuity is so reduced, the amount of the reduction for all prior months of ineligibility will be added to the next annuity payment after receipt of such evidence.

History: Cr. Register, November, 1957, No. 23, eff. 12–31–57.

Ret 4.031 Beneficiary life annuity. The following basic table, herein termed "Table B—Life Beneficiary Life Annuity", shall be used to

compute the monthly ordinary annuity authorized by section 66.909, Wis. Stats., which can be provided by each $1,000 of available accumulated credits as provided below:

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Rule Ret 4.031
TABLE B—LIFE
BENEFICIARY LIFE ANNUITY

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Age	Monthly Life Annuity Purchased by Each $1,000 of Accumulated Credits		
	Employer Factors	Normal Factors	Additional Factors
10	$3.549	$3.545	$3.542
11	3.560	3.556	3.553
12	3.572	3.568	3.564
13	3.585	3.580	3.576
14	3.597	3.593	3.589
15	3.611	3.606	3.602
16	3.625	3.620	3.615
17	3.640	3.634	3.629
18	3.655	3.649	3.644
19	3.671	3.665	3.659
20	3.688	3.681	3.675
21	3.705	3.698	3.692
22	3.724	3.716	3.710
23	3.743	3.735	3.728
24	3.763	3.754	3.747
25	3.784	3.775	3.767
26	3.806	3.796	3.788
27	3.829	3.819	3.810
28	3.853	3.842	3.833
29	3.879	3.867	3.857
30	3.905	3.893	3.882
31	3.933	3.920	3.908
32	3.963	3.948	3.936
33	3.993	3.978	3.964
34	4.026	4.010	3.995
35	4.060	4.042	4.026
36	4.096	4.077	4.060
37	4.134	4.113	4.095
38	4.174	4.152	4.131
39	4.216	4.192	4.170
40	4.260	4.234	4.210
41	4.307	4.279	4.253
42	4.356	4.326	4.298
43	4.408	4.375	4.345
44	4.463	4.427	4.394
45	4.521	4.482	4.447
46	4.583	4.541	4.502
47	4.648	4.602	4.560
48	4.717	4.667	4.621
49	4.790	4.736	4.686
50	4.868	4.809	4.754
51	4.951	4.887	4.826
52	5.039	4.969	4.903
53	5.133	5.057	4.983
54	5.233	5.150	5.068
55	5.341	5.248	5.158
56	5.456	5.354	5.253
57	5.579	5.465	5.355
58	5.710	5.584	5.462
59	5.851	5.711	5.576
60	6.003	5.845	5.697
61	6.165	5.989	5.826
62	6.338	6.145	5.965
63	6.524	6.310	6.110
64	6.725	6.487	6.264

Rule Ret 4.031
TABLE B—LIFE
BENEFICIARY LIFE ANNUITY (Continued)

Age	Monthly Life Annuity Purchased by Each $1,000 of Accumulated Credits		
	Employer Factors	Normal Factors	Additional Factors
65	6.940	6.677	6.428
66	7.174	6.882	6.608
67	7.427	7.101	6.793
68	7.703	7.342	6.986
69	8.005	7.595	7.194
70	8.333	7.864	7.421
71	8.689	8.151	7.654
72	9.070	8.455	7.899
73	9.477	8.778	8.159
74	9.911	9.130	8.436
75	10.373	9.493	8.726
76	10.866	9.879	9.032
77	11.392	10.288	9.356
78	11.953	10.721	9.700
79	12.549	11.180	10.077
80	13.183	11.686	10.448
81	13.858	12.206	10.858
82	14.578	12.760	11.294
83	15.348	13.351	11.761
84	16.174	13.983	12.279
85	17.063	14.662	12.814
86	18.022	15.390	13.388
87	19.059	16.173	14.003
88	20.180	17.075	14.620
89	21.393	17.985	15.352
90	22.704	18.968	16.120

(1) Table B—Life may be extended as required to other ages on the same actuarial basis as the values published herein.

(2) The amount of the monthly annuity provided by accumulated prior service credits and municipality credits shall be computed by the application of the employer credit factors at the age of the annuitant on the date the annuity begins.

(3) The amount of the monthly annuity provided by accumulated normal credits and additional credits shall be computed by application of the normal and additional factors, respectively, at the age of the annuitant on the date the annuity begins.

History: 1–2–56; am. Register, November, 1957, No. 23, eff. 12–31–57; r. and recr., Register, June, 1967, No. 138, eff. 7–1–67.

Ret 4.032 Beneficiary 180 payment annuity. The following basic table, herein termed "Table B—180–Beneficiary 180 Month Certain", shall be used to compute the monthly annuity authorized by section 66.909 (4), Wis. Stats., which is the actuarial equivalent of an ordinary annuity payable under section 66.909:

Rule Ret 4.032
TABLE B—180
BENEFICIARY 180 MONTH CERTAIN

Amount of Optional Annuity Actuarially Equivalent to Ordinary Annuity

Age	Reduction Factors
10	.9997
11	.9997
12	.9996
13	.9996
14	.9996
15	.9995
16	.9995
17	.9995
18	.9994
19	.9994
20	.9993
21	.9992
22	.9992
23	.9991
24	.9990
25	.9989
26	.9988
27	.9987
28	.9986
29	.9984
30	.9982
31	.9981
32	.9978
33	.9976
34	.9974
35	.9971
36	.9967
37	.9964
38	.9959
39	.9955
40	.9950
41	.9944
42	.9937
43	.9930
44	.9921
45	.9911
46	.9900
47	.9887
48	.9872
49	.9854
50	.9834
51	.9811
52	.9785
53	.9755
54	.9719
55	.9680
56	.9634
57	.9581
58	.9520
59	.9450
60	.9369
61	.9277
62	.9173
63	.9054
64	.8920
65	.8771
66	.8602
67	.8418
68	.8219
69	.8007

Rule Ret 4.032

TABLE B—180

BENEFICIARY 180 MONTH CERTAIN (Continued)

Amount of Optional Annuity Actuarially Equivalent to Ordinary Annuity	
Age	Reduction Factors
70	.7783
71	.7551
72	.7309
73	.7064
74	.6815
75	.6563
76	.6309
77	.6056
78	.5801
79	.5552
80	.5307
81	.5065
82	.4827
83	.4593
84	.4364
85	.4140
86	.3916
87	.3705
88	.3501

(1) Table B-180 may be extended as required to other ages on the same actuarial basis as the values published herein.

(2) The amount of annuity with a guarantee of 180 monthly payments shall be computed by application to the amount of annuity payable if no optional form is elected, of the Table B-180 factor at the age of the annuitant on the date the annuity begins.

History: 1–2–56; am. Register, November, 1957, No. 23, eff. 12–31–57; r. and recr., Register, June, 1967, No. 138, eff. 7–1–67.

Ret 4.033 Widow integrated annuity. The optional integrated annuity authorized by section 66.909 (5), Wis. Stats., shall be computed as follows:

(1) For purposes of determining benefits under the optional integrated annuity for widow beneficiaries, the survivor's benefit of the widow shall be deemed to be the percentage of the husband's estimated primary social security amount provided by federal law to be determined as follows:

(a) *Taxable wages.* Determine the total wages paid by all employing municipalities upon which social security old age benefit taxes have been paid in each calendar year from January 1, 1951 to the first day of the year in which the husband died, provided that if the applicant shall offer the board official information from the social security administration that her husband's taxable wages for any such year exceed the amount as otherwise determined, the larger amount shall be accepted for the purposes of this rule.

(b) *Taxable period.* Compute the number of months (any fraction of a month to be considered a month) elapsing from January 1, 1951 to the first day of the year in which the husband died. If result is less than 18 months, use 18 months.

(c) *Drop-out period.* Eliminate a period of calendar years in the taxable period not to exceed 5 years, when taxable earnings are lowest. Notwithstanding the above, the taxable wages and the number of months in any year shall not be eliminated in making the calculation if such elimination would result in leaving a period less than 18 months.

(d) *Average monthly wage.* Divide (a) the sum of the taxable wages in the taxable period, by (b) the number of months in the taxable period, after excluding the taxable wages and the months in the drop-out period to ascertain the average monthly wage. If (b) is less than 18, it should be taken as 18. Eliminate cents from the result.

(e) *Monthly primary social security amount.* Ascertain the primary amount from the table of retirement benefits issued by the U. S. Bureau of Old Age, Survivors and Disability Insurance on the basis of the average monthly wage.

(2) Determine the actuarial equivalent factor to be used for the widow from Table W—Integrated, interpolating for the exact age on the first date the annuity is to begin.

TABLE W—INTEGRATED
WIDOW ACTUARIAL EQUIVALENT FACTORS

Age	Actuarial Equivalent Factors	Age	Actuarial Equivalent Factors
31	16.947%	47	38.205%
32	17.768	48	40.410
33	18.635	49	42.778
34	19.553	50	45.325
35	20.523	51	48.071
36	21.551	52	51.035
37	22.640	53	54.241
38	23.795	54	57.716
39	25.021	55	61.489
40	26.324	56	65.597
41	27.711	57	70.078
42	29.186	58	74.980
43	30.759	59	80.355
44	32.438	60	86.267
45	34.232	61	92.787
46	36.150	62	100.000

(3) Multiply the estimated survivor's benefit at age 62 by the actuarial equivalent factor.

(4) Determine the ordinary beneficiary annuity under section 66.909 (3), Wis. Stats.

(5) Determine the sum of the results obtained in items 3 and 4.

(6) If the amount in item 5 exceeds the estimated social security benefit at age 62, item 1, by at least $10.00, the amount in item 5 is payable monthly during life and terminating with the payment due in the month in which the beneficiary attains age 62, and the amount payable during life thereafter will equal the amount payable prior to age 62 reduced by the estimated social security benefit, item 1.

(7) If the amount in item 5 does not exceed the estimated social security benefit at age 62, item 1, by at least $10.00, the amount payable prior to age 62 will be determined as follows:

(a) Subtract $10.00 from the ordinary beneficiary annuity, item 4.

(b) Subtract the actuarial equivalent factor, item 2, from 100%.

(c) Divide the amount obtained in (a) by the amount obtained in (b) and add $10.00 to the result.

(d) The result in paragraph (c) is payable monthly during life and terminating with the payment due in the month in which the beneficiary attains age 62 and the amount payable for life thereafter will be $10.00 a month.

History: Cr. Register, November, 1957, No. 23, eff. 12–31–57; am. (1) (a), Register, October, 1959, No. 46, eff. 11–1–59; am. (2), Register, December, 1965, No. 120, eff. 1–1–66; am. intro. par.; r. and recr. (2), Register, June, 1967, No. 138, eff. 7–1–67.

Ret 4.034 Table E—Last Survivor. The following basic table, herein termed "Table E—Last Survivor" shall be used to compute the amount of the joint and survivor annuity described in section 66.908 (2) (g) Wis. Stats., as follows:

(1) Determine to the near one-tenth year the age of the participating employe at date of death and the difference between his age and that of the eldest qualified beneficiary (spouse, minor child or other dependent).

(2) Compute amount of annuity which would have been payable to the deceased participating employe under section 66.906 (2) if he was eligible therefor.

(3) Multiply the annuity computed under item (2) by Table E—Last Survivor factor for employe age and difference in ages determined under item (1).

(a) If age of participating employe and difference in ages are not integral obtain appropriate factor by linear interpolation.

(b) Table E—Last Survivor may be extended as required to other ages and differences in ages on the same actuarial basis as the values shown herein.

TABLE E—LAST SURVIVOR

Difference in Age of Beneficiary	Amount of Last Survivor Annuity Equivalent to a Unit of Life Annuity										
	Age of Participating Employe										
	60	61	62	63	64	65	66	67	68	69	70
15 years less	.6308	.6202	.6094	.5984	.5875	.5765	.5656	.5546	.5434	.5320	.5208
14 years less	.6380	.6276	.6171	.6063	.5956	.5849	.5742	.5634	.5526	.5414	.5305
13 years less	.6455	.6354	.6251	.6145	.6041	.5937	.5832	.5727	.5621	.5512	.5406
12 years less	.6533	.6434	.6334	.6231	.6129	.6028	.5927	.5825	.5722	.5616	.5513
11 years less	.6615	.6518	.6421	.6321	.6222	.6124	.6026	.5927	.5827	.5724	.5624
10 years less	.6699	.6606	.6511	.6414	.6319	.6224	.6129	.6034	.5937	.5838	.5741
9 years less	.6787	.6696	.6605	.6512	.6419	.6328	.6237	.6145	.6052	.5956	.5863
8 years less	.6877	.6791	.6703	.6612	.6524	.6436	.6349	.6261	.6172	.6079	.5990
7 years less	.6971	.6888	.6804	.6717	.6632	.6548	.6465	.6381	.6296	.6208	.6123
6 years less	.7068	.6989	.6908	.6825	.6745	.6665	.6585	.6505	.6424	.6341	.6260
5 years less	.7168	.7092	.7016	.6937	.6860	.6785	.6709	.6634	.6557	.6478	.6402
4 years less	.7271	.7199	.7127	.7052	.6980	.6908	.6837	.6766	.6695	.6620	.6550
3 years less	.7377	.7309	.7240	.7170	.7102	.7035	.6969	.6903	.6836	.6767	.6702
2 years less	.7484	.7421	.7357	.7291	.7227	.7165	.7104	.7042	.6981	.6917	.6859
1 year less	.7594	.7535	.7475	.7414	.7355	.7297	.7241	.7185	.7130	.7072	.7019
Same	.7706	.7651	.7595	.7539	.7485	.7432	.7381	.7331	.7282	.7230	.7183
1 year more	.7818	.7768	.7717	.7665	.7616	.7569	.7524	.7480	.7436	.7390	.7348
2 years more	.7932	.7886	.7840	.7793	.7749	.7708	.7668	.7630	.7592	.7551	.7513
3 years more	.8046	.8005	.7964	.7922	.7884	.7848	.7814	.7781	.7748	.7711	.7677
4 years more	.8161	.8124	.8088	.8051	.8018	.7988	.7960	.7932	.7903	.7869	.7839
5 years more	.8275	.8243	.8212	.8181	.8153	.8128	.8104	.8080	.8055	.8025	.7997
6 years more	.8339	.8362	.8336	.8309	.8287	.8266	.8246	.8225	.8203	.8176	.8153
7 years more	.8501	.8479	.8458	.8437	.8418	.8401	.8384	.8367	.8348	.8324	.8304
8 years more	.8613	.8595	.8579	.8561	.8546	.8532	.8518	.8504	.8488	.8468	.8451
9 years more	.8722	.8709	.8696	.8682	.8670	.8659	.8648	.8636	.8623	.8606	.8592
10 years more	.8829	.8819	.8809	.8798	.8789	.8780	.8772	.8763	.8754	.8739	.8728

History: Cr. Register, December, 1965, No. 120, eff. 1–1–66; am. (table only), Register, June, 1967, No. 138, eff. 7–1–67.

Ret 4.11 Prescribed interest. The prescribed rate of interest shall be 4% per annum compounded annually.

History: 1–2–56; am. Register, November, 1957, No. 23, eff. 12–31–57; am. Register, June, 1967, No. 138, eff. 7–1–67.

Ret 4.21 History: 1–2–56; am. Register, August, 1963, No. 92, eff. 9–1–63; r. Register, December, 1965, No. 120, eff. 1–1–66.

Ret 4.31 Disability premiums. Pursuant to section 66.912 (3) (a), Wis. Stats., the disability benefit premiums shall be as follows:

Municipality Contribution Rates—Disability Benefits

The percentage is determined for each municipality as follows:

(1) Determine the prior calendar year earnings of all active employes under age 65.

(2) Determine the prior calendar year earnings of all active employes.

(3) Divide item (1) by item (2).

(4) Multiply the result in item (3) by 0.50%. The result is the percentage municipality rate for disability for the succeeding year.

History: 1–2–56; am. Register, November, 1957, No. 23, eff. 12–31–57; am. Register, July, 1962, No. 79, eff. 8–1–62; am. Register, November, 1964, No. 107, eff. 12–1–64; am. Register, December, 1965, No. 120, eff. 1–1–66.

Ret 4.32 Disability reserve. The amount credited to the reserve for annuities granted upon the granting of any disability annuity shall be determined on the following actuarial bases:

(1) DISABILITY ANNUITY TO EMPLOYE. The basis underlying the factors in section Ret 4.011, Table E-Life, modified by the assumption (1) of a mortality rate of 12% for the first year the annuity is payable; and (2) that the age of the employe is 5 years older than his actual age.

(2) DEATH BENEFIT UNDER SECTION 66.908 (2) (e), WIS. STATS. The basis underlying the factors in section Ret 4.031, Table B-Life.

History: 1–2–56; am. Register, November, 1957, No. 23, eff. 12–31–57; am. Register, April, 1962, No. 76, eff. 5–1–62; am. (1), Register, June, 1967, No. 138, eff. 7–1–67.

Ret 4.35 Special disability contribution rates. For purposes of determining municipality contribution rates, the following annual probabilities that a participant will within a year become entitled to a special disability annuity under section 66.907 (3), Wis. Stats.. shall be assumed:

Age	Special Disability Rate
55	.030
56	.035
57	.040
58	.045
59	.050

History: Cr. Register, April, 1960, No. 52, eff. 5–1–60.