

## CHAPTER 82-05-04 ACTUARIAL FACTORS

### Section

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#### **82-05-04-01. Actuarial factors - Early retirement.**

In determining early retirement benefits under North Dakota Century Code section 15-39.1-12, the benefits to which a member is entitled shall be reduced 0.5 percent for each month that the early retirement date precedes the first day of the month coincident with or next following the earlier of the member's sixty-fifth birthday or the date at which current service plus the member's age will equal eighty-five for a tier one grandfathered member. Effective July 1, 2013, for members who are either tier one nongrandfathered or tier two, in determining the early retirement benefit under North Dakota Century Code section 15-39.1-12, the benefits to which a member is entitled shall be reduced 0.6667 percent for each month that the early retirement date precedes the first day of the month coincident with or next following the earlier of the member's sixty-fifth birthday or the date at which current service plus the member's age will equal ninety, with a minimum age of sixty.

**History:** Effective September 1, 1990; amended effective May 1, 2000; July 1, 2008; April 1, 2016.

**General Authority:** NDCC 15-39.1-07

**Law Implemented:** NDCC 15-39.1-16, 15-39.1-24

#### **82-05-04-02. Actuarial factors - Optional payment forms.**

Under the optional joint and survivor, term certain and life, and partial lump sum forms of annuity payment shall be based on the following actuarial assumptions:

1. Interest rate - 7.25 percent per year, compounded annually.
2. Member's mortality (used for nondisabled members) - A mortality table constructed by blending thirty percent of the mortality rates under a combination of PubT-2010 employee and PubT-2010 healthy retiree tables for males, adjusted by one hundred four percent for ages fifty-five and older, and projected to 2022 using projection scale MP-2019, with seventy percent of the mortality rates under a combination of PubT-2010 employee and PubT-2010 healthy retiree tables for females, adjusted by one hundred four percent for ages fifty-five and older, and projected to 2022 using projection scale MP-2019.
3. Beneficiary's mortality - A mortality table constructed by blending seventy percent of the mortality rates under a combination of PubT-2010 employee and Pub-2010 contingent survivor tables for males, adjusted by ninety-five percent for ages forty-five and older, and projected to 2022 using projection scale MP-2019, with thirty percent of the mortality rates under a combination of PubT-2010 employee and Pub-2010 contingent survivor tables for females, adjusted by ninety-five percent for ages forty-five and older and projected to 2022 using projection scale MP-2019. Mortality tables for survivors under age eighteen use the RP-2014 juvenile tables with fifty percent blending of the male/female rates and projected to 2022 using projection scale MP-2019.
4. Disabled member's mortality - A mortality table constructed by blending thirty percent of the mortality rates under the PubNS-2010 non-safety disabled mortality table for males, projected to 2022 using projection scale MP-2019, with seventy percent of the mortality rates under the PubNS-2010 non-safety disabled mortality table for females, projected to 2022 using projection scale MP-2019.

In addition, the above actuarial assumptions shall be used to determine actuarial equivalence for other purposes not covered by sections 82-05-04-01, 82-05-04-03, and 82-05-04-04, such as the determination of the reduction to a member's benefit because of the existence of a qualified domestic relations order.

**History:** Effective May 1, 2000; amended effective May 1, 2004; July 1, 2008; April 1, 2016; July 1, 2021; April 1, 2024.

**General Authority:** NDCC 15-39.1-07

**Law Implemented:** NDCC 15-39.1-16, 15-39.1-24

### **82-05-04-03. Actuarial factors - Maximum benefits under section 415.**

In computing the maximum benefits under Internal Revenue Code section 415, as required under North Dakota Century Code section 15-39.1-10.6, the following actuarial assumptions must be used:

1. Interest rate - the interest rate assumption must be the same as the rate that is used in computing actuarially equivalent optional payment forms under section 82-05-04-02 except that:
  - a. The interest rate assumption may not be less than five percent for the purposes of converting the maximum retirement income to a form other than a straight life annuity with no ancillary benefits;
  - b. The interest rate assumption may not be greater than five percent for the purposes of adjusting the maximum retirement income payable to a member who is over age sixty-five so that it is actuarially equivalent to such a retirement income commencing at age sixty-five; and
  - c. The factor for adjusting the maximum permissible retirement income to a member who is less than age sixty-two years so that it is actuarially equivalent to such a retirement income commencing at age sixty-two years shall be equal to the factor for determining actuarial equivalence for early retirement under section 82-05-04-01 or an actuarially computed reduction factor determined using an interest rate assumption of five percent and the mortality assumptions specified in this section (except that the mortality decrement must be ignored if a death benefit at least equal to the single-sum value of the member's accrued benefit would be payable under the fund on behalf of the member if the member remained in service and the member's service was to be terminated by reason of the member's death prior to the member's normal retirement date), whichever factor will provide the greater reduction. The factor for determining actuarial equivalence for early retirement under the fund for any given age below age sixty-two years must be determined by dividing the early retirement adjustment factor that applies under section 82-05-04-01 at such given age by the early retirement adjustment factor that applies under the fund at age sixty-two years. The actuarial adjustment provided in this subdivision does not apply for limitation years beginning after 1994 to income received as a pension, annuity, or similar allowance as a result of a member's disability due to personal injuries or sickness, or amounts received as a result of a member's death by the member's beneficiaries, survivors, or estate.
2. Mortality - the mortality assumptions must be based upon the mortality table prescribed by the secretary of the treasury of the United States pursuant to Internal Revenue Code section 415(b)(2)(E).

**History:** Effective May 1, 2000; amended effective May 1, 2004.

**General Authority:** NDCC 15-39.1-07

**Law Implemented:** NDCC 15-39.1-16, 15-39.1-24

**82-05-04-04. Actuarial factors - Purchase of service.**

Whenever the North Dakota Century Code permits a member to purchase service on an actuarially equivalent basis, the following actuarial assumptions shall be used:

1. Interest rate - 7.25 percent per year, compounded annually.
2. Mortality rates - the same table specified in section 82-05-04-02 for nondisabled members.
3. Retirement - the member will be assumed to retire at the age at which the member is first eligible for an unreduced retirement benefit. Such unreduced retirement date will be determined taking into account any purchased service and assuming the member continues in full-time covered service.
4. Salary increase rate - Increases are assumed to occur once each year. The following table shows the increase rates indexed by the member's service (excluding any service being purchased):

Years From Hire	Percentage Increase at End of Year
1	14.80%
2	6.80%
3	6.55%
4-5	6.30%
6-7	5.80%
8-9	5.55%
10-12	5.30%
13-14	5.05%
15-16	4.80%
17-19	4.55%
20-23	4.30%
24-30	4.05%
31 and over	3.80%

**History:** Effective May 1, 2000; amended effective July 1, 2008; April 1, 2016; July 1, 2021.

**General Authority:** NDCC 15-39.1-07

**Law Implemented:** NDCC 15-39.1-16, 15-39.1-24