



**CITY GUIDE TO  
USC & COLAs**

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# City Guide to USC and COLAs

## What Is Updated Service Credit? (USC)

Updated Service Credit (USC) is an optional benefit provision within the TMRS menu of plan design options that cities can adopt. USC is intended to help keep retirement benefits from being eroded over time. In calculating USC, TMRS looks at the changes in a member's salary during his or her career as well as any changes the city has made to its TMRS plan, such as the member deposit rate or the city's matching ratio. In some cases, USC will raise the member's monthly retirement payment. USC is one of the features that make TMRS a "hybrid" defined benefit (DB) retirement plan.

## What Are Annuity Increases? (COLAs)

An Annuity Increase — also called a Cost of Living Adjustment (COLA) — is an option chosen by cities to increase annuities for retirees. The amount of the COLA varies from year to year depending on the rate of inflation as measured by the annual Consumer Price Index (CPI). The CPI for All Urban Consumers (CPI-U) is the index most often reported by the national media and is the index used by TMRS with certain adjustments. The city chooses the adjustment amount of 30%, 50%, or 70% of the CPI increase, if there is one. A COLA benefits retirees by acting like a "raise" to counter the effects of inflation.

## USC and COLA Options for Cities

Both USC and COLAs were originally added to the TMRS Act in 1975. They often are adopted together. **A city that grants COLAs to retirees must also provide USC, but a city may provide USC without granting a COLA.**

USC and COLAs are granted by a city-adopted ordinance. Requests for a model ordinance to adopt USC/COLAs may be made through the TMRS Regional Managers (Travel Team) or the Deputy Executive Director. The ordinance to adopt USC/COLAs is effective January 1 of the following year, and can be adopted on a one time (ad hoc) or an annually repeating basis. These benefit enhancements may be added in any year.

# USC – A Benefit for Active Members

## Why Adopt Updated Service Credit?

USC is a credit granted to an employee by the adopting city. This credit takes into account plan changes the city may have adopted, and salary increases the employee has been granted over the course of his or her career. Although USC may increase the value of a member's retirement benefit, it does not affect the amount shown in the member's account or the amount the member receives if the account is refunded. USC only becomes part of the member's benefit if he or she retires and draws an annuity.

## How Does USC Benefit Employees?

USC provides a valuable benefit for employees because it may, in some cases, increase the amount of the retirement annuity. In practical terms, it provides additional benefits for long tenure and advancement during the employee's career.

## How Does a City Adopt USC?

Since USC is an optional feature that requires additional funding from the city, it must be adopted by city ordinance. A city that decides to adopt USC chooses the percentage of USC it will provide (50%, 75%, or 100% of the calculated credit), whether or not to include transfer credits, and whether it will adopt USC on an "annually repeating" or "ad hoc" basis (see discussions of "transfer USC" on page 10 and of "ad hoc" benefits, pages 16-18).

## How Does USC Affect City Contribution Rates?

Adopting the benefit will almost always result in an increase in the city's contribution rate. Since USC can increase a member's retirement benefit, the cost of the USC becomes a pension liability that must be paid for by city contributions out of the city's account in the Benefit Accumulation Fund (BAF). The BAF is defined in the glossary of this publication.

The monthly contribution your city makes for TMRS benefits is composed of two parts: a Normal Cost (NC) and a Prior Service (PS) amount that will amortize any Unfunded/Overfunded Actuarial Accrued Liability (UAAL/OAAL) over a specified amortization period (generally 25 or 30 years), both expressed as a percentage of payroll. The NC, in simple terms, is the annual cost of benefits attributable to the current year of service for active members. The UAAL arises from benefit increases that were not previously funded, actuarial experience, and other factors.

Adopting USC, either on an ad hoc or an annually repeating basis, increases both the city's Normal Cost and its Prior Service Cost. The amount of the contribution rate increase will vary based on the salary and service history of the city's workforce. **If a city adopts an ad hoc USC, the cost increase will be amortized on a level dollar basis over a 15-year period.**

The cost of USC depends on many factors, including the other options the city has chosen, the demographics of its workforce, salary history, tenure, and other considerations. A city should contact TMRS to determine the potential change in its contribution rate for adopting USC. (See the Plan Change Study shown in Table 1 on page 22 for an example.)

## **How Does USC Work?**

### **USC Study Date**

The USC study date is always the 31st of the December that falls 13 months before the effective date. An actuarial study is performed each year to determine the cost of USC. Member account balances and salary information at the time of the study date are included in the USC calculation. Plan provisions as of the effective date are also used in calculating this benefit. The study date is also used to determine member eligibility for USC.

**EXAMPLE - If a city adopts USC effective January 1, 2013, the study date will be December 31, 2011.**

### **Effective Date**

The effective date for USC to be credited is always the January 1 following the city's adoption of the ordinance granting the benefit. For cities with annually repeating USC, each subsequent January 1 is the USC effective date.

## Eligibility

To be eligible for USC, the employee must have earned 36 months of credit in TMRS for service with the city that is adopting USC. This credit must have been earned as of the USC study date. Prior service credit and current service credit are included in determining a member's eligibility for USC. Restricted Prior Service Credit and Military Service Credit (with the exception of USERRA credit) are not included.

Former employees of a city that adopts USC are also eligible. Contributing and noncontributing members are eligible as long as they have at least 36 months of service credit as of the study date. USC may benefit former employees because even though the average salary of noncontributing members remains the same in the USC calculation, plan changes could provide additional USC.

## Rate of USC Growth

The USC calculation assumes a 3% annual interest rate. However, once the credit is awarded, the USC balance receives an interest credit of 5% every year.

If a later USC calculation produces an amount that is greater than the USC amount previously calculated, plus interest credited, the previous USC amount is replaced with the new USC amount. If the calculation produces an amount that is less than the previous USC amount plus interest credited, the USC is not reduced. Once the USC has been earned, it is never taken away. If a member were to take a lower paying position, any USC earned will remain with the member (assuming the member retires).

## Key Points about USC

- ◆ **Not every employee receives USC.** Some employees may not receive USC because their actual reserve totals (deposits, interest, matching funds) are larger than the USC calculation. The USC calculation assumes an historic 3% annual interest credit, and the employee account grows using a minimum annual interest credit of 5%. (The 3% interest assumption is a lower interest rate than what members' accounts have earned in the past.) Also, if an employee has had no significant salary increases or has not experienced any plan changes, there would typically be no USC granted.

- ◆ **Buybacks may increase the amount.** If an employee is eligible to buy back previously forfeited TMRS service, the buyback may increase the amount of the USC because it increases the amount of time figured into the calculation. Employees considering buyback should request retirement estimates to determine how beneficial the buyback would be to them.

**NOTE** – Updated Service Credit *may not be as significant a factor* for employees in cities that have been at a 7% employee contribution rate and have offered the maximum city match for a long time or if a city has never changed the basis of its plan. Since these cities have not made additional improvements, only those employees who receive relatively large pay increases may receive USC.

## **Transfer USC**

Cities may choose to include a “transfer” feature in the USC calculation. The transfer provision in the USC calculation works just like the regular calculation but also factors in any service the employee may have with previous TMRS cities. For example, for a contributing employee who has previously worked for another TMRS city and did not refund or retiree his or her account balance upon leaving the city, the USC calculation uses the total service for both cities in determining the hypothetical and actual reserve account balances.

The USC (if any) that was previously granted from the first city is still that city’s obligation, but any increase in the calculation is the obligation of the new city. Transfer USC can have a significant employer cost impact when an employee transfers from a city with a lower deposit rate and/or matching ratio to a new city with a higher rate and/or match. As a result, the transfer feature may make a city’s USC cost (and overall contribution rate) higher. TMRS can provide an estimate of the city’s cost with and without a transfer feature. Remember that an employee must have 36 months of service credit with the new city as of the study date before he or she becomes eligible for USC in that city.

## How is USC Calculated for Each Eligible Employee?

The USC calculation is computed in January for every eligible member in cities that provide this benefit and uses the following assumptions:

- ◆ That the member's average updated service compensation (see number 1 below) and the city's current TMRS plan of benefits have been in effect throughout the member's career.
  - ◆ That during the entire career, a fixed annual interest rate of 3% is applied in the calculation.
1. The average updated service compensation is calculated, based on the member's 36 monthly TMRS deposits received immediately preceding the study date. The highest and lowest monthly deposits are disregarded and the average is computed based on the remaining 34 deposits.
  2. A hypothetical reserve\* amount is calculated assuming the member contributed a percentage of the average monthly salary calculated in #1 above into their TMRS account during their tenure in that city. The percentage used is the city's current employee deposit rate. Assuming the deposits earned an annual interest rate of 3%, the hypothetical total is then matched based on the city's current matching ratio.
  3. If the hypothetical reserves\* are greater than the member's actual reserves\* as of the study date, the difference is accrued for the benefit of the member based on the USC percentage adopted by the city (50, 75, or 100%).

\* The reserves include member deposits, interest, city matching funds, and other credit funded by the city.

**FOR EXAMPLE:**

\$ 40,000 hypothetical reserves
\$ 38,000 actual reserves
<hr/>
\$ 2,000 difference
× 100% (or other USC percentage adopted by city)
<hr/>
\$ 2,000 USC accrued for the benefit of the member

4. If the hypothetical reserves are not greater than the member's actual reserves, the member 1) keeps any previous USC granted (which earns 5% annual interest), and 2) no additional USC is granted.

**NOTE:** *Cities may request estimates for each member to determine how each person's benefits will be affected with the adoption of USC.*

# COLAs – A Benefit for Retirees

## Why Adopt COLAs?

COLAs are a plan enhancement to help retirees with increases in their cost of living after retirement. The COLA, also called an Annuity Increase, benefits retirees most in periods of high inflation by acting like a “raise” to counter the effects of inflation.

If a city council wishes to adopt COLAs for its retirees, the provision must be adopted in conjunction with USC. A city chooses the percentage of the change in the CPI<sup>1</sup> it will grant as an annuity increase (either 30%, 50%, or 70%). Like USC, COLAs may be adopted either year-to-year or on an annually repeating basis.

**NOTE:** The COLA is **NOT** in any way related to any pay raise for active employees with the city. If active employees receive pay raises, that does not automatically mean that retirees will receive COLAs.

## How Do COLAs Affect City Contribution Rates?

The monthly contribution your city makes for TMRS benefits is composed of two parts: 1) a Normal Cost (NC) and 2) a Prior Service amount that will amortize any Unfunded/Overfunded Actuarial Accrued Liability (UAAL/OAAL) over a specified amortization period (generally 25 or 30 years). The NC is, in simple terms, the annual cost of benefits attributable to the current year of service for active members. The UAAL arises from benefit increases that were not previously funded, actuarial experience, and other factors.

Adopting an ad hoc COLA increases (decreases) your city’s UAAL (OAAL). **Ad hoc COLAs are funded on a level dollar basis over a 15-year period.** In other words, the portion of your city’s UAAL (OAAL) that is attributable to an ad hoc COLA will be amortized over 15 years, while the remainder of your city’s UAAL (OAAL) will be amortized over a longer period. Adopting an annually

1. The Consumer Price Index (CPI) is a monthly report from the Bureau of Labor Statistics that measures the economic environment. The index is determined by the costs of goods in certain categories the consumer would use; e.g., food and beverage, housing, apparel, transportation. CPI-U is the Consumer Price Index for all Urban Consumers (the index TMRS uses).

repeating COLA increases both your city's Normal Cost (because the projected future COLAs are being prefunded for all current members as well as retirees) and Prior Service Cost. Annually repeating benefits are funded over your city's normal funding period, generally 25 or 30 years.

## **COLAs are Tied to Inflation**

The CPI rate is a measure of the change over time in the general level of prices of goods and services. Inflation can be described as a decline in the real value of money — a loss of purchasing power. When inflation rates rise higher, COLA calculations will rise.

The reverse happens when prices are low and dropping. Because COLAs are designed to help hedge against inflation, in periods when the inflation rate is low, the COLA will also be low. It is important to note that, if the economy ever enters a true period of “deflation,” when the CPI changes in a negative direction, the retirees’ annuity benefit will not be decreased.

The change in the Consumer Price Index (CPI-U) since 1980 is shown in Figure 1 on page 15.

## **CPI Measurement**

TMRS applies the CPI calculation effective January 1 of each year. The CPI change for a particular calendar year is measured from the December immediately preceding the effective date of retirement through the December that is 13 months prior to the COLA effective date. For example, if a member retired in June 2002, the change in the CPI from December 2001 to December 2010 is used for the January 2012 calculation.

## **How Is the COLA Calculated?**

To determine the amount of the COLA for each eligible annuitant, TMRS first calculates the cumulative change in the CPI over the annuitant's period of retirement (the December before retirement through the December that is 13 months before the effective date of the COLA). Next, the cumulative change in the CPI is multiplied by the percentage adopted by the city (30%, 50%, or 70%). This amount is then multiplied by the annuitant's original benefit amount. The result of this calculation is then added to the original annuity to arrive at the new monthly benefit. See the Example COLA Calculation on page 13. The example shows how the CPI change affects the annuity.

## Example COLA Calculation

John Doe retires in October 1985 with an annuity of \$324.98. Due to past increase adoption(s) by the city, Mr. Doe's December 2011 annuity is \$564.04. Assuming his only city of employment adopted a 70% increase effective January 2012, we would calculate Mr. Doe's increase as follows:

<b>CPI Value for December 2010</b> (13 months prior to the date of the increase):	<b>219.179</b>
<b>CPI Value for December 1984</b> (December before year of retirement):	<b>105.3</b>
<b>Calculated cumulative change in the CPI :</b> $(219.179 - 105.3) / 105.3 =$	<b>1.0815</b>
<b>Increase over original annuity:</b> $(1.0815 \times 70\%) \times 324.98 =$	<b>\$246.03</b>

Mr. Doe's new annuity will be the **larger** of:

◆ Original annuity	+	calculated increase	
\$324.98	+	\$246.03	<b>= \$571.01</b>

*OR*

◆ His current annuity	<b>\$564.04</b>
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If Mr. Doe was drawing an annuity from multiple cities, this calculation would be performed separately for each city's component of his total annuity, for each city that had adopted a cost of living adjustment.

See Appendix A on page 25 for a cumulative COLA calculation with plan Annuity Increase changes.

## **Retiree Notification**

Each year, TMRS sends retirees a Retirement Account Statement at the end of January. For retirees whose cities have chosen to provide a COLA, this statement provides information about the amount of the COLA, if any. In years when the CPI is low, COLAs will be very small. If a city chooses to suspend an annually repeating COLA, TMRS will notify the city's retirees by letter the first year the COLA is not granted.

## **COLA Amounts Vary from Year to Year**

The "typical" actual COLA increase is variable, but on average, the CPI increases around 3% a year (3% is also TMRS' actuarially assumed inflation rate). So the "typical" annual increase would be either around 2.1% (which is 70% of the 3% increase), around 1.5% (50% of the 3% increase) or around 1% (30% of the 3% increase). Not only does the CPI change each year, but in periods of low inflation there may be no COLA at all.

See Appendix B on page 26 for December CPI-U values since 1946.

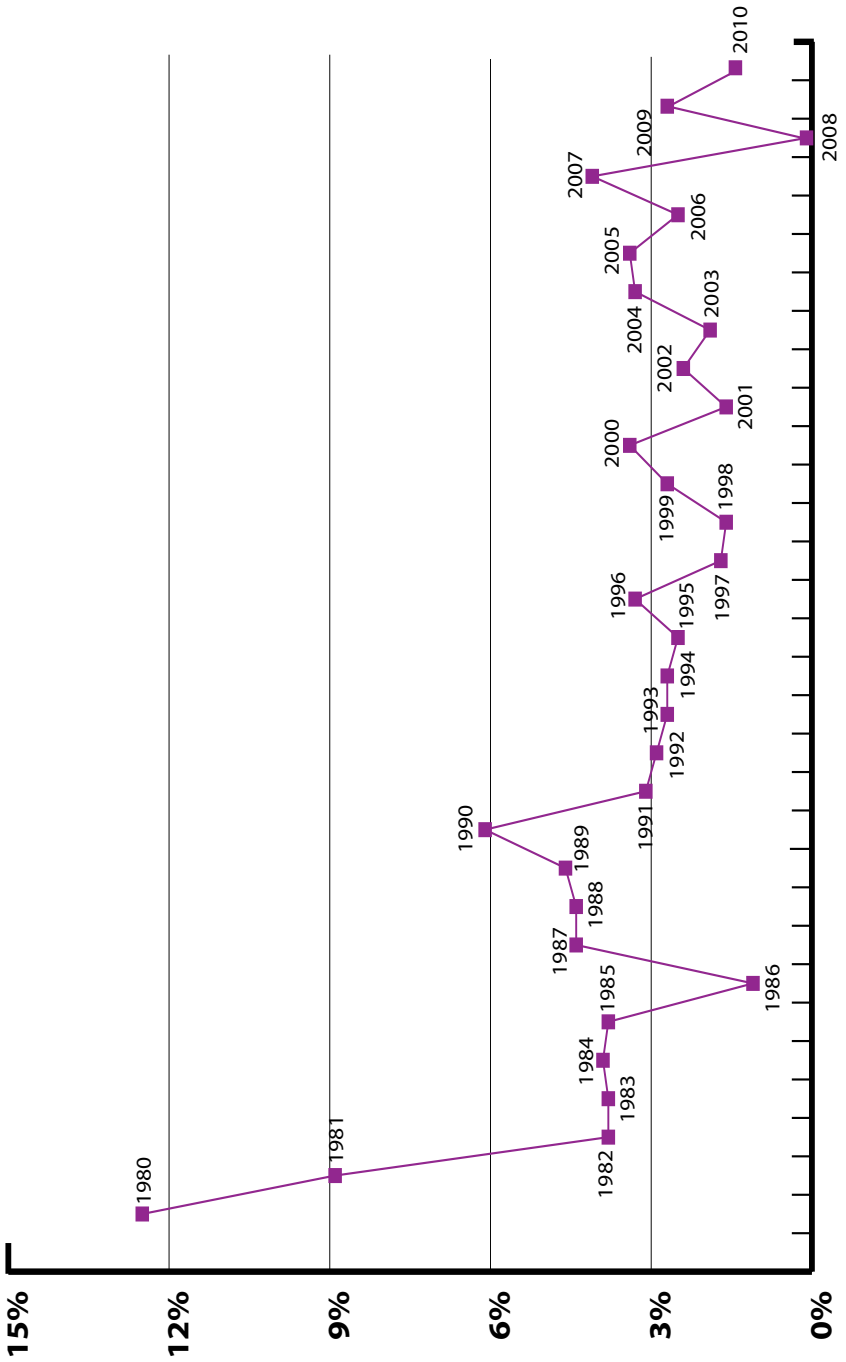


Figure 1: Percentage Change in CPI-U.

# USC and COLAs – Funding and Adoption

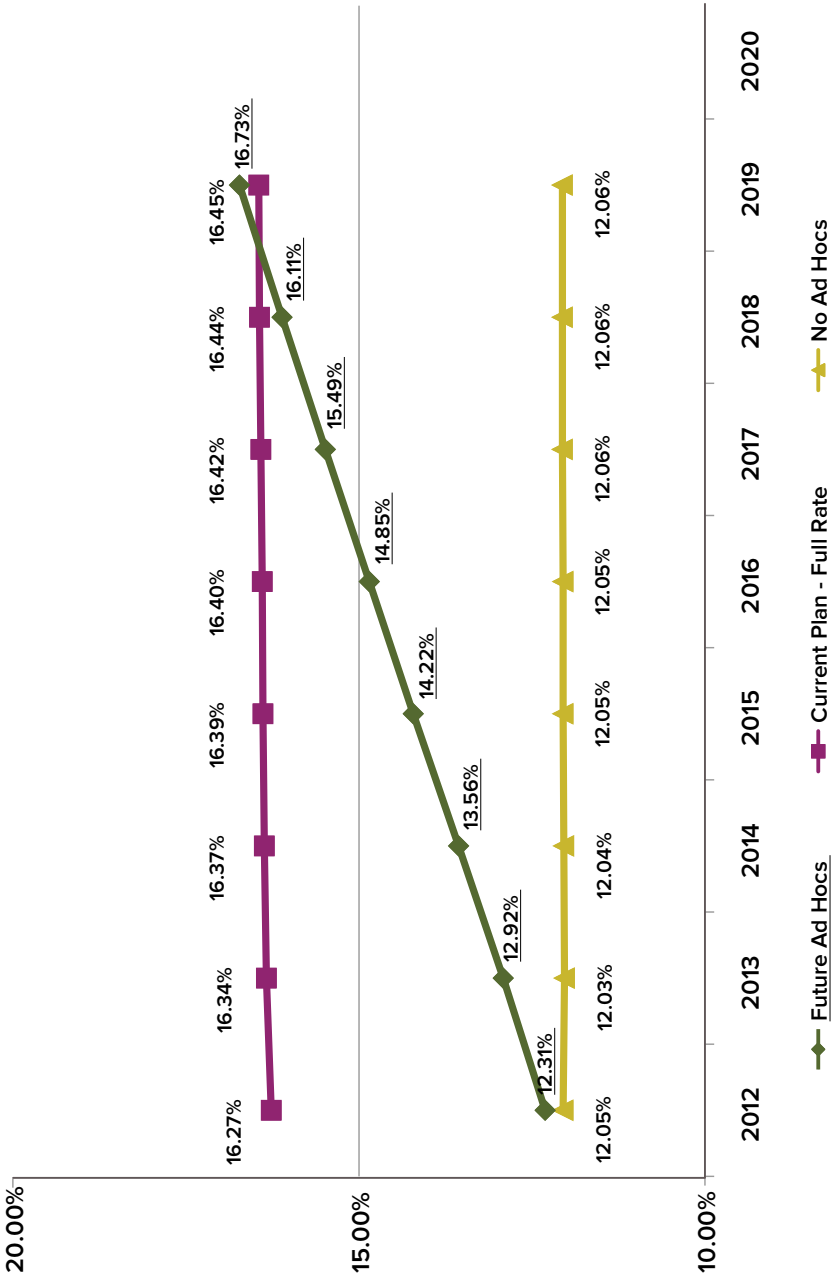
The actuarial cost method that TMRS uses, Projected Unit Credit, advance funds all benefits. TMRS changed from traditional Unit Credit to Projected Unit Credit in 2007 to ensure that annually repeating benefits remain soundly funded. This change caused significant contribution rate increases for many cities with annually repeating benefits. Many of these cities elected to use an eight-year phase-in to gradually reach their full contribution rate.

To reduce their contribution rates, a few cities have considered changing from repeating benefits to ad hoc. TMRS discourages this practice unless the benefit will be truly applied in an “ad hoc” manner. If the same ad hoc benefits are approved by the council every year, then the long-term costs are essentially the same as an annually repeating benefit that is not being advance funded. A city that grants ad hoc benefits each year is likely to see its contribution rate rise and its funded ratio (a common measure of funding status) decrease, because the benefit is not being advance funded.

## **Board Policy for Ad Hoc Funding**

Ad hoc benefits are one-time enhancements. In ad hoc form, these benefits are not advance funded as projected future benefits. The Actuarial Standards of Practice (ASOP) recommends that plan enhancements be adequately funded to make payments for benefits as they become due. Ad hoc benefits effective on or after January 1, 2011, will be funded over a 15-year amortization period using level dollar funding. This policy allows for their financing as a “stand alone” benefit with a positive net cash flow (“contributions in” minus “benefits out” are greater than 0).

Each adoption of ad hoc benefits will increase the city contribution rate. As these incremental rate increases “stack” on top of each other, a city that consistently adopts ad hoc benefits will eventually have a contribution rate that exceeds the repeating benefit rate (see Figure 2 on page 17). Paying for the liability associated with ad hoc benefits over a shorter period of time will increase a city’s contribution rate.



**Figure 2: Increase in Rate over Time with Ad Hoc Benefits (USC and COLAs), Using 15-Year Amortization with Level Dollar Funding.**

## **Ad Hoc Effect on Phase-In Rates**

Cities that are paying a “phase-in” rate may have another consideration if they wish to change from annually repeating to ad hoc benefits. Those cities that saw a contribution rate increase greater than 0.5% between 2008 and 2009, due to the actuarial changes TMRS made, were granted an eight-year “phase-in” period to reach the full contribution level. Cities that turn off annually repeating benefits and adopt ad hoc increases are likely to see their contribution rate fall below the level that triggered eligibility for the eight-year phase-in. A city that turns off annually repeating benefits and then re-adopts them in a future year will almost certainly see an increase in the contribution rate. If a city in this circumstance wishes to re-adopt annually repeating benefits in a future year, that city will not be eligible for the phase-in and will be required to pay the full contribution rate.

## **What Happens if the City Changes Options?**

### **Adding Option or Increasing Percentage**

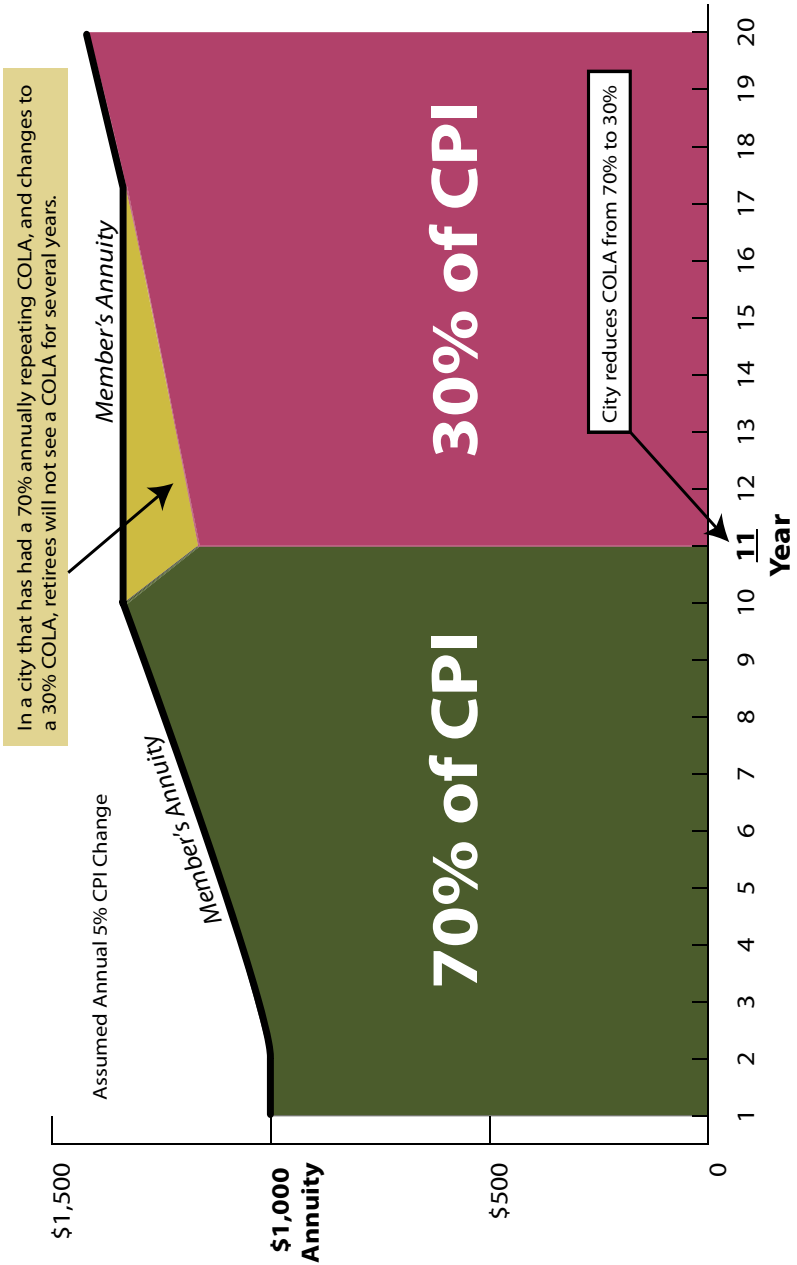
For a city to adopt USC/COLAs (either ad hoc or repeating) for a particular year, TMRS must receive the ordinance by December 31 of the preceding year. If a city is interested in changing to annually repeating benefits from ad hoc (or vice versa), or in changing the percentage of the CPI or USC, TMRS will prepare the comparisons to show the impact on a city’s contribution rate (see Tables 1 and 2 on pages 22 and 23 for samples of Plan Change Studies) or on individual members’ benefits.

### **Decreasing or Eliminating USC/COLAs**

A city ordinance is required for a city to discontinue annually repeating USC/COLAs. If USC is terminated, COLAs must also be terminated. If a city modifies USC by lowering the rate (changing to a lower percentage) or by turning off transfer USC, the city may — but does not have to — make changes to COLAs.

In some situations, cities are considering reducing the percentage of CPI used for their COLAs. Figure 3 on page 19 shows that even under normal economic conditions, the drop in COLA percentage creates a “gap” that can last for several years before the retiree again receives a COLA. The chart in Figure 4 on page 20 shows that (except for retirees receiving their first annuity increase) if a city drops to a lower percentage, a retiree will not see a COLA the first year, even though the city still offers one.

**TMRS COLAs are calculated on the cumulative change in CPI for all the years since retirement.**



**Figure 3: Effect of Reduction in USC Percentage.**

**Mr. Smith****Date Retired: 12/31/1999****Annuity Increase Provision: 70% Auto****Original Annuity \$1,126.52**

<b>Year</b>	<b>30%</b>	<b>50%</b>	<b>70%</b>
Jan-00	1,126.52	1,126.52	1,126.52
Jan-01	1,135.59	1,141.64	1,147.69
Jan-02	1,147.35	1,161.23	1,175.11
Jan-03	1,152.91	1,170.51	1,188.11
Jan-04	1,161.57	1,184.94	1,208.31
Jan-05	1,168.58	1,196.63	1,224.67
Jan-06	1,180.96	1,217.25	1,253.54
Jan-07	1,194.36	1,239.58	1,284.81
Jan-08	1,204.67	1,256.77	1,308.87
Jan-09	1,221.65	1,285.07	1,348.49
Jan-10	1,222.05	1,285.73	1,349.42
Jan-11	1,233.84	1,305.39	1,376.94

Higher annuity will apply if city drops to a lower percentage of CPI.

**Figure 4: Comparison of COLA Percentages on Annuity.**

COLA calculations are based on the change in CPI applied to the original annuity and not the current annuity. When the COLA percentage is reduced, the change in the CPI for the entire period is multiplied by the lower percentage, which will result in a lower projected monthly benefit amount. When the new projected amount is lower than the existing benefit, the retiree will simply keep the existing benefit.

**EXAMPLE**

Referring to the figures in the table in Figure 4, assume Mr. Smith's city has a 70% COLA, and the city adopted a 50% COLA in December 2003. This change would affect the January 2004 annuity. Mr. Smith's annuity at the time of the change (2003) was \$1,188.11. The 2004 50% COLA calculation was \$1,184.94, which was a few dollars less than his former annuity. Since the higher annuity applies, Mr. Smith's annuity did not change in 2004. Assuming the city continued with the 50% of CPI COLA, the 2005 annuity increased to \$1,196.63.

## **Effect of Changes on Employees and Retirees**

COLAs and USC are enhancements that cities may offer to attract and retain employees. It is important for a city to work with TMRS to understand the cost impact of changes under consideration. If a prospective change is made, the city still needs to meet the obligations for employees who have previously received USC, and it is possible that due to those promised benefits, the actual cost savings to the city may not be as expected.

These decisions are entirely at the discretion of each city. Subject to the requirements of the TMRS Act, the city council can adopt an ordinance at any time to change its TMRS plan, but TMRS strongly encourages cities to work with TMRS staff to assess the effects of changes on employees, retirees, and city contribution rates.

## **Getting Information from TMRS for Comparisons**

TMRS urges cities that are considering making changes to their benefit offerings (either decreasing, adding, or changing from annually repeating to ad hoc, or vice versa) to contact the city's TMRS Regional Manager. The Regional Manager can help assess the city's needs and arrange visits to discuss the changes with city staff, employees, or city councils. TMRS can show a city the effect of any proposed change on the city's contribution rate and on the benefit amounts of current employees and retirees. Contact information for each Regional Manager may be found on the TMRS website or by e-mailing [communications@tmrs.com](mailto:communications@tmrs.com).

In addition, TMRS' staff actuary, Leslee Hardy (512-225-3760 or [lhardy@tmrs.com](mailto:lhardy@tmrs.com)), is available to assist cities with detailed actuarial projections.

**Table 1: Effect of USC and COLAs (Ad Hoc and Repeating) on City Rate and Liability – Sample City**

Plan Provisions	Proposed Plans	
	1	2
Deposit Rate	7.00%	7.00%
Matching Ratio	2 to 1	2 to 1
Updated Service Credit	100% (ad hoc)	100% (Repeating)
Transfer USC**	Yes	Yes
Annuity Increase	0%	70% (Repeating)
20 Year/Any Age Ret.	Yes	Yes
Vesting	5 years	5 years
<b>Contribution Rates</b>		
Normal Cost Rate	<u>2012</u> 4.92%	<u>2012</u> 8.94%
Prior Service Rate	<u>2.49%</u>	<u>7.02%</u>
Retirement Rate	<b>6.72</b>	<b>15.96%</b>
Supplemental Death Rate	0.15% (A & R)	0.15% (A & R)
Total Rate	<b>6.87%</b>	<b>16.11%</b>
Unfunded Actuarial Liability	\$9,774,456	\$42,066,689
Amortization Period	25 years	25 years
Funded Ratio	91.2%	70.6%
Phase-In Total Rate	N/A	N/A



**Plan Change Study**  
**Sample City 99999**

**Proposed Plans**

**GRID 2012**  
For Informational Purposes Only  
Effective Date - January 1, 2012  
Report Date - December 7, 2011

\*\*This is the addition to the Initial Prior Service Rate for USC for transfers. There were 26 eligible transfer employees on the valuation date.

\* This sample is for illustrative purposes only. Each city's percentage will vary.

**Table 2: Effect of COLAs (Repeating, Ad Hoc, and None) on City Rate and Liability – Sample City**



**Plan Change Study**  
**Sample City 11111**

**Proposed Plans**

**GRID 2012**

For Informational Purposes Only  
 Effective Date - January 1, 2012  
 Report Date - December 7, 2011

Plan Provisions	Current	1	2	3	4
Deposit Rate	7.00%	7.00%	7.00%	7.00%	7.00%
Matching Ratio	2 to 1	2 to 1	2 to 1	2 to 1	2 to 1
Updated Service Credit	100% (Repeating)	100% (Repeating)	100% (Repeating)	100% (Repeating)	100% (Repeating)
Transfer USC**	Yes	Yes	Yes	Yes	Yes
Annuity Increase	70% (Repeating)	50% (Repeating)	30% (Repeating)	0%	70% (ad hoc)
20 Year/Any Age Ret.	Yes	Yes	Yes	Yes	Yes
Vesting	5 years	5 years	5 years	5 years	5 years
<b>Contribution Rates</b>	<b>2012</b>	<b>2012</b>	<b>2012</b>	<b>2012</b>	<b>2012</b>
Normal Cost Rate	13.05%	12.03%	11.10%	9.82%	9.82%
Prior Service Rate	5.55%	3.95%	2.43%	0.67%	0.80%
Retirement Rate	<b>18.60%</b>	<b>15.98%</b>	<b>13.53%</b>	<b>10.49%</b>	<b>10.62%</b>
Supplemental Death Rate	0.00% (None)	0.00% (None)	0.00% (None)	0.00% (None)	0.00% (None)
Total Rate	<b>18.60%</b>	<b>15.98%</b>	<b>13.53%</b>	<b>10.49%</b>	<b>10.62%</b>
Unfunded Actuarial Liability	\$118,741,840	\$84,542,608	\$52,227,536	\$14,679,732	\$16,250,178
Amortization Period	30 years	30 years	30 years	30 years	30 years
Funded Ratio	81.3%	86.0%	90.8%	97.2%	97.0%
Phase-In Total Rate	17.67%	N/A	N/A	N/A	N/A

\*\*This is the addition to the Initial Prior Service Rate for USC for transfers. There were 268 eligible transfer employees on the valuation date.

\* This sample is for illustrative purposes only. Each city's percentage will vary.

**Table 3: Effect of USC and COLA Changes on Employees**

	<b>Current Employees</b>	<b>Future Employees</b>	<b>Retired Employees</b>
<b>Adopt USC / COLAs (options are 30%, 50%, and 70% of CPI)</b>	USC calculated on all employees. Those eligible could see increase in benefit at retirement.	If eligible (under annually repeating option) potential benefit increase. No impact if ad hoc adoption.	COLA may or may not be adopted with USC. Can potentially increase size of annuity.
<b>Change from Ad Hoc USC to Annually Repeating</b>	Eligible employees could see increase in benefit at retirement; calculated annually	Eligible employees could see increase in benefit at retirement.	N/A unless city also changes COLAs to annually repeating; then benefit is calculated annually
<b>Adopt Transfer USC</b>	Transfer USC calculated for contributing employees with service in other TMRS cities – potential benefit increase.	Transfer USC calculated for contributing employees with service in other TMRS cities (annually repeating adoption) – potential benefit increase. No impact if ad hoc.	N/A
<b>Cancel USC</b>	No future USC calculations made. For employees previously granted USC, 5% annual interest will continue to be credited.	Will not receive benefit.	Will not receive COLA benefit after date of USC cancellation (COLAs must be cancelled if USC is cancelled)
<b>Cancel COLAs</b>	Will not receive this benefit after retirement.	Will not receive this benefit after retirement.	Will cease receiving this benefit.
<b>Reduce USC Percentage (reduction options are 50% or 75% of USC calculation)</b>	USC calculated at lower rate; if eligible, USC increase will be smaller; previously granted USC will continue to earn 5% interest.	USC calculated at lower rate; if eligible, employee would see a potential benefit increase at retirement.	N/A if city reduces USC only; city may, but doesn't have to, reduce COLA percentage along with USC percentage.
<b>Reduce COLA percentage (reduction options are 30% or 50% of CPI)</b>	N/A until retirement.	N/A until retirement	Reduces the percentage increase figured each year for the COLA. Retirees previously receiving larger COLA percentages may not see an increase for one or more years.
<b>Change from Annually Repeating to Ad Hoc</b>	USC calculated in years granted; potential benefit increase. USC will only apply when city makes ad hoc adoption. Previously granted USC will continue receiving 5% annual interest.	USC calculated in years granted; potential benefit increase. USC will only apply when city makes ad hoc adoption.	City must move COLAs to ad hoc as well, or eliminate them. Future increases will only occur when city makes ad hoc adoption.

## Appendix A: COLA Calculation with Plan Changes — Cumulative Example

Individual retires effective June 30, 2007 with a monthly benefit of \$1,000. City from which the individual retired has adopted a 70% of CPI COLA (Annuity Increase) on an annually repeating basis.

1. January 1, 2008 — Individual is ineligible for COLA because the December before retirement (12-2006) and the December that is 13 months prior to the effective date (12-2006) are the same date; therefore, there is no change in the CPI for this individual.
2. January 1, 2009 — Individual was eligible for an annuity increase calculated as follows:
  - a. CPI-U factor for 12-2006 = 201.8
  - b. CPI-U factor for 12-2007 = 210.036
  - c.  $210.036 - 201.8 / 201.8 \times 100 = 4.0813\%$
  - d.  $4.0813\% \times 70\%$  of change in CPI = 2.86%
  - e. Original annuity \$1,000 x 2.86% cumulative annuity increase = \$28.60
  - f. New monthly annuity amount = \$1,028.60 (cannot be less than previous year)
  - g. Increase over previous year = \$28.60
3. January 1, 2010 — Individual was eligible for an annuity increase calculated as follows:
  - a. CPI-U factor for 12-2006 = 201.8
  - b. CPI-U factor for 12-2008 = 210.228
  - c.  $210.228 - 201.8 / 201.8 \times 100 = 4.1764\%$
  - d.  $4.1764\% \times 70\%$  of change in CPI = 2.92%
  - e. Original annuity \$1,000 x 2.92% cumulative annuity increase = \$29.20
  - f. New monthly annuity amount = \$1,029.20 (cannot be less than previous year)
  - g. Increase over previous year = \$0.60
4. January 1, 2011 — **City reduces COLA percentage from 70% to 30%**. Individual was not eligible for an annuity increase, calculated as follows:
  - a. CPI-U factor for 12-2006 = 201.8
  - b. CPI-U factor for 12-2009 = 215.949
  - c.  $215.949 - 201.8 / 201.8 \times 100 = 7.0114\%$
  - d.  $7.0114\% \times 30\%$  of change in CPI = 2.10%
  - e. Original annuity \$1,000 x 2.10% cumulative annuity increase = \$21.00
  - f. New monthly annuity amount would be \$1,021.00, but annuity cannot be less than previous year, so annuity remains \$1,029.20
  - g. Increase over previous year = \$0.00
5. January 1, 2012 — Individual is not eligible for an annuity increase ,calculated as follows:
  - a. CPI-U factor for 12-2006 = 201.8
  - b. CPI-U factor for 12-2010 = 219.179
  - c.  $219.179 - 201.8 / 201.8 \times 100 = 8.6120\%$
  - d.  $8.6120\% \times 30\%$  of change in CPI = 2.58%
  - e. Original annuity \$1,000 x 2.58% cumulative annuity increase = \$25.80
  - f. New monthly annuity amount would be \$1,025.80, but annuity cannot be less than previous year, so annuity remains \$1,029.20
  - g. Increase over previous year = \$0.00

## Appendix B: History of December CPI-U Values

The Consumer Price Index for All Urban Consumers (CPI-U) is provided by the United States Department of Labor. Below is the history of December CPI-U values that may be used in the COLA formula.

### CPI-U

1946: 21.5	1968: 35.5	1990: 133.8
1947: 23.4	1969: 37.7	1991: 137.9
1948: 24.1	1970: 39.8	1992: 141.9
1949: 23.6	1971: 41.1	1993: 145.8
1950: 25.0	1972: 42.5	1994: 149.7
1951: 26.5	1973: 46.2	1995: 153.5
1952: 26.7	1974: 51.9	1996: 158.6
1953: 26.9	1975: 55.5	1997: 161.3
1954: 26.7	1976: 58.2	1998: 163.9
1955: 26.8	1977: 62.1	1999: 168.3
1956: 27.6	1978: 67.7	2000: 174.0
1957: 28.4	1979: 76.7	2001: 176.7
1958: 28.9	1980: 86.3	2002: 180.9
1959: 29.4	1981: 94.0	2003: 184.3
1960: 29.8	1982: 97.6	2004: 190.3
1961: 30.0	1983: 101.3	2005: 196.8
1962: 30.4	1984: 105.3	2006: 201.8
1963: 30.9	1985: 109.3	2007: 210.036
1964: 31.2	1986: 110.5	2008: 210.228
1965: 31.8	1987: 115.4	2009: 215.949
1966: 32.9	1988: 120.5	2010: 219.179
1967: 33.9	1989: 126.1	

To figure the percentage increase between any two points, subtract the index for the earlier year from that of the later year. Divide that number by the index for the earlier year, and then multiply by 100 by moving the decimal point two places to the right.

## **Contact TMRS if You Have Additional Questions**

To analyze the effect of USC adoption or other changes to your city plan provisions, contact TMRS and ask for a Plan Change Study, like those shown on pages 22 and 23. This study will be based on your city's actual actuarial valuation. Our staff will look at your city plan options using the TMRS Actuarial Grid, a modeling tool that shows the effects of plan changes on a city's contribution rate.

### **City Plan Questions**

**TMRS Travel Team • [communications@tmrs.com](mailto:communications@tmrs.com)**

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# GLOSSARY

**Actuarial Funding Method** – Technique used in allocating the present value of future benefits payable to all plan participants to valuation years. In 2007, TMRS changed its actuarial funding method from Unit Credit to Projected Unit Credit in order to begin pre-funding annually repeating USC and COLA benefits.

**Ad hoc benefit** – A benefit that must be examined and either approved or not approved annually by city council ordinance.

**Amortization** – the process of funding a benefit gradually by periodic increments (such as paying off ad hoc benefits under a 15-year amortization schedule) in order to pay the cost of a benefit. Most TMRS benefits are amortized over a closed 25- or 30-year period.

**Annually repeating benefit** – A benefit, USC or a COLA, which is automatically adopted for members or retirees year after year. A repeating benefit implies long-term application or part of a standing benefits package.

**Annuity** – In TMRS, the series of payments, guaranteed for a fixed number of years or the lifetime of the retiree. The money is paid out of the BAF, in which the retiree’s deposits and interest credits, the city’s matching funds, and the System’s investment earnings have accumulated.

**Annuity Increase** – See COLA.

**BAF** – An acronym for “Benefit Accumulation Fund,” the main TMRS retirement trust fund. Each city maintains a separate account in the BAF. Member and city contributions are paid into the BAF and benefits are paid to retirees from the BAF assets of their respective city.

**COLA** – An acronym for cost-of-living adjustment. A COLA payment is an adjustment based on the consumer price index (CPI) that permanently increases the retirement annuity. Also known as an “Annuity Increase.”

# GLOSSARY

**CPI, CPI-U** – A measure of the average change over time in the prices paid by consumers for consumer goods and services such as food, housing, apparel, transportation, medical care, and education. The Consumer Price Index for All Urban Consumers (CPI-U) is provided by the United States Bureau of Labor Statistics, which produces CPI figures for the U.S as a whole and for major urban areas. See Appendix B for CPI-U values since 1946.

**Level Dollar Amortization** – A funding approach that resembles the funding of a traditional mortgage, where the payments are equal to each other over the amortization period. This type of amortization is an accelerated funding approach when compared to level percent of payroll amortization.

**Level Percent Amortization** – A funding approach where the contribution rate remains level when expressed as a percent of overall payroll, but where the dollar amount of payments increase incrementally over the amortization period commensurate with annual changes in payroll.

**Normal Cost Contribution Rate** – Actuarial present value of benefits allocated to each valuation year by the actuarial cost method, expressed as a percentage of the covered payroll. Normal Cost information is included in the City Rate Letter.

**Overfunded Actuarial Accrued Liability (OAAL)** – The positive difference between the actuarial accrued liability and the assets held as of the actuarial valuation date.

**Phase-in Rate** – Cities with increases of more than 0.5% of pay in the 2007 valuation due to actuarial method or assumption changes had the opportunity to phase in to their full rate over the eight-year period from 2009 through 2016, inclusive.

# GLOSSARY

**Pre-Funding** – Also called advance funding. In actuarial terms, this means that the plan is funded so that all plan enhancements such as USC and COLAs are fully funded as they become due.

**Transfer USC** – An enhancement to USC, adoptable by city ordinance. The transfer provision in the USC calculation works like the regular calculation but also factors in any service the employee may have with previous TMRS cities.

**Unfunded Actuarial Accrued Liability (UAAL)** – The difference between the actuarial accrued liability and the assets held as of the actuarial valuation date. The fact that a retirement plan has a UAAL is not necessarily an indication that a plan is not properly funded. The UAAL is funded systematically in an actuarially acceptable manner over a reasonable period of time. See also OAAL.

**USC Calculation** – This calculation determines a hypothetical account balance by:

1. Using the average updated service compensation, calculated based on the member's 36 monthly TMRS deposits immediately preceding the study date, and dropping the highest and lowest months
2. Calculating how much would have accrued under the current plan of benefits
3. Earning 3% annual interest

If this hypothetical balance is greater than the member's actual balance, the difference, multiplied by the percentage adopted by the city, is added to the employee's total reserves at retirement.



