



nyhart
part of FuturePlan by Ascensus®

Retirement Plan for the Employees of Rock Community Fire Protection District

**Cost Statement of Proposed
Plan Changes**

November 4, 2022



Statement Outline

- Certification
- Proposed Changes
- Reasons and Requirements
- Current and Projected Financial Impacts
- Assumptions
- Required Statements



Certification

This cost statement was prepared for Rock Community Fire Protection District to document impacts of implementing proposed pension plan changes under current consideration. The information contained in this document was prepared in order to meet the requirements of Missouri Statute 105.665 and 105.684.

Except where indicated otherwise, the results included in this cost statement are based on the same data, assumptions, methods, and provisions as the 1/1/2022 valuation. This cost statement has been prepared in accordance with generally accepted actuarial principles and practice using methods and assumptions we believe to be reasonable.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

- Plan experience differing from that anticipated by the economic or demographic assumptions;
- Changes in economic or demographic assumptions;
- Increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and
- Changes in plan provisions or applicable law.

We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement.

Neither Nyhart nor any of its employees have any relationship with the plan or its sponsor which could impair or appear to impair the objectivity of this report.

The consultants indicated below are compliant with the continuing education requirements of the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States.



Nick H. Meggos, EA, FCA



Rebecca Brown, FSA, EA

November 4, 2022

www.nyhart.com



Proposed Change

Current Structure

- Supplemental Benefit: Participants retiring under Normal or Early Retirement receive a supplemental benefit of \$500 per month until the earlier of the participant's eligibility for Medicare or the participant's death.

Proposed Structure

The only changes to the above that is being proposed is as follows, costed as if effective on January 1, 2022, and anticipated to become effective retroactively as of January 1, 2022:

- Supplemental Benefit: Active participants, and terminated participants with at least 30 years of service, retiring under Normal or Early Retirement receive a supplemental benefit of \$1000 per month until the earlier of the participant's eligibility for Medicare or the participant's death. In addition, the supplemental benefits currently being paid to retired participants will be increased to a total of \$1000 per month.



Reasons and Requirements

Reasons for the Statement

- Required by law (Missouri statute 105.665)
- Document various impacts of making changes to plan benefits
- Uniform information for every legislative body/committee before approving and implementing plan changes

Requirements of the Statement

- Immediate impacts to liabilities, normal costs, contributions and funded levels
- Must use the methods of the most recent valuation
- 10-year projections of similar information
- Assumptions and methods used to calculate the impacts
- Specific statements about the plan's ability to make necessary contributions before and after the proposed changes
- The cost statement must be available as public information for 45 days prior to implementing the changes
- The cost statement must be kept on file by the legislative body/committee and filed with the joint committee on public employee retirement



Important Comments About Projections

The cost projections contained in this report are based on the January 1, 2022 valuation results. Census data and asset information were provided by the plan sponsor and asset advisor and are summarized in the January 1, 2022 actuarial valuation report. Reasonable actuarial techniques and assumptions were used to produce the cost projections.

The following pages show cost projections under different economic scenarios. Actual results will vary from projections shown in this report, perhaps significantly, due to changes in the assumptions, plan provisions, participant demographics, interest rate movement, actual asset performance, and other actual experience of the plan. Depending on the use of this information, additional cost projections may be necessary to quantify the sensitivity of results.

Financial Impacts: 7.00% return all years

Current Provisions	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Liability	29,193,935	30,818,971	32,353,981	33,918,861	35,297,572	36,692,150	38,059,678	39,499,818	40,708,824	41,815,398	42,813,979
Assets	24,083,157	26,282,813	28,870,668	31,007,109	32,655,340	34,025,276	35,357,535	36,791,857	37,936,758	39,023,480	40,008,814
Unfunded Accrued Liability	5,110,778	4,536,158	3,483,313	2,911,752	2,642,232	2,666,874	2,702,143	2,707,961	2,772,066	2,791,918	2,805,165
Funded Percentage	82.5%	85.3%	89.2%	91.4%	92.5%	92.7%	92.9%	93.1%	93.2%	93.3%	93.4%
Normal Cost	718,732	729,119	741,912	690,765	735,904	731,037	781,763	701,502	705,316	699,185	709,871
% of Payroll	13.5%	13.7%	13.9%	12.6%	13.3%	12.8%	13.4%	11.8%	11.6%	11.4%	11.3%
Payment on Unfunded	303,919	276,082	217,304	186,491	174,050	181,031	189,426	196,514	208,798	218,921	229,752
% of Payroll	5.7%	5.2%	4.1%	3.4%	3.1%	3.2%	3.3%	3.3%	3.4%	3.6%	3.7%
Contribution BOY	1,022,651	1,005,201	959,216	877,256	909,954	912,068	971,189	898,016	914,114	918,106	939,623
Contribution MOY	1,057,838	1,039,788	992,221	907,441	941,264	943,450	1,004,606	928,915	945,567	949,696	971,954
% of Payroll	19.9%	19.6%	18.5%	16.6%	17.0%	16.5%	17.3%	15.6%	15.6%	15.4%	15.5%
Payroll	5,315,891	5,310,432	5,354,369	5,469,928	5,537,570	5,716,061	5,814,013	5,962,443	6,056,151	6,147,065	6,268,302
Proposed Provisions											
Liability	30,108,544	31,746,648	33,288,536	34,850,406	36,189,573	37,552,960	38,900,538	40,329,701	41,490,482	42,581,061	43,556,213
Assets	24,083,157	26,289,060	28,878,957	31,009,041	32,615,537	33,954,607	35,268,929	36,696,854	37,799,603	38,879,511	39,853,503
Unfunded Accrued Liability	6,025,387	5,457,588	4,409,579	3,841,365	3,574,036	3,598,353	3,631,609	3,632,847	3,690,879	3,701,550	3,702,710
Funded Percentage	80.0%	82.8%	86.8%	89.0%	90.1%	90.4%	90.7%	91.0%	91.1%	91.3%	91.5%
Normal Cost	749,755	760,583	770,564	715,968	762,036	756,524	808,720	722,752	725,754	718,824	729,408
% of Payroll	14.1%	14.3%	14.4%	13.1%	13.8%	13.2%	13.9%	12.1%	12.0%	11.7%	11.6%
Payment on Unfunded	358,308	332,163	275,088	246,030	235,430	244,261	254,584	263,631	278,004	290,247	303,264
% of Payroll	6.7%	6.3%	5.1%	4.5%	4.3%	4.3%	4.4%	4.4%	4.6%	4.7%	4.8%
Contribution BOY	1,108,063	1,092,746	1,045,652	961,998	997,466	1,000,785	1,063,304	986,383	1,003,758	1,009,071	1,032,672
Contribution MOY	1,146,189	1,130,345	1,081,631	995,098	1,031,787	1,035,220	1,099,890	1,020,323	1,038,295	1,043,791	1,068,204
% of Payroll	21.6%	21.3%	20.2%	18.2%	18.6%	18.1%	18.9%	17.1%	17.1%	17.0%	17.0%
Payroll	5,315,891	5,310,432	5,354,369	5,469,928	5,537,570	5,716,061	5,814,013	5,962,443	6,056,151	6,147,065	6,268,302
Change in Contribution											
Contribution MOY	88,351	90,557	89,410	87,657	90,523	91,770	95,284	91,408	92,728	94,095	96,250
% of Payroll	1.7%	1.7%	1.7%	1.6%	1.6%	1.6%	1.6%	1.5%	1.5%	1.5%	1.5%

- Funded percentages as 1/1/2022 satisfy 105.684 (above 80% currently above 75% after proposed changes)
- Impacts measured starting with data as of 1/1/2022, with a steady flat active population
- Accrued Liability (AL) is calculated using the projected unit credit cost method at 7.00%
- Assets are assumed to grow at **7.00% per annum**
- The unfunded liability was amortized over 30 years beginning in 1/1/2018. The amortization period decreases by 1 each year until reaching 15 years in 2033 at which time new sources of gains and losses will be amortized in a separate amortization base over 15 years. Amortizations are determined as a level percent of pay assuming a 3% annual growth in total payroll.
- Actual contributions are assumed to be equal to the recommended contributions shown above, interest has been added to reflect anticipated middle of year (MOY) timing.

Financial Impacts: -15% return in 2022 and 7.00% thereafter

Current Provisions	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Liability	29,193,935	30,818,971	32,353,981	33,918,861	35,297,572	36,692,150	38,059,678	39,499,818	40,708,824	41,815,398	42,813,979
Assets	24,083,157	25,146,782	26,274,978	27,028,388	27,375,699	27,532,634	28,881,987	30,348,749	31,542,931	32,697,393	33,770,669
Unfunded Accrued Liability	5,110,778	5,672,189	6,079,003	6,890,473	7,921,873	9,159,516	9,177,691	9,151,069	9,165,893	9,118,005	9,043,310
Funded Percentage	82.5%	81.6%	81.2%	79.7%	77.6%	75.0%	75.9%	76.8%	77.5%	78.2%	78.9%
Normal Cost	718,732	729,119	741,912	690,765	735,904	731,037	781,763	701,502	705,316	699,185	709,871
% of Payroll	13.5%	13.7%	13.9%	12.6%	13.3%	12.8%	13.4%	11.8%	11.6%	11.4%	11.3%
Payment on Unfunded	303,919	345,224	379,233	441,318	521,832	621,759	643,377	664,082	690,393	714,965	740,677
% of Payroll	5.7%	6.5%	7.1%	8.1%	9.4%	10.9%	11.1%	11.1%	11.4%	11.6%	11.8%
Contribution BOY	1,022,651	1,074,343	1,121,145	1,132,083	1,257,736	1,352,796	1,425,140	1,365,584	1,395,709	1,414,150	1,450,548
Contribution MOY	1,057,838	1,111,309	1,159,721	1,171,036	1,301,012	1,399,343	1,474,176	1,412,571	1,443,733	1,462,808	1,500,459
% of Payroll	19.9%	20.9%	21.7%	21.4%	23.5%	24.5%	25.4%	23.7%	23.8%	23.8%	23.9%
Payroll	5,315,891	5,310,432	5,354,369	5,469,928	5,537,570	5,716,061	5,814,013	5,962,443	6,056,151	6,147,065	6,268,302
Proposed Provisions											
Liability	30,108,544	31,746,648	33,288,536	34,850,406	36,189,573	37,552,960	38,900,538	40,329,701	41,490,482	42,581,061	43,556,213
Assets	24,083,157	25,154,880	26,287,496	27,036,802	27,344,499	27,472,544	28,803,933	30,264,244	31,416,193	32,563,731	33,625,520
Unfunded Accrued Liability	6,025,387	6,591,768	7,001,040	7,813,604	8,845,074	10,080,416	10,096,605	10,065,457	10,074,289	10,017,330	9,930,693
Funded Percentage	80.0%	79.2%	79.0%	77.6%	75.6%	73.2%	74.0%	75.0%	75.7%	76.5%	77.2%
Normal Cost	749,755	760,583	770,564	715,968	762,036	756,524	808,720	722,752	725,754	718,824	729,408
% of Payroll	14.1%	14.3%	14.4%	13.1%	13.8%	13.2%	13.9%	12.1%	12.0%	11.7%	11.6%
Payment on Unfunded	358,308	401,192	436,754	500,443	582,645	684,271	707,795	730,438	758,816	785,483	813,357
% of Payroll	6.7%	7.6%	8.2%	9.1%	10.5%	12.0%	12.2%	12.3%	12.5%	12.8%	13.0%
Contribution BOY	1,108,063	1,161,775	1,207,318	1,216,411	1,344,681	1,440,795	1,516,515	1,453,190	1,484,570	1,504,307	1,542,765
Contribution MOY	1,146,189	1,201,749	1,248,859	1,258,265	1,390,949	1,490,370	1,568,695	1,503,191	1,535,651	1,556,067	1,595,849
% of Payroll	21.6%	22.6%	23.3%	23.0%	25.1%	26.1%	27.0%	25.2%	25.4%	25.3%	25.5%
Payroll	5,315,891	5,310,432	5,354,369	5,469,928	5,537,570	5,716,061	5,814,013	5,962,443	6,056,151	6,147,065	6,268,302
Change in Contribution											
Contribution MOY	88,351	90,440	89,138	87,229	89,937	91,027	94,519	90,620	91,918	93,259	95,390
% of Payroll	1.7%	1.7%	1.7%	1.6%	1.6%	1.6%	1.6%	1.5%	1.5%	1.5%	1.5%

- Funded percentages as 1/1/2022 satisfy 105.684 (above 80% currently above 75% after proposed changes)
- Impacts measured starting with data as of 1/1/2022, with a steady flat active population
- Accrued Liability (AL) is calculated using the projected unit credit cost method at 7.00%
- Assets are assumed to grow at **-15.00% in 2022 and 7.00% per annum thereafter**
- The unfunded liability was amortized over 30 years beginning in 1/1/2018. The amortization period decreases by 1 each year until reaching 15 years in 2033 at which time new sources of gains and losses will be amortized in a separate amortization base over 15 years. Amortizations are determined as a level percent of pay assuming a 3% annual growth in total payroll.
- Actual contributions are assumed to be equal to the recommended contributions shown above, interest has been added to reflect anticipated middle of year (MOY) timing.

Financial Impacts: 7.00% returns all years, 4% Salary Scale

Current Provisions	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Liability	30,071,010	31,831,680	33,515,289	35,246,781	36,814,234	38,413,708	40,005,455	41,689,177	43,159,289	44,534,163	45,813,993
Assets	24,083,157	26,396,956	29,120,593	31,411,726	33,229,973	34,797,590	36,344,887	38,021,373	39,412,613	40,764,313	42,030,066
Unfunded Accrued Liability	5,987,853	5,434,724	4,394,696	3,835,055	3,584,261	3,616,118	3,660,568	3,667,804	3,746,676	3,769,850	3,783,927
Funded Percentage	80.1%	82.9%	86.9%	89.1%	90.3%	90.6%	90.8%	91.2%	91.3%	91.5%	91.7%
Normal Cost	772,943	793,387	813,520	768,684	825,902	827,718	888,872	810,357	825,012	826,679	846,649
% of Payroll	14.4%	14.7%	14.8%	13.6%	14.3%	13.8%	14.5%	12.8%	12.8%	12.6%	12.6%
Payment on Unfunded	356,075	330,771	274,159	245,626	236,103	245,467	256,614	266,168	282,207	295,603	309,916
% of Payroll	6.6%	6.1%	5.0%	4.3%	4.1%	4.1%	4.2%	4.2%	4.4%	4.5%	4.6%
Contribution BOY	1,129,018	1,124,158	1,087,679	1,014,310	1,062,005	1,073,185	1,145,486	1,076,525	1,107,219	1,122,282	1,156,565
Contribution MOY	1,167,865	1,162,838	1,125,104	1,049,210	1,098,547	1,110,111	1,184,900	1,113,566	1,145,316	1,160,898	1,196,360
% of Payroll	21.8%	21.5%	20.5%	18.5%	19.1%	18.5%	19.3%	17.6%	17.8%	17.7%	17.8%
Payroll	5,367,502	5,404,617	5,494,995	5,658,117	5,758,568	5,990,874	6,130,460	6,336,995	6,442,026	6,565,871	6,719,143
Proposed Provisions											
Liability	30,985,619	32,759,356	34,449,845	36,178,327	37,706,234	39,274,518	40,846,315	42,519,060	43,940,948	45,299,827	46,556,227
Assets	24,083,157	26,403,204	29,128,883	31,413,660	33,190,172	34,726,922	36,256,282	37,926,369	39,275,456	40,620,342	41,874,751
Unfunded Accrued Liability	6,902,462	6,356,152	5,320,962	4,764,667	4,516,062	4,547,596	4,590,033	4,592,691	4,665,492	4,679,485	4,681,476
Funded Percentage	77.7%	80.6%	84.6%	86.8%	88.0%	88.4%	88.8%	89.2%	89.4%	89.7%	89.9%
Normal Cost	803,966	824,851	842,172	793,888	852,034	853,205	915,829	831,606	845,449	846,317	866,186
% of Payroll	15.0%	15.3%	15.3%	14.0%	14.8%	14.2%	14.9%	13.1%	13.1%	12.9%	12.9%
Payment on Unfunded	410,464	386,852	331,944	305,165	297,483	308,696	321,772	333,286	351,414	366,930	383,429
% of Payroll	7.6%	7.2%	6.0%	5.4%	5.2%	5.2%	5.2%	5.3%	5.5%	5.6%	5.7%
Contribution BOY	1,214,430	1,211,703	1,174,116	1,099,053	1,149,517	1,161,901	1,237,601	1,164,892	1,196,863	1,213,247	1,249,615
Contribution MOY	1,256,216	1,253,395	1,214,515	1,136,869	1,189,070	1,201,880	1,280,184	1,204,974	1,238,045	1,254,992	1,292,612
% of Payroll	23.4%	23.2%	22.1%	20.1%	20.6%	20.1%	20.9%	19.0%	19.2%	19.1%	19.2%
Payroll	5,367,502	5,404,617	5,494,995	5,658,117	5,758,568	5,990,874	6,130,460	6,336,995	6,442,026	6,565,871	6,719,143
Change in Contribution											
Contribution MOY	88,351	90,557	89,411	87,659	90,523	91,769	95,284	91,408	92,729	94,094	96,252
% of Payroll	1.6%	1.7%	1.6%	1.5%	1.6%	1.5%	1.6%	1.4%	1.4%	1.4%	1.4%

- Funded percentages as 1/1/2022 satisfy 105.684 (above 80% currently above 75% after proposed changes)
- Impacts measured starting with data as of 1/1/2022, with a steady flat active population
- Accrued Liability (AL) is calculated using the projected unit credit cost method at 7.00%
- Assets are assumed to grow at **7.00% per annum**
- The unfunded liability was amortized over 30 years beginning in 1/1/2018. The amortization period decreases by 1 each year until reaching 15 years in 2033 at which time new sources of gains and losses will be amortized in a separate amortization base over 15 years. Amortizations are determined as a level percent of pay assuming a 3% annual growth in total payroll.
- Actual contributions are assumed to be equal to the recommended contributions shown above, interest has been added to reflect anticipated middle of year (MOY) timing.

Financial Impacts: -15% return in 2022 and 7.00% thereafter, 4% Salary Scale

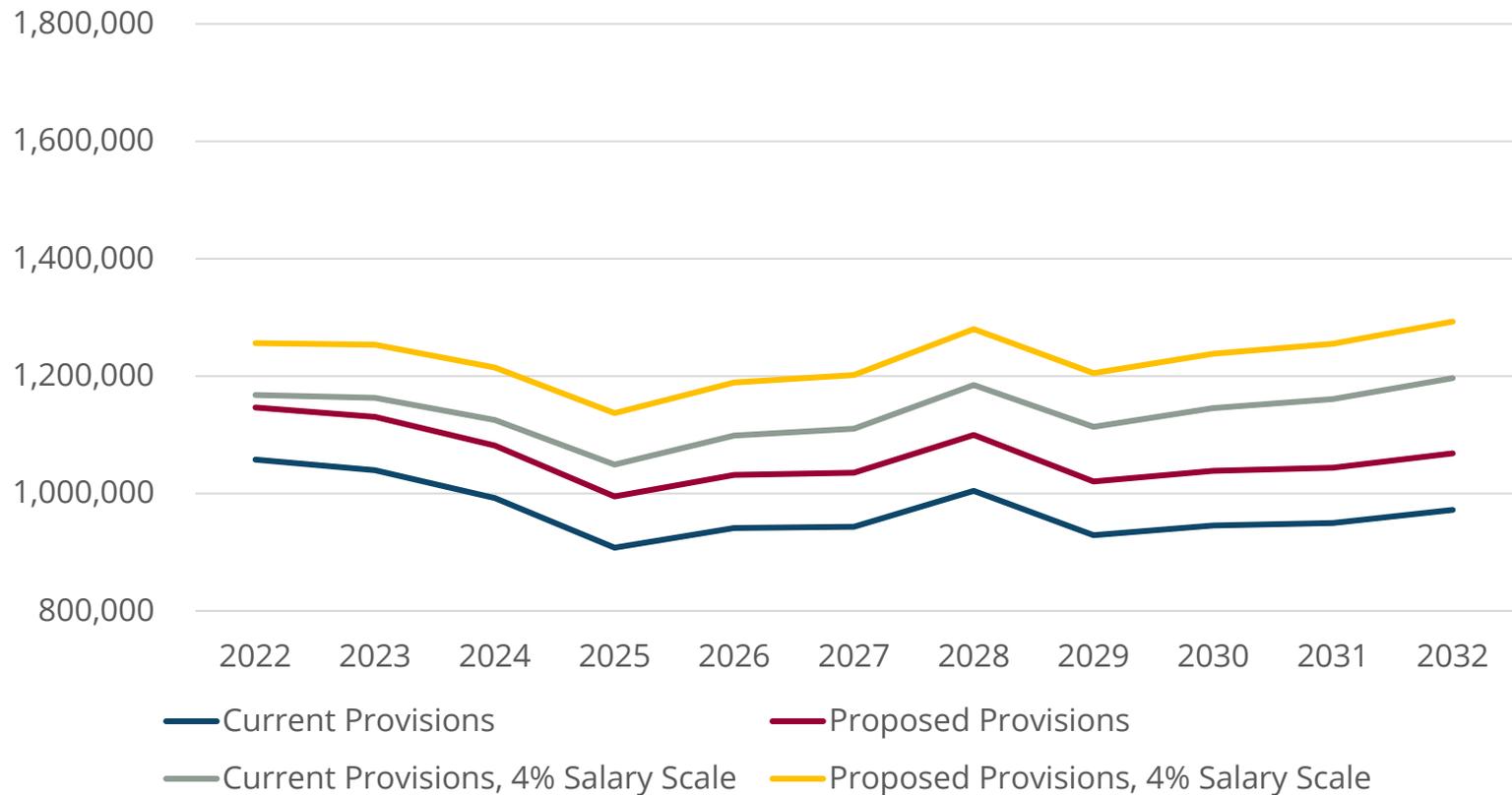
Current Provisions	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Liability	30,071,010	31,831,680	33,515,289	35,246,781	36,814,234	38,413,708	40,005,455	41,689,177	43,159,289	44,534,163	45,813,993
Assets	24,083,157	25,260,918	26,524,886	27,432,978	27,950,296	28,304,904	29,869,295	31,578,220	33,018,742	34,438,182	35,791,875
Unfunded Accrued Liability	5,987,853	6,570,762	6,990,403	7,813,803	8,863,938	10,108,804	10,136,160	10,110,957	10,140,547	10,095,981	10,022,118
Funded Percentage	80.1%	79.4%	79.1%	77.8%	75.9%	73.7%	74.7%	75.7%	76.5%	77.3%	78.1%
Normal Cost	772,943	793,387	813,520	768,684	825,902	827,718	888,872	810,357	825,012	826,679	846,649
% of Payroll	14.4%	14.7%	14.8%	13.6%	14.3%	13.8%	14.5%	12.8%	12.8%	12.6%	12.6%
Payment on Unfunded	356,075	399,913	436,090	500,455	583,888	686,198	710,568	733,740	763,806	791,650	820,845
% of Payroll	6.6%	7.4%	7.9%	8.8%	10.1%	11.5%	11.6%	11.6%	11.9%	12.1%	12.2%
Contribution BOY	1,129,018	1,193,300	1,249,610	1,269,139	1,409,790	1,513,916	1,599,440	1,544,097	1,588,818	1,618,329	1,667,494
Contribution MOY	1,167,865	1,234,359	1,292,607	1,312,808	1,458,298	1,566,007	1,654,474	1,597,226	1,643,486	1,674,013	1,724,869
% of Payroll	21.8%	22.8%	23.5%	23.2%	25.3%	26.1%	27.0%	25.2%	25.5%	25.5%	25.7%
Payroll	5,367,502	5,404,617	5,494,995	5,658,117	5,758,568	5,990,874	6,130,460	6,336,995	6,442,026	6,565,871	6,719,143
Proposed Provisions											
Liability	30,985,619	32,759,356	34,449,845	36,178,327	37,706,234	39,274,518	40,846,315	42,519,060	43,940,948	45,299,827	46,556,227
Assets	24,083,157	25,269,017	26,537,405	27,441,397	27,919,101	28,244,818	29,791,246	31,493,719	32,892,007	34,304,523	35,646,730
Unfunded Accrued Liability	6,902,462	7,490,339	7,912,440	8,736,930	9,787,133	11,029,700	11,055,069	11,025,341	11,048,941	10,995,304	10,909,497
Funded Percentage	77.7%	77.1%	77.0%	75.9%	74.0%	71.9%	72.9%	74.1%	74.9%	75.7%	76.6%
Normal Cost	803,966	824,851	842,172	793,888	852,034	853,205	915,829	831,606	845,449	846,317	866,186
% of Payroll	15.0%	15.3%	15.3%	14.0%	14.8%	14.2%	14.9%	13.1%	13.1%	12.9%	12.9%
Payment on Unfunded	410,464	455,881	493,611	559,579	644,700	748,710	774,985	800,096	832,228	862,168	893,524
% of Payroll	7.6%	8.4%	9.0%	9.9%	11.2%	12.5%	12.6%	12.6%	12.9%	13.1%	13.3%
Contribution BOY	1,214,430	1,280,732	1,335,783	1,353,467	1,496,734	1,601,915	1,690,814	1,631,702	1,677,677	1,708,485	1,759,710
Contribution MOY	1,256,216	1,324,799	1,381,745	1,400,037	1,548,234	1,657,034	1,748,992	1,687,846	1,735,403	1,767,271	1,820,258
% of Payroll	23.4%	24.5%	25.1%	24.7%	26.9%	27.7%	28.5%	26.6%	26.9%	26.9%	27.1%
Payroll	5,367,502	5,404,617	5,494,995	5,658,117	5,758,568	5,990,874	6,130,460	6,336,995	6,442,026	6,565,871	6,719,143
Change in Contribution											
Contribution MOY	88,351	90,440	89,138	87,229	89,936	91,027	94,518	90,620	91,917	93,258	95,389
% of Payroll	1.6%	1.7%	1.6%	1.5%	1.6%	1.5%	1.5%	1.4%	1.4%	1.4%	1.4%

- Funded percentages as 1/1/2022 satisfy 105.684 (above 80% currently above 75% after proposed changes)
- Impacts measured starting with data as of 1/1/2022, with a steady flat active population
- Accrued Liability (AL) is calculated using the projected unit credit cost method at 7.00%
- Assets are assumed to grow at **-15.00% in 2022 and 7.00% per annum thereafter**
- The unfunded liability was amortized over 30 years beginning in 1/1/2018. The amortization period decreases by 1 each year until reaching 15 years in 2033 at which time new sources of gains and losses will be amortized in a separate amortization base over 15 years. Amortizations are determined as a level percent of pay assuming a 3% annual growth in total payroll.
- Actual contributions are assumed to be equal to the recommended contributions shown above, interest has been added to reflect anticipated middle of year (MOY) timing.



Comparisons of Contributions: 7.00% return all years

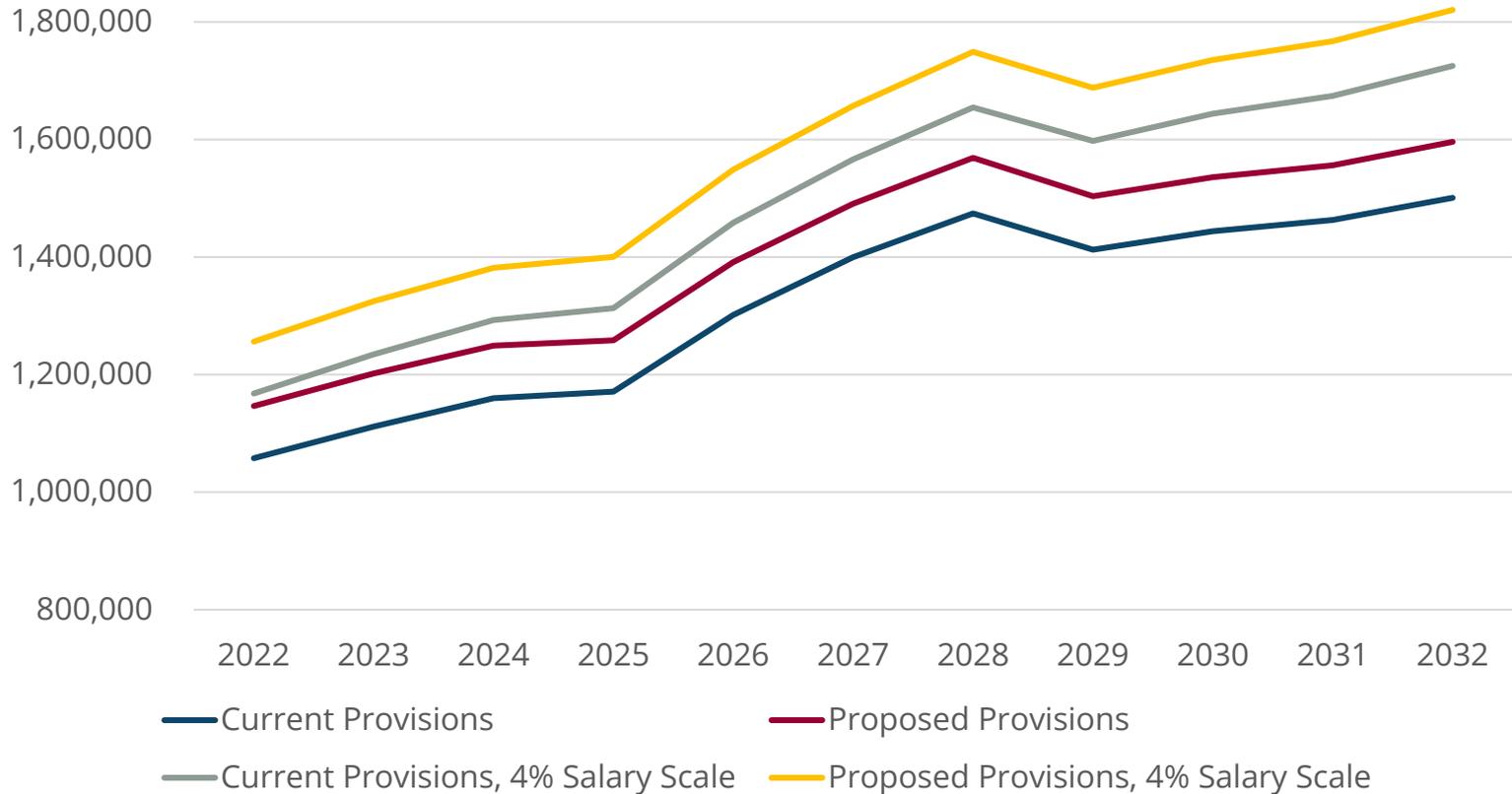
Recommended Contributions





Comparisons of Contributions: -15% return in 2022 and 7.00% thereafter

Recommended Contributions





Assumptions

The following assumptions all match the January 1, 2022 valuation report as required:

- Investment Return: 7.00%
- Salary Scale: 3.00%
- Mortality:
 - Healthy: Pub-S 2010 Mortality Table with generational improvements from 2010 based on MP-21
 - Survivors: Pub-2010 Continuing Survivor Mortality Table with generational improvements from 2010 based on MP-21
- Retirement – Employees are assumed to retire at the following rates:

Age	<u>Years of Service*</u>			
	< 30	30	31-34	35
55	0%	50%	25%	100%
56	0%	50%	25%	100%
57	0%	50%	25%	100%
58	0%	50%	25%	100%
59	0%	50%	25%	100%
60 +	100%	100%	100%	100%

* 5 years of service are required for eligibility



Assumptions

- Withdrawal: T-2 Actuaries Table. Sample Rates:

<u>Age</u>	<u>Rate</u>
25	5.3%
35	4.7%
40	3.5%
45	1.8%
55	0.0%

- Disability: None assumed

Additional assumptions made to provide projections:

- Active participant count flat over the projection period
- Actual contributions are assumed to be equal to the recommended contributions
- Alternative scenario with salary scale of 4.00%



Required Statements

- Current Contributions
 - The plan has made and continues to make contributions well exceeding the contributions as calculated and recommended under current plan provisions.

- Proposed Contributions
 - To our knowledge, the additional contributions described as part of the proposed benefit changes will be met based on recent contributions levels. These funds will be provided by designated tax revenue and general funds. The projected improvement of the funding ratio of the plan under the proposed changes over the next 10 years demonstrates this outcome.

- Assumptions
 - The actuarial assumptions and methods used for the valuation were chosen by the employer. In our opinion, all actuarial assumptions and methods used in both the valuation and projections are individually reasonable, and in aggregate produce results which are reasonable.



Required Statements

➤ Actuarial Funding Methods

- The actuarial cost method used in the valuation was the projected unit credit cost method.
- Under this method, the normal cost is the sum of the individual normal costs for all participants. For an active participant, the individual normal cost is the present value at the current age of the projected benefit at the assumed retirement age, based on the actuarial assumptions, divided by the participant's expected years of credited service at that age. For a non-active participant, the normal cost is zero.
- The actuarial accrued liability is the sum of the individual accrued liabilities for all plan participants. For an active participant, the individual accrued liability is the product of the normal cost and the total years of credited service at the current age. For non-active participants, the individual accrued liability is the present value at the current age of future benefits. The unfunded actuarial accrued liability equals the actuarial accrued liability less the actuarial value of assets.
- The total annual contribution of the plan is calculated as the normal cost plus an amount to amortize the initial unfunded actuarial accrued liability. The unfunded liability was amortized over 30 years beginning in 1/1/2018. The amortization period will decrease by 1 each year until reaching 15 years in 2033 at which time new sources of gains and losses will be amortized in a separate amortization base over 15 years. Amortizations are determined as a level percent of pay assuming a 3% annual growth in total payroll.