Michael A. Ribble, FSA, EA, MAAA
Principal

Buck Consultants, LLC
A Xerox Company
14911 Quorum Drive
Suite 200
Dallas, TX 75254

P: 972.628.6816
F: 972.628.6801

michael.ribble@xerox.com,
www.xerox.com\hrconsulting

June 30, 2016

Mr. Sam Watts
Policy Development Analyst
State of North Carolina
Department of State Treasurer
Retirement Systems Division
3200 Atlantic Avenue
Raleigh, NC 27604

Re: Full Actuarial Cost Factors

Dear Mr. Watts:

As discussed in our letter of June 10, 2016 we have prepared our recommendations for the full actuarial cost factors, which are composed of three sets of factors: salary factors, reserve factors and COLA factors. For a member to pay the full actuarial cost of any service purchase, the cost should be based on the mortality, interest rate and salary increase assumptions used in the valuation of the pension plans.

Salary Factor Tables

The salary factor tables are used to project the member's average final compensation based on their current compensation and an assumed salary increase. For the salary factors to be actuarially neutral, they should be based on the salary increase used in the valuation of the pension plans. The attached tables are based on a weighted average of the salary increase assumptions in the experience investigation prepared as of December 31, 2014 of the Teachers' and State Employees' Retirement System (TSERS) and the Local Governmental Employees' Retirement System (LGERS) and adopted by the Board of Trustees on January 21, 2016. We have weighted these factors as follows: 35% TSERS Teachers, 24% TSERS General Employees, 21% LGERS General Employees, 11% TSERS Other Education Employees, 5% LGERS Law Enforcement Officers, 3% LGERS Firefighters and Rescue Squad Workers and 1% TSERS Law Enforcement Officers.

There are two tables provided – numerator and denominator – that are necessary to determine the appropriate salary factor. The numerator table is based on the member's service at the time of the purchase. The denominator table is based on the member's service at earliest retirement eligibility. This is identical to the method for the current tables.

Reserve Factor Tables

The reserve factor tables are used to calculate the value of the annuity attributable to the purchased service. For the reserve factors to be actuarially neutral, they should be

based on the mortality and interest rate assumptions used in the valuation of the pension plans. The attached tables are based on an annual interest rate of 7.25% and the mortality assumption used for the payment option factors described in our letter entitled "Payment Option Factors" dated June 30, 2016.

There are two tables provided – numerator and denominator – that are necessary to determine the appropriate reserve factor. The numerator table is based on the member's age at earliest retirement eligibility. The denominator table is based on the member's age at the time of the purchase. This is identical to the method for the current tables.

COLA Factor Table

The COLA factor table is used to calculate the value of the assumed COLA attributable to the portion of the benefit purchased. For the COLA factors to be actuarially neutral, they should be based on the mortality and interest rate assumptions used in the valuation of the pension plans and a reasonable expectation of future COLAs. The attached table is based on an annual interest rate of 7.25%, a mortality assumption that is identical to the assumption used for the reserve factor tables, and a 4% rate of future COLAs.

The table provided is based on the member's age at earliest retirement eligibility, which is identical to the method for the current table.

Example

Assume we have a 35-year old member of TSERS with 10 years of service with earnings of $50,000 during the last 12 months. The member would currently be able to retire at age 55 when the member has 30 years of service. Based on the Salary Numerator and Denominator tables, the member's projected average final compensation at age 55 is $102,344 ($50,000 x 7.4396 / 3.6346). The salary numerator is based on the member's current service of 10 years and the salary denominator is based on the member's service at earliest retirement of 30 years. The member's projected retirement benefit is $55,880. The estimated required reserve for this benefit at age 55 is $265,602 ($55,880 x 1.6023 x 255,102 / 85,997). The reserve numerator and COLA factor are based on the member's age at earliest retirement of 55 and the reserve denominator is based on the member's current age of 35.

If this member purchased five years of service, the member would have 15 years of current service and be able to retire at age 50 with 30 years of service. Based on the Salary Numerator and Denominator tables, the member's projected average final compensation at age 50 is $81,837 ($50,000 x 5.9489 / 3.6346). The salary numerator is based on the member's current service of 15 years and the salary denominator is based on the member's service at earliest retirement of 30 years. The member's projected retirement benefit is $44,683. The estimated required reserve for this benefit at age 50 is $330,089 ($44,683 x 1.6675 x 380,983 / 85,997). The reserve numerator and COLA factor are based on the member's age at earliest retirement of 50 and the reserve denominator is based on the member's current age of 35.

The difference in these reserve amounts results in a total cost of $64,487, not including any administrative fees. This example reflects our understanding of the current methodology for determining the full actuarial cost of service purchases.

The undersigned are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

If you have any questions or need additional assistance, please let us know.

Very truly yours,

Michael A. Ribble, FSA, EA, MAAA
Principal, Consulting Actuary

Larry Langer, ASA, EA, MAAA
Principal, Consulting Actuary

MAR
\NC\COR\60623MR1.DOCX

North Carolina Retirement Systems
Administration Factors based on Experience Study at December 31, 2014
Salary Factors - Numerator

Service	Months 0	1	2	3	4	5	6	7	8	9	10	11
0	13.2649	13.1915	13.1181	13.0447	12.9713	12.8980	12.8246	12.7512	12.6778	12.6044	12.5310	12.4576
1	12.3842	12.3182	12.2522	12.1861	12.1201	12.0541	11.9881	11.9221	11.8561	11.7901	11.7240	11.6580
2	11.5920	11.5326	11.4731	11.4137	11.3543	11.2948	11.2354	11.1759	11.1165	11.0571	10.9976	10.9382
3	10.8787	10.8252	10.7716	10.7180	10.6644	10.6109	10.5573	10.5037	10.4502	10.3966	10.3430	10.2894
4	10.2359	10.1876	10.1392	10.0909	10.0426	9.9943	9.9460	9.8976	9.8493	9.8010	9.7527	9.7044
5	9.6560	9.6124	9.5688	9.5252	9.4815	9.4379	9.3943	9.3506	9.3070	9.2634	9.2198	9.1761
6	9.1325	9.0925	9.0526	9.0126	8.9726	8.9327	8.8927	8.8527	8.8128	8.7728	8.7328	8.6929
7	8.6529	8.6163	8.5796	8.5430	8.5063	8.4697	8.4331	8.3964	8.3598	8.3231	8.2865	8.2499
8	8.2132	8.1796	8.1460	8.1124	8.0788	8.0452	8.0115	7.9779	7.9443	7.9107	7.8771	7.8435
9	7.8099	7.7790	7.7482	7.7173	7.6865	7.6556	7.6248	7.5939	7.5631	7.5322	7.5014	7.4705
10	7.4396	7.4109	7.3822	7.3535	7.3248	7.2961	7.2674	7.2387	7.2100	7.1813	7.1526	7.1239
11	7.0952	7.0686	7.0420	7.0154	6.9888	6.9622	6.9355	6.9089	6.8823	6.8557	6.8291	6.8025
12	6.7758	6.7511	6.7264	6.7018	6.6771	6.6524	6.6277	6.6030	6.5783	6.5536	6.5289	6.5042
13	6.4795	6.4566	6.4336	6.4107	6.3878	6.3649	6.3419	6.3190	6.2961	6.2732	6.2502	6.2273
14	6.2044	6.1831	6.1618	6.1405	6.1192	6.0980	6.0767	6.0554	6.0341	6.0128	5.9915	5.9702
15	5.9489	5.9291	5.9094	5.8896	5.8698	5.8500	5.8302	5.8104	5.7906	5.7708	5.7510	5.7312
16	5.7114	5.6929	5.6743	5.6558	5.6372	5.6187	5.6001	5.5816	5.5630	5.5445	5.5259	5.5074
17	5.4888	5.4714	5.4540	5.4366	5.4192	5.4018	5.3844	5.3670	5.3496	5.3322	5.3148	5.2974
18	5.2800	5.2637	5.2473	5.2310	5.2147	5.1983	5.1820	5.1657	5.1493	5.1330	5.1167	5.1004
19	5.0840	5.0687	5.0534	5.0381	5.0227	5.0074	4.9921	4.9767	4.9614	4.9461	4.9308	4.9154
20	4.9001	4.8856	4.8710	4.8565	4.8420	4.8275	4.8129	4.7984	4.7839	4.7694	4.7548	4.7403
21	4.7258	4.7120	4.6982	4.6844	4.6706	4.6568	4.6430	4.6292	4.6154	4.6016	4.5878	4.5741
22	4.5603	4.5471	4.5339	4.5208	4.5076	4.4944	4.4813	4.4681	4.4549	4.4418	4.4286	4.4155
23	4.4023	4.3897	4.3770	4.3644	4.3518	4.3391	4.3265	4.3139	4.3013	4.2886	4.2760	4.2634
24	4.2507	4.2386	4.2265	4.2144	4.2023	4.1901	4.1780	4.1659	4.1538	4.1416	4.1295	4.1174
25	4.1053	4.0936	4.0820	4.0704	4.0587	4.0471	4.0355	4.0238	4.0122	4.0006	3.9889	3.9773
26	3.9657	3.9544	3.9432	3.9320	3.9207	3.9095	3.8983	3.8870	3.8758	3.8645	3.8533	3.8421
27	3.8308	3.8200	3.8091	3.7983	3.7874	3.7766	3.7657	3.7549	3.7440	3.7332	3.7223	3.7115
28	3.7006	3.6902	3.6797	3.6692	3.6587	3.6482	3.6378	3.6273	3.6168	3.6063	3.5958	3.5854
29	3.5749	3.5648	3.5547	3.5445	3.5344	3.5243	3.5142	3.5041	3.4939	3.4838	3.4737	3.4636
30	3.4535	3.4437	3.4339	3.4241	3.4144	3.4046	3.3948	3.3850	3.3753	3.3655	3.3557	3.3460
31	3.3362	3.3267	3.3173	3.3079	3.2984	3.2890	3.2796	3.2701	3.2607	3.2512	3.2418	3.2324
32	3.2229	3.2138	3.2047	3.1956	3.1865	3.1773	3.1682	3.1591	3.1500	3.1409	3.1318	3.1227
33	3.1135	3.1047	3.0959	3.0871	3.0783	3.0695	3.0607	3.0519	3.0431	3.0343	3.0255	3.0167
34	3.0079	2.9994	2.9909	2.9824	2.9739	2.9654	2.9569	2.9484	2.9399	2.9314	2.9229	2.9144
35	2.9059	2.8977	2.8895	2.8812	2.8730	2.8648	2.8566	2.8484	2.8402	2.8320	2.8238	2.8155
36	2.8073	2.7994	2.7915	2.7836	2.7756	2.7677	2.7598	2.7518	2.7439	2.7360	2.7280	2.7201
37	2.7122	2.7045	2.6969	2.6892	2.6816	2.6739	2.6663	2.6586	2.6509	2.6433	2.6356	2.6280
38	2.6203	2.6129	2.6055	2.5981	2.5908	2.5834	2.5760	2.5686	2.5612	2.5538	2.5464	2.5390
39	2.5316	2.5245	2.5173	2.5102	2.5031	2.4959	2.4888	2.4816	2.4745	2.4674	2.4602	2.4531
40	2.4460	2.4391	2.4322	2.4253	2.4184	2.4115	2.4046	2.3977	2.3908	2.3839	2.3770	2.3701
41	2.3632	2.3566	2.3499	2.3433	2.3366	2.3299	2.3233	2.3166	2.3100	2.3033	2.2966	2.2900
42	2.2833	2.2769	2.2705	2.2640	2.2576	2.2512	2.2447	2.2383	2.2319	2.2254	2.2190	2.2125
43	2.2061	2.1999	2.1937	2.1875	2.1812	2.1750	2.1688	2.1626	2.1564	2.1502	2.1439	2.1377
44	2.1315	2.1255	2.1195	2.1135	2.1075	2.1015	2.0955	2.0895	2.0835	2.0775	2.0714	2.0654
45	2.0594	2.0536	2.0478	2.0420	2.0362	2.0304	2.0246	2.0188	2.0130	2.0072	2.0014	1.9956
46	1.9898	1.9842	1.9786	1.9730	1.9674	1.9618	1.9561	1.9505	1.9449	1.9393	1.9337	1.9281
47	1.9225	1.9171	1.9117	1.9062	1.9008	1.8954	1.8900	1.8846	1.8792	1.8737	1.8683	1.8629
48	1.8575	1.8523	1.8470	1.8418	1.8366	1.8313	1.8261	1.8208	1.8156	1.8104	1.8051	1.7999
49	1.7947	1.7896	1.7846	1.7795	1.7744	1.7694	1.7643	1.7593	1.7542	1.7492	1.7441	1.7390
50	1.7340	1.7291	1.7242	1.7193	1.7144	1.7096	1.7047	1.6998	1.6949	1.6900	1.6851	1.6802
51	1.6753	1.6706	1.6659	1.6612	1.6565	1.6517	1.6470	1.6423	1.6376	1.6329	1.6281	1.6234
52	1.6187	1.6141	1.6096	1.6050	1.6004	1.5959	1.5913	1.5868	1.5822	1.5776	1.5731	1.5685
53	1.5640	1.5595	1.5551	1.5507	1.5463	1.5419	1.5375	1.5331	1.5287	1.5243	1.5199	1.5155
54	1.5111	1.5068	1.5026	1.4983	1.4940	1.4898	1.4855	1.4813	1.4770	1.4727	1.4685	1.4642
55	1.4600	1.4559	1.4517	1.4476	1.4435	1.4394	1.4353	1.4312	1.4271	1.4229	1.4188	1.4147
56	1.4106	1.4066	1.4026	1.3987	1.3947	1.3907	1.3867	1.3828	1.3788	1.3748	1.3708	1.3669
57	1.3629	1.3591	1.3552	1.3514	1.3475	1.3437	1.3399	1.3360	1.3322	1.3283	1.3245	1.3206
58	1.3168	1.3131	1.3094	1.3057	1.3020	1.2983	1.2945	1.2908	1.2871	1.2834	1.2797	1.2760
59	1.2723	1.2687	1.2651	1.2615	1.2579	1.2544	1.2508	1.2472	1.2436	1.2400	1.2364	1.2328
60	1.2293	1.2258	1.2223	1.2189	1.2154	1.2119	1.2085	1.2050	1.2015	1.1981	1.1946	1.1912
61	1.1877	1.1843	1.1810	1.1776	1.1743	1.1710	1.1676	1.1643	1.1609	1.1576	1.1542	1.1509
62	1.1475	1.1443	1.1411	1.1378	1.1346	1.1314	1.1281	1.1249	1.1217	1.1184	1.1152	1.1120
63	1.1087	1.1056	1.1025	1.0993	1.0962	1.0931	1.0900	1.0868	1.0837	1.0806	1.0775	1.0743
64	1.0712	1.0682	1.0652	1.0622	1.0592	1.0561	1.0531	1.0501	1.0471	1.0441	1.0410	1.0380
65	1.0350	-	-	-	-	-	-	-	-	-	-	-

North Carolina Retirement Systems
Administration Factors based on Experience Study at December 31, 2014
Salary Factors - Denominator

Service	Months 0	1	2	3	4	5	6	7	8	9	10	11
0	13.2649	13.2269	13.1890	13.1510	13.1131	13.0751	13.0372	12.9992	12.9612	12.9233	12.8853	12.8474
1	12.8094	12.7742	12.7390	12.7038	12.6686	12.6334	12.5982	12.5629	12.5277	12.4925	12.4573	12.4221
2	12.3869	12.3543	12.3217	12.2891	12.2564	12.2238	12.1912	12.1586	12.1260	12.0934	12.0607	12.0281
3	11.9955	11.9330	11.8704	11.8079	11.7454	11.6828	11.6203	11.5578	11.4952	11.4327	11.3702	11.3076
4	11.2451	11.1888	11.1324	11.0761	11.0197	10.9634	10.9071	10.8507	10.7944	10.7380	10.6817	10.6253
5	10.5690	10.5182	10.4674	10.4165	10.3657	10.3149	10.2641	10.2132	10.1624	10.1116	10.0608	10.0099
6	9.9591	9.9128	9.8664	9.8201	9.7737	9.7274	9.6811	9.6347	9.5884	9.5420	9.4957	9.4493
7	9.4030	9.3609	9.3187	9.2766	9.2344	9.1923	9.1502	9.1080	9.0659	9.0237	8.9816	8.9394
8	8.8973	8.8591	8.8208	8.7826	8.7444	8.7061	8.6679	8.6297	8.5914	8.5532	8.5150	8.4767
9	8.4385	8.4034	8.3684	8.3333	8.2983	8.2632	8.2282	8.1931	8.1580	8.1230	8.0879	8.0529
10	8.0178	7.9853	7.9529	7.9204	7.8879	7.8554	7.8230	7.7905	7.7580	7.7255	7.6931	7.6606
11	7.6281	7.5982	7.5682	7.5383	7.5084	7.4784	7.4485	7.4186	7.3886	7.3587	7.3288	7.2988
12	7.2689	7.2414	7.2138	7.1863	7.1587	7.1312	7.1037	7.0761	7.0486	7.0210	6.9935	6.9659
13	6.9384	6.9128	6.8872	6.8616	6.8359	6.8103	6.7847	6.7591	6.7335	6.7079	6.6822	6.6566
14	6.6310	6.6072	6.5835	6.5597	6.5359	6.5121	6.4884	6.4646	6.4408	6.4170	6.3933	6.3695
15	6.3457	6.3236	6.3015	6.2795	6.2574	6.2353	6.2132	6.1911	6.1690	6.1470	6.1249	6.1028
16	6.0807	6.0601	6.0394	6.0188	5.9981	5.9775	5.9568	5.9362	5.9155	5.8949	5.8742	5.8536
17	5.8329	5.8136	5.7944	5.7751	5.7558	5.7366	5.7173	5.6980	5.6788	5.6595	5.6402	5.6210
18	5.6017	5.5837	5.5658	5.5478	5.5299	5.5119	5.4940	5.4760	5.4580	5.4401	5.4221	5.4042
19	5.3862	5.3694	5.3525	5.3357	5.3188	5.3020	5.2851	5.2683	5.2514	5.2346	5.2177	5.2009
20	5.1840	5.1681	5.1522	5.1362	5.1203	5.1044	5.0885	5.0725	5.0566	5.0407	5.0248	5.0088
21	4.9929	4.9779	4.9628	4.9478	4.9328	4.9177	4.9027	4.8877	4.8726	4.8576	4.8426	4.8275
22	4.8125	4.7983	4.7841	4.7699	4.7557	4.7415	4.7273	4.7130	4.6988	4.6846	4.6704	4.6562
23	4.6420	4.6284	4.6149	4.6013	4.5877	4.5742	4.5606	4.5470	4.5335	4.5199	4.5063	4.4928
24	4.4792	4.4663	4.4533	4.4404	4.4274	4.4145	4.4016	4.3886	4.3757	4.3627	4.3498	4.3368
25	4.3239	4.3115	4.2992	4.2868	4.2745	4.2621	4.2498	4.2374	4.2250	4.2127	4.2003	4.1880
26	4.1756	4.1637	4.1518	4.1398	4.1279	4.1160	4.1041	4.0921	4.0802	4.0683	4.0564	4.0444
27	4.0325	4.0210	4.0096	3.9981	3.9866	3.9751	3.9637	3.9522	3.9407	3.9292	3.9178	3.9063
28	3.8948	3.8838	3.8727	3.8617	3.8507	3.8396	3.8286	3.8176	3.8065	3.7955	3.7845	3.7734
29	3.7624	3.7518	3.7411	3.7305	3.7198	3.7092	3.6985	3.6879	3.6772	3.6666	3.6559	3.6453
30	3.6346	3.6243	3.6140	3.6037	3.5934	3.5831	3.5729	3.5626	3.5523	3.5420	3.5317	3.5214
31	3.5111	3.5012	3.4912	3.4813	3.4713	3.4614	3.4515	3.4415	3.4316	3.4216	3.4117	3.4017
32	3.3918	3.3822	3.3726	3.3630	3.3534	3.3438	3.3343	3.3247	3.3151	3.3055	3.2959	3.2863
33	3.2767	3.2674	3.2582	3.2489	3.2396	3.2304	3.2211	3.2118	3.2026	3.1933	3.1840	3.1748
34	3.1655	3.1565	3.1476	3.1386	3.1297	3.1207	3.1118	3.1028	3.0938	3.0849	3.0759	3.0670
35	3.0580	3.0494	3.0407	3.0321	3.0234	3.0148	3.0062	2.9975	2.9889	2.9802	2.9716	2.9629
36	2.9543	2.9460	2.9376	2.9293	2.9209	2.9126	2.9042	2.8959	2.8875	2.8792	2.8708	2.8625
37	2.8541	2.8460	2.8380	2.8299	2.8219	2.8138	2.8058	2.7977	2.7896	2.7816	2.7735	2.7655
38	2.7574	2.7496	2.7418	2.7341	2.7263	2.7185	2.7107	2.7029	2.6951	2.6874	2.6796	2.6718
39	2.6640	2.6565	2.6490	2.6415	2.6339	2.6264	2.6189	2.6114	2.6039	2.5964	2.5888	2.5813
40	2.5738	2.5665	2.5593	2.5520	2.5447	2.5375	2.5302	2.5229	2.5157	2.5084	2.5011	2.4939
41	2.4866	2.4796	2.4726	2.4656	2.4586	2.4516	2.4446	2.4375	2.4305	2.4235	2.4165	2.4095
42	2.4025	2.3957	2.3890	2.3822	2.3754	2.3686	2.3619	2.3551	2.3483	2.3415	2.3348	2.3280
43	2.3212	2.3147	2.3081	2.3016	2.2950	2.2885	2.2820	2.2754	2.2689	2.2623	2.2558	2.2492
44	2.2427	2.2364	2.2301	2.2238	2.2174	2.2111	2.2048	2.1985	2.1922	2.1859	2.1795	2.1732
45	2.1669	2.1608	2.1547	2.1486	2.1425	2.1364	2.1303	2.1241	2.1180	2.1119	2.1058	2.0997
46	2.0936	2.0877	2.0818	2.0759	2.0700	2.0641	2.0582	2.0523	2.0464	2.0405	2.0346	2.0287
47	2.0228	2.0171	2.0114	2.0057	2.0000	1.9943	1.9886	1.9829	1.9772	1.9715	1.9658	1.9601
48	1.9544	1.9489	1.9434	1.9379	1.9324	1.9269	1.9214	1.9158	1.9103	1.9048	1.8993	1.8938
49	1.8883	1.8830	1.8777	1.8724	1.8670	1.8617	1.8564	1.8511	1.8458	1.8405	1.8351	1.8298
50	1.8245	1.8194	1.8142	1.8091	1.8039	1.7988	1.7937	1.7885	1.7834	1.7782	1.7731	1.7679
51	1.7628	1.7578	1.7529	1.7479	1.7429	1.7380	1.7330	1.7280	1.7231	1.7181	1.7131	1.7082
52	1.7032	1.6984	1.6936	1.6888	1.6840	1.6792	1.6744	1.6696	1.6648	1.6600	1.6552	1.6504
53	1.6456	1.6410	1.6363	1.6317	1.6270	1.6224	1.6178	1.6131	1.6085	1.6038	1.5992	1.5945
54	1.5899	1.5854	1.5809	1.5765	1.5720	1.5675	1.5630	1.5585	1.5540	1.5496	1.5451	1.5406
55	1.5361	1.5318	1.5275	1.5231	1.5188	1.5145	1.5102	1.5058	1.5015	1.4972	1.4929	1.4885
56	1.4842	1.4800	1.4758	1.4717	1.4675	1.4633	1.4591	1.4549	1.4507	1.4466	1.4424	1.4382
57	1.4340	1.4300	1.4259	1.4219	1.4178	1.4138	1.4098	1.4057	1.4017	1.3976	1.3936	1.3895
58	1.3855	1.3816	1.3777	1.3738	1.3699	1.3660	1.3621	1.3582	1.3543	1.3504	1.3465	1.3426
59	1.3387	1.3349	1.3312	1.3274	1.3236	1.3198	1.3161	1.3123	1.3085	1.3047	1.3010	1.2972
60	1.2934	1.2898	1.2861	1.2825	1.2788	1.2752	1.2716	1.2679	1.2643	1.2606	1.2570	1.2533
61	1.2497	1.2462	1.2427	1.2391	1.2356	1.2321	1.2286	1.2250	1.2215	1.2180	1.2145	1.2109
62	1.2074	1.2040	1.2006	1.1972	1.1938	1.1904	1.1870	1.1836	1.1802	1.1768	1.1734	1.1700
63	1.1666	1.1633	1.1600	1.1567	1.1534	1.1501	1.1469	1.1436	1.1403	1.1370	1.1337	1.1304
64	1.1271	1.1239	1.1208	1.1176	1.1144	1.1112	1.1081	1.1049	1.1017	1.0985	1.0954	1.0922
65	1.0890	-	-	-	-	-	-	-	-	-	-	-

North Carolina Retirement Systems
Administration Factors based on Experience Study at December 31, 2014
Reserve and COLA Factors

Age	Reserve Numerator	Reserve Denominator	COLA Factors
15	4,955,535	349,978	2.0169
16	4,616,417	326,284	2.0100
17	4,300,260	304,190	2.0028
18	4,005,513	283,588	1.9955
19	3,730,727	264,382	1.9880
20	3,474,553	246,474	1.9803
21	3,235,732	229,776	1.9725
22	3,013,092	214,207	1.9644
23	2,805,538	199,691	1.9562
24	2,612,049	186,157	1.9478
25	2,431,675	173,539	1.9393
26	2,263,527	161,778	1.9305
27	2,106,774	150,813	1.9216
28	1,960,646	140,592	1.9124
29	1,824,422	131,062	1.9031
30	1,697,432	122,178	1.8936
31	1,579,051	113,894	1.8840
32	1,468,697	106,170	1.8741
33	1,365,827	98,970	1.8640
34	1,269,934	92,256	1.8538
35	1,180,547	85,997	1.8434
36	1,097,225	80,161	1.8328
37	1,019,558	74,721	1.8220
38	947,162	69,649	1.8110
39	879,681	64,920	1.7999
40	816,781	60,512	1.7886
41	758,153	56,402	1.7771
42	703,508	52,569	1.7655
43	652,576	48,996	1.7537
44	605,107	45,664	1.7418
45	560,867	42,557	1.7297
46	519,638	39,659	1.7175
47	481,218	36,956	1.7052
48	445,418	34,435	1.6927
49	412,061	32,083	1.6802
50	380,983	29,890	1.6675
51	352,045	27,813	1.6547
52	325,119	25,877	1.6418
53	300,069	24,071	1.6288
54	276,770	22,387	1.6156
55	255,102	20,817	1.6023
56	234,956	19,353	1.5889
57	216,229	17,988	1.5753
58	198,825	16,715	1.5617
59	182,654	15,528	1.5479
60	167,633	14,422	1.5341
61	153,685	13,390	1.5202
62	140,735	12,428	1.5062
63	128,718	11,531	1.4921
64	117,571	10,695	1.4780
65	107,234	9,914	1.4638
66	97,653	9,187	1.4496
67	88,777	8,508	1.4354
68	80,560	7,874	1.4211
69	72,956	7,283	1.4069
70	65,926	6,732	1.3927
71	59,430	6,217	1.3786
72	53,434	5,736	1.3646
73	47,904	5,286	1.3506
74	42,810	4,866	1.3367
75	38,124	4,474	1.3231
76	33,818	4,107	1.3096
77	29,869	3,763	1.2964
78	26,252	3,442	1.2834
79	22,956	3,123	1.2708
80	19,970	2,825	1.2584