## Chapter 491-02 WAC ACTUARIAL TABLES

WAC
491-02-095 Actuarial tables, schedules, and factors.

WAC 491-02-095 Actuarial tables, schedules, and factors. This chapter contains the tables, schedules, and factors adopted by the board for volunteer firefighters and reserve officers pursuant to the authority granted by RCW 41.24.185 for calculating optional retirement allowances of members of retirement systems administered by the board. These tables, schedules, and factors were adopted by the board upon the recommendation of and in light of the findings of the state actuary in his regular actuarial investigation into the mortality, service, compensation, and other experience of the members and beneficiaries of such retirement systems. The tables, schedules, and factors contained in this chapter shall govern the retirement allowances only of members retiring during the period from January 1, 2017, until such time as these tables, schedules, and factors are amended by the board following the next actuarial investigation conducted by the state actuary. The retirement allowances of members retiring before January 1, 2017, shall continue to be governed by the tables, schedules, and factors in effect at the time of each member's retirement. Any new tables, schedules, and factors adopted by the board in the future shall govern retirement allowances only of members retiring after the adoption of such new tables, schedules, and factors.

| Board for Volunteer Firefighters and Reserve Officers <br> Table \#1 <br> Joint/Survivor Pension <br> (Joint and 100\% Survivor Pension with Pop-up) <br> (WAC 415-02-380) |  |  |  |
| :---: | :---: | :---: | :---: |
| Membe | ounger | Memb | Older |
| Age Difference | Option 2 | Age Difference | $\begin{aligned} & \text { Option } 2 \\ & 100 \% \end{aligned}$ |
| -20 | 0.941 | 0 | 0.850 |
| -19 | 0.938 | 1 | 0.844 |
| -18 | 0.934 | 2 | 0.839 |
| -17 | 0.930 | 3 | 0.834 |
| -16 | 0.926 | 4 | 0.829 |
| -15 | 0.922 | 5 | 0.825 |
| -14 | 0.918 | 6 | 0.820 |
| -13 | 0.913 | 7 | 0.815 |
| -12 | 0.909 | 8 | 0.811 |
| -11 | 0.904 | 9 | 0.806 |
| -10 | 0.900 | 10 | 0.802 |
| -9 | 0.895 | 11 | 0.798 |


| Member Younger |  | Member Older |  |
| :---: | :---: | :---: | :---: |
| Age Difference | Option 2 100\% | Age Difference | $\begin{gathered} \text { Option } 2 \\ 100 \% \end{gathered}$ |
| -8 | 0.890 | 12 | 0.794 |
| -7 | 0.885 | 13 | 0.790 |
| -6 | 0.880 | 14 | 0.786 |
| -5 | 0.875 | 15 | 0.783 |
| -4 | 0.870 | 16 | 0.779 |
| -3 | 0.865 | 17 | 0.776 |
| -2 | 0.860 | 18 | 0.773 |
| -1 | 0.855 | 19 | 0.770 |
|  |  | 20 | 0.767 |
|  |  | 21 | 0.764 |
|  |  | 22 | 0.762 |
|  |  | 23 | 0.759 |
|  |  | 24 | 0.757 |
|  |  | 25 | 0.755 |
|  |  | 26 | 0.753 |
|  |  | 27 | 0.751 |
|  |  | 28 | 0.749 |
|  |  | 29 | 0.747 |
|  |  | 30 | 0.746 |
|  |  | 31 | 0.744 |
|  |  | 32 | 0.743 |
|  |  | 33 | 0.742 |
|  |  | 34 | 0.740 |
|  |  | 35 | 0.739 |
|  |  | 36 | 0.738 |
|  |  | 37 | 0.737 |
|  |  | 38 | 0.736 |
|  |  | 39 | 0.735 |
|  |  | 40 | 0.734 |

Actuarial Tables

Table \#2
Survivor Pension
Early Retirement Factors
(WAC 415-02-320)

| Years Early | $\begin{gathered} \text { Month } \\ 0 \end{gathered}$ | $\begin{gathered} \text { Month } \\ 1 \end{gathered}$ | $\begin{gathered} \text { Month } \\ 2 \end{gathered}$ | $\begin{gathered} \text { Month } \\ 3 \end{gathered}$ | $\begin{gathered} \text { Month } \\ 4 \end{gathered}$ | $\begin{gathered} \text { Month } \\ 5 \end{gathered}$ | $\begin{gathered} \text { Month } \\ 6 \end{gathered}$ | $\begin{gathered} \text { Month } \\ 7 \end{gathered}$ | $\begin{gathered} \text { Month } \\ 8 \end{gathered}$ | $\begin{gathered} \text { Month } \\ 9 \end{gathered}$ | $\begin{gathered} \text { Month } \\ 10 \end{gathered}$ | $\begin{gathered} \text { Month } \\ 11 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 1.0000 | . 9926 | . 9852 | . 9778 | . 9704 | . 9630 | . 9557 | . 9483 | . 9409 | . 9335 | . 9261 | . 9187 |
| 1 | . 9113 | . 9047 | . 8981 | . 8915 | . 8849 | . 8783 | . 8717 | . 8651 | . 8585 | . 8519 | . 8453 | . 8387 |
| 2 | . 8321 | . 8262 | . 8203 | . 8144 | . 8085 | . 8026 | . 7967 | . 7908 | . 7849 | . 7789 | . 7730 | . 7671 |
| 3 | . 7612 | . 7559 | . 7506 | . 7453 | . 7400 | . 7347 | . 7294 | . 7241 | . 7188 | . 7135 | . 7082 | . 7028 |
| 4 | . 6975 | . 6928 | . 6880 | . 6832 | . 6784 | . 6736 | . 6689 | . 6641 | . 6593 | . 6545 | . 6497 | . 6450 |
| 5 | . 6402 | . 6359 | . 6316 | . 6272 | . 6229 | . 6186 | . 6143 | . 6100 | . 6057 | . 6014 | . 5970 | . 5927 |
| 6 | . 5884 | . 5845 | . 5806 | . 5767 | . 5728 | . 5689 | . 5650 | . 5611 | . 5572 | . 5533 | . 5493 | . 5454 |
| 7 | . 5415 | . 5380 | . 5345 | . 5309 | . 5274 | . 5238 | . 5203 | . 5167 | . 5132 | . 5096 | . 5061 | . 5026 |
| 8 | . 4990 | . 4958 | . 4926 | . 4894 | . 4861 | . 4829 | . 4797 | . 4765 | . 4733 | . 4700 | . 4668 | . 4636 |
| 9 | . 4604 | . 4574 | . 4545 | . 4516 | . 4486 | . 4457 | . 4428 | . 4398 | . 4369 | . 4340 | . 4310 | . 4281 |
| 10 | . 4252 | . 4225 | . 4198 | . 4171 | . 4145 | . 4118 | . 4091 | . 4064 | . 4037 | . 4011 | . 3984 | . 3957 |
| 11 | . 3930 | . 3906 | . 3881 | . 3857 | . 3832 | . 3808 | . 3783 | . 3759 | . 3735 | . 3710 | . 3686 | . 3661 |
| 12 | . 3637 | . 3614 | . 3592 | . 3569 | . 3547 | . 3525 | . 3502 | . 3480 | . 3457 | . 3435 | . 3413 | . 3390 |
| 13 | . 3368 | . 3347 | . 3327 | . 3306 | . 3286 | . 3265 | . 3244 | . 3224 | . 3203 | . 3183 | . 3162 | . 3142 |
| 14 | . 3121 | . 3102 | . 3083 | . 3065 | . 3046 | . 3027 | . 3008 | . 2989 | . 2970 | . 2951 | . 2932 | . 2914 |
| 15 | . 2895 | . 2877 | . 2860 | . 2843 | . 2825 | . 2808 | . 2791 | . 2773 | . 2756 | . 2738 | . 2721 | . 2704 |
| 16 | . 2686 | . 2670 | . 2654 | . 2639 | . 2623 | . 2607 | . 2591 | . 2575 | . 2559 | . 2543 | . 2527 | . 2511 |
| 17 | . 2495 | . 2480 | . 2465 | . 2451 | . 2436 | . 2421 | . 2406 | . 2392 | . 2377 | . 2362 | . 2347 | . 2333 |
| 18 | . 2318 | . 2304 | . 2291 | . 2277 | . 2264 | . 2250 | . 2236 | . 2223 | . 2209 | . 2196 | . 2182 | . 2169 |
| 19 | . 2155 | . 2142 | . 2130 | . 2117 | . 2105 | . 2092 | . 2080 | . 2067 | . 2055 | . 2042 | . 2029 | . 2017 |
| 20 | . 2004 | . 1993 | . 1981 | . 1969 | . 1958 | . 1946 | . 1935 | . 1923 | . 1911 | . 1900 | . 1888 | . 1877 |
| 21 | . 1865 | . 1854 | . 1844 | . 1833 | . 1822 | . 1811 | . 1801 | . 1790 | . 1779 | . 1768 | . 1758 | . 1747 |
| 22 | . 1736 | . 1726 | . 1716 | . 1706 | . 1696 | . 1686 | . 1677 | . 1667 | . 1657 | . 1647 | . 1637 | . 1627 |
| 23 | . 1617 | . 1608 | . 1598 | . 1589 | . 1580 | . 1571 | . 1562 | . 1552 | . 1543 | . 1534 | . 1525 | . 1516 |
| 24 | . 1506 | . 1498 | . 1489 | . 1481 | . 1472 | . 1464 | . 1455 | . 1446 | . 1438 | . 1429 | . 1421 | . 1412 |
| 25 | . 1404 | . 1396 | . 1388 | . 1380 | . 1372 | . 1364 | . 1356 | . 1348 | . 1340 | . 1332 | . 1324 | . 1317 |
| 26 | . 1309 | . 1301 | . 1294 | . 1287 | . 1279 | . 1272 | . 1264 | . 1257 | . 1250 | . 1242 | . 1235 | . 1228 |
| 27 | . 1220 | . 1213 | . 1207 | . 1200 | . 1193 | . 1186 | . 1179 | . 1172 | . 1166 | . 1159 | . 1152 | . 1145 |
| 28 | . 1138 | . 1132 | . 1125 | . 1119 | . 1113 | . 1106 | . 1100 | . 1094 | . 1087 | . 1081 | . 1075 | . 1068 |
| 29 | . 1062 | . 1057 | . 1052 | . 1046 | . 1041 | . 1036 | . 1031 | . 1026 | . 1021 | . 1015 | . 1010 | . 1005 |
| 30+ | . 1000 | . 1000 | . 1000 | . 1000 | . 1000 | . 1000 | . 1000 | . 1000 | . 1000 | . 1000 | . 1000 | . 1000 |

Table \#3
Lump-Sum Settlements

| Age | Factor | Age | Factor |
| :---: | ---: | :---: | ---: |
| 20 | 14.4584 | 66 | 10.4052 |
| 21 | 14.4415 | 67 | 10.1797 |
| 22 | 14.4235 | 68 | 9.9469 |
| 23 | 14.4043 | 69 | 9.7055 |
| 24 | 14.3837 | 70 | 9.4569 |
| 25 | 14.3616 | 71 | 9.2012 |
| 26 | 14.3379 | 72 | 8.9402 |
| 27 | 14.3124 | 73 | 8.6725 |
| 28 | 14.2850 | 74 | 8.3989 |
| 29 | 14.2556 | 75 | 8.1204 |


| Age | Factor | Age | Factor |
| :---: | :---: | :---: | :---: |
| 41 | 13.7273 | 87 | 4.6359 |
| 42 | 13.6642 | 88 | 4.3627 |
| 43 | 13.5971 | 89 | 4.1017 |
| 44 | 13.5257 | 90 | 3.8552 |
| 45 | 13.4499 | 91 | 3.6261 |
| 46 | 13.3694 | 92 | 3.4160 |
| 47 | 13.2840 | 93 | 3.2225 |
| 48 | 13.1934 | 94 | 3.0459 |
| 49 | 13.0971 | 95 | 2.8863 |
| 50 | 12.9948 | 96 | 2.7439 |
| 51 | 12.8861 | 97 | 2.6189 |
| 52 | 12.7706 | 98 | 2.5100 |
| 53 | 12.6497 | 99 | 2.4068 |
| 54 | 12.5217 | 100 | 2.3177 |
| 55 | 12.3863 | 101 | 2.2325 |
| 56 | 12.2433 | 102 | 2.1606 |
| 57 | 12.0937 | 103 | 2.0940 |
| 58 | 11.9376 | 104 | 2.0445 |
| 59 | 11.7734 | 105 | 2.0036 |
| 60 | 11.6011 | 106 | 1.9836 |
| 61 | 11.4206 | 107 | 1.9718 |
| 61 | 11.2323 | 108 | 1.9636 |
| 62 | 11.0364 | 109 | 1.9558 |
| 64 | 10.8332 | 110 | 1.9481 |
| 65 | 10.6232 |  |  |

[Statutory Authority: RCW 41.24.290(2). WSR 16-22-052, § 491-02-095, filed $10 / 29 / 16$, effective $1 / 1 / 17$; WSR 09-24-026, § 491-02-095, filed 11/23/09, effective 12/24/09; WSR 03-22-024, § 491-02-095, filed 10/27/03, effective $1 / 1 / 04$; WSR 99-21-052, § 491-02-095, filed 10/18/99, effective 1/1/00; WSR 90-24-033, § 491-02-095, filed 11/30/90, effective $12 / 31 / 90$.]

