



## **County of Napa**

**BARTEL**  
ASSOCIATES, LLC

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### **Retiree Healthcare Plan January 1, 2006 Actuarial Study Executive Summary**

November 2006

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**Executive Summary**  
**County of Napa**  
**January 1, 2006 Retiree Healthcare Actuarial Study**

On June 21, 2004, the Governmental Accounting Standards Board approved Statement No. 45 (GASB 45), Accounting Standards for *Other* (than pensions) *Post Employment Benefits* (OPEB). This report is based on the financial reporting standards established under GASB 45. We understand the County is required to implement GASB 45 for its' 2007/08 fiscal year<sup>1</sup>. Historically the County has accounted for retiree healthcare benefits as they were paid, with estimated approximately \$1.5 million for 2006/07. GASB 45 will require the County account for this promise on an accrual basis (as benefits are earned).

**STUDY RESULTS**

**Funded Status:** The plan funded status is equal to the Actuarial Liability (see definitions and assumptions section below) less plan assets. When assets equal liabilities, a plan is considered on track for funding.

To consider a retiree healthcare plan funded for GASB 45 purposes, assets must be set aside in a trust that cannot, legally, be used for any purpose other than to pay retiree healthcare benefits. The County's retiree healthcare plan is not currently funded. This has important implications on the discount rate assumption used to calculate plan liabilities (see definitions and assumptions section below). We have prepared valuation results under 2 scenarios:

- No Pre-funding – Benefits paid from the County's general fund which is assumed to earn a 4.25% long term rate of return
- Pre-funding – Contributions made to an irrevocable trust with diversified assets which are assumed to earn a 7.0% long term return. Ultimately, the long term return assumption would be based on the plan's actual investment mix.

The following table summarizes the County's January 1, 2006 funded status (000s omitted):

|                            | <b>No<br/>Pre-funding<br/>4.25%</b> | <b>Pre-funding<br/>7.0%</b> |
|----------------------------|-------------------------------------|-----------------------------|
| ■ Actuarial Liability (AL) |                                     |                             |
| • Actives                  | \$ 35,141                           | \$ 24,711                   |
| • Retirees                 | <u>16,096</u>                       | <u>12,350</u>               |
| • Total                    | \$ 51,237                           | \$ 37,061                   |
| ■ Plan Assets              | <u>0</u>                            | <u>0</u>                    |
| ■ Unfunded AL (UAL)        | \$ 51,237                           | \$ 37,061                   |

**Annual Required Contribution (ARC):** GASB 45 doesn't require an agency make up any shortfall (unfunded liability) immediately, nor does it allow an immediate credit for any excess assets. Instead, the difference is amortized over time. An agency's Annual Required Contribution is nothing more than the current employer Normal Cost, plus the amortized unfunded liability or less the amortized excess assets. Simply put, this contribution is the value of benefits earned during the

<sup>1</sup> Assumes the County was a Phase I GASB 34 implementer.



**Executive Summary**  
**County of Napa**  
**January 1, 2006 Retiree Healthcare Actuarial Study**  
**Page 2**

year plus something to move the plan toward being on track for funding. For the County's valuation we calculated the ARC as the Normal Cost (NC) plus a 20-year amortization (as a level percent of pay amortization) of the Unfunded Actuarial Liability (000s omitted):

|  | <b>No<br/>Pre-funding<br/>4.25%</b> | <b>Pre-funding<br/>7.0%</b> |
|--|-------------------------------------|-----------------------------|
| ■ Normal Cost  | \$ 3,525                            | \$ 2,097                    |
| ■ UAL Amortization   | <u>2,922</u>                        | <u>2,725</u>                |
| ■ Annual Required Contribution   | \$ 6,447                            | \$ 4,822                    |
| ■ Annual Required Contribution as a<br>percentage of estimated 2006/07 payroll | 8.0%                                | 6.0%                        |

**Net OPEB Obligation (NOO):** An agency's Net OPEB Obligation is the historical (from implementation)<sup>2</sup> difference between actual contributions made and the Annual Required Contributions<sup>3</sup>. If an agency has always contributed the required contribution, then the Net OPEB Obligation equals zero. However, an agency has not "made" the contribution unless it has been set aside and cannot legally be used for any other purpose.

**Annual OPEB Cost (AOC):** GASB 45 requires the Annual OPEB Cost equal the Annual Required Contribution, except when an agency has a Net OPEB Obligation at the beginning of the year. When that happens an agency's Annual OPEB Cost will equal the ARC, adjusted for expected interest on the Net OPEB Obligation and reduced by an amortization of the Net OPEB Obligation (000s omitted):

|                                       | <b>No<br/>Pre-funding<br/>4.25%</b> | <b>Pre-funding<br/>7.0%</b> |
|---------------------------------------|-------------------------------------|-----------------------------|
| ■ Annual Required Contribution        | \$ 6,447                            | \$ 4,822                    |
| ■ Interest on Net OPEB Obligation     | 0                                   | 0                           |
| ■ Amortization of Net OPEB Obligation | <u>0</u>                            | <u>0</u>                    |
| ■ Total Annual OPEB Cost              | \$ 6,447                            | \$ 4,822                    |

<sup>2</sup> GASB 45 specifies the initial Net OPEB Obligation (at implementation) be set to zero.

<sup>3</sup> Benefits paid for current retirees are considered contributions.



**Executive Summary**  
**County of Napa**  
**January 1, 2006 Retiree Healthcare Actuarial Study**  
**Page 3**

The following illustrates the County's June 30, 2007 Net OPEB Obligation if the County adopts GASB 45 for the 2006/07 fiscal year (000s omitted):

|                                     | <b>No<br/>Pre-funding<br/>4.25%</b> | <b>Pre-funding<br/>7.0%</b> |
|-------------------------------------|-------------------------------------|-----------------------------|
| ■ June 30, 2006 Net OPEB Obligation | \$ 0                                | \$ 0                        |
| ■ Annual OPEB Cost                  | 6,447                               | 4,822                       |
| ■ 06/07 Contributions               | <u>(1,535)<sup>4</sup></u>          | <u>(4,822)<sup>5</sup></u>  |
| ■ June 30, 2007 Net OPEB Obligation | \$ 4,913                            | \$ 0                        |

The County's actual June 30, 2007 Net OPEB Obligation will differ slightly from the above because actual benefit payments will be different from estimated.

**Cash and Accrual Projections**

**No Pre-funding:** If the County contributes the pay-as-you-go cost, following are 10-year projections with 4.25% discount rate and a 20-year amortization (000's omitted):

| <u>Year</u> | <u>NOO</u> | <u>Pay As<br/>You Go<sup>6</sup></u> | <u>AOC</u> | <u>Payroll</u> | <u>Year</u> | <u>NOO</u> | <u>Pay As<br/>You Go<sup>6</sup></u> | <u>AOC</u> | <u>Payroll</u> |
|-------------|------------|--------------------------------------|------------|----------------|-------------|------------|--------------------------------------|------------|----------------|
| 2006/07     | \$ -       | \$1,535                              | \$6,447    | \$80,700       | 2011/12     | 23,288     | 3,083                                | 7,254      | 94,694         |
| 2007/08     | 4,913      | 1,778                                | 6,591      | 83,322         | 2012/13     | 27,459     | 3,445                                | 7,444      | 97,772         |
| 2008/09     | 9,727      | 2,076                                | 6,743      | 86,030         | 2013/14     | 31,458     | 3,768                                | 7,645      | 100,949        |
| 2009/10     | 14,394     | 2,388                                | 6,904      | 88,826         | 2014/15     | 35,335     | 4,160                                | 7,855      | 104,230        |
| 2010/11     | 18,911     | 2,697                                | 7,075      | 91,713         | 2015/16     | 39,029     | 4,429                                | 8,076      | 107,617        |

**Pre-funding:** If the County contributes the ARC every year, following are 10-year projections with 7.0% discount rate and a 20-year amortization (000's omitted):

| <u>Year</u> | <u>NOO</u> | <u>Pay As<br/>You Go<sup>6</sup></u> | <u>AOC</u> | <u>Payroll</u> | <u>Year</u> | <u>NOO</u> | <u>Pay As<br/>You Go<sup>6</sup></u> | <u>AOC</u> | <u>Payroll</u> |
|-------------|------------|--------------------------------------|------------|----------------|-------------|------------|--------------------------------------|------------|----------------|
| 2006/07     | \$-        | \$1,535                              | \$4,822    | \$80,700       | 2011/12     | -          | 3,083                                | 5,658      | 94,694         |
| 2007/08     | -          | 1,778                                | 4,978      | 83,322         | 2012/13     | -          | 3,445                                | 5,842      | 97,772         |
| 2008/09     | -          | 2,076                                | 5,140      | 86,030         | 2013/14     | -          | 3,768                                | 6,032      | 100,949        |
| 2009/10     | -          | 2,388                                | 5,307      | 88,826         | 2014/15     | -          | 4,160                                | 6,228      | 104,230        |
| 2010/11     | -          | 2,697                                | 5,480      | 91,713         | 2015/16     | -          | 4,429                                | 6,430      | 107,617        |

<sup>4</sup> Estimated 2006/07 benefit payments.

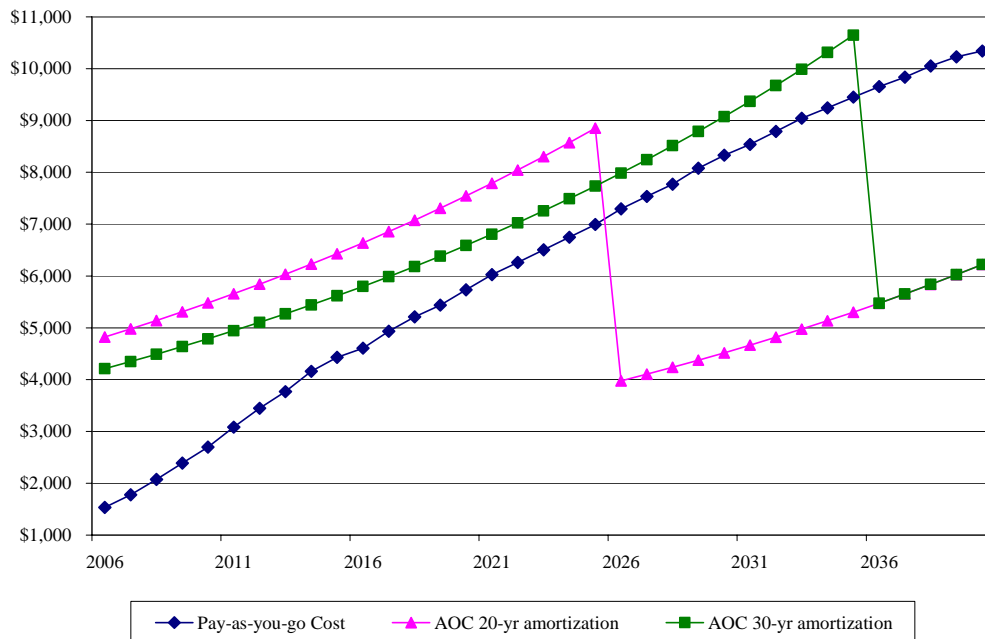
<sup>5</sup> Assumes full ARC is contributed.

<sup>6</sup> Estimated open group projection



Following illustrates of the pay-as-you-go cost, AOC with 20-year and 30-year amortizations at 7.0% discount rate over next 35 years.

### 35 Year Projection



**Sensitivity:** The above results are based on the following:

- 20-year amortization of the unfunded liability
- No plan assets

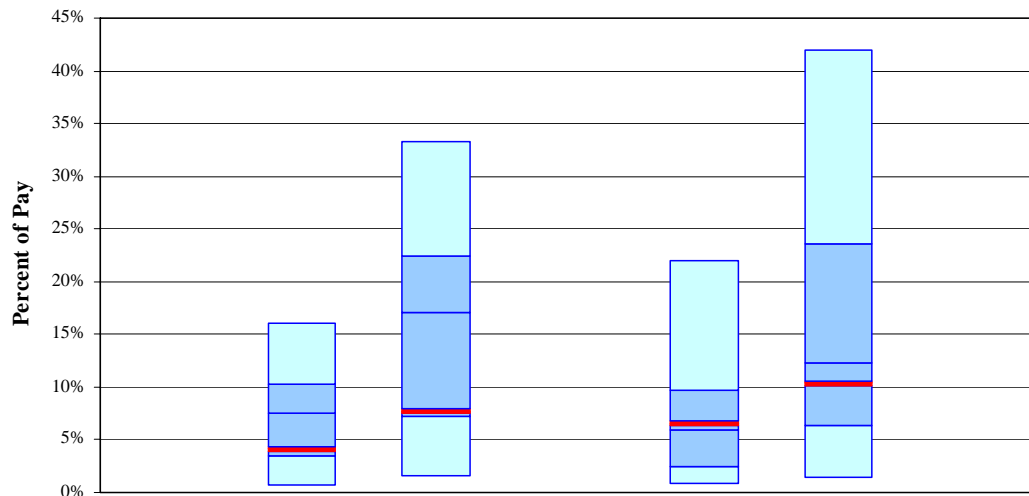
Following illustrates the impact of changing the amortization to 30-years (000s omitted).

|                        | No Funding<br>4.25% | Funding<br>7.0% |
|------------------------|---------------------|-----------------|
| ■ 20-year amortization |                     |                 |
| • Total ARC \$         | \$ 6,447            | \$ 4,822        |
| • Total ARC %          | 8.0%                | 6.0%            |
| ■ 30-year amortization |                     |                 |
| • Total ARC - \$       | \$ 5,565            | \$4,212         |
| • Total ARC - %        | 6.9%                | 5.2%            |

**Bartel Associates GASB 45 Database:** The following exhibit compares Napa County's Normal Cost (NC and ARC as a percentage of payroll for Miscellaneous and Safety retiree medical programs with other California public agency studies prepared by Bartel Associates. Our database currently included 48 public agencies for Miscellaneous and 32 agencies for Safety.

- The highest Miscellaneous NC is 16.1%, the lowest 0.7%. The County's Miscellaneous NC of 4.1% is at the 27.6<sup>th</sup> percentile of all plans.
- The highest Miscellaneous ARC is 33.2%, the lowest 1.5%. The County's Miscellaneous ARC of 7.7% is at the 25.5<sup>th</sup> percentile of all plans.
- The highest actual Safety NC is 22.0%, the lowest 0.8%. The County's Safety NC of 6.6% is at the 54.8<sup>th</sup> percentile of all plans.
- The highest actual Safety ARC is 42.0%, the lowest 1.4%. The County's Safety ARC of 10.4% is at the 41.9<sup>th</sup> percentile of all plans.

**GASB 45**  
**Retiree Medical Benefits Survey**  
**Normal Cost & Annual Required Contribution**



|                    | <u>Miscellaneous</u> |              | <u>Safety</u> |              |
|--------------------|----------------------|--------------|---------------|--------------|
|                    | NC                   | ARC          | NC            | ARC          |
| 100th Percentile   | 16.1%                | 33.2%        | 22.0%         | 42.0%        |
| 75th Percentile    | 10.3%                | 22.4%        | 9.7%          | 23.6%        |
| 50th Percentile    | 7.5%                 | 17.1%        | 5.9%          | 12.3%        |
| 25th Percentile    | 3.5%                 | 7.2%         | 2.5%          | 6.4%         |
| 0th Percentile     | 0.7%                 | 1.5%         | 0.8%          | 1.4%         |
| <b>Napa County</b> | <b>4.1%</b>          | <b>7.7%</b>  | <b>6.6%</b>   | <b>10.4%</b> |
| <b>Percentile</b>  | <b>27.6%</b>         | <b>25.5%</b> | <b>54.8%</b>  | <b>41.9%</b> |

## BASIC DEFINITIONS AND ASSUMPTIONS

**Present Value of Benefits:** When an actuary prepares an actuarial valuation, (s)he first gathers participant data (including active employees, former employees not in payment status, participants and beneficiaries in payment status) at the valuation date (for example January 1, 2006). Using this data and actuarial assumptions, (s)he projects future benefit payments. (The assumptions predict, among other things, when people will retire, terminate, die or become disabled, as well as what salary increases, general (and healthcare) inflation and investment return might be.) Those future benefit payments are discounted, using expected future investment return, back to the valuation date. This discounted present value is the plan's present value of benefits. It represents the amount the plan needs as of the valuation date to pay all future benefits – if all assumptions are met and no future contributions (employee or employer) are made. The County's January 1, 2006 retiree healthcare Present Value of Benefits is \$89.3 million using a 4.25% interest rate (\$55.3 million using a 7% interest rate), with \$16 million of this for former employees who have already retired (\$12.3 million using a 7% interest rate).

**Actuarial Liability:** This represents the portion of the present value of benefits that participants have earned (on an actuarial, not actual, basis) through the valuation date. The County's January 1, 2006 retiree healthcare Actuarial Liability is \$51.2 million using a 4.25% interest rate (\$37 million using a 7% interest rate), with \$16 million of this for former employees who have already retired (\$12.3 million using a 7% interest rate).

**Normal Cost:** The Normal Cost represents the portion of the present value of benefits expected to be earned (on an actuarial, not actual, basis) in the coming year. The County's (Employer portion) 2006/07 retiree healthcare Normal Cost is \$3.5 million (4.4% of base payroll) using a 4.25% discount rate and \$2.1 million using a 7% discount rate (2.6% of base payroll).

**Actuarial Cost Method:** This determines the method in which benefits are actuarially earned (allocated) to each year of service. It has no effect on the Present Value of Benefits, but has significant effect on the Actuarial Liability and Normal Cost. The County's January 1, 2006 retiree healthcare valuation was prepared using the Entry Age Normal cost method.

**Actuarial Assumptions:** Under GASB 45, an actuary must follow current actuarial standards of practice, which generally call for explicit assumptions - meaning each individual assumption represents the actuary's best estimate.

GASB 45 requires that the discount rate is based on the source of funds used to pay benefits. This means the underlying expected long-term rate of return on plan assets for funded plans. Furthermore, since the source of funds for an unfunded plan is usually the general fund and California law restricts agencies' investment vehicles, this valuation uses a relatively low, 4.25%, discount rate. If the County sets up a Trust (that could only be used to pay plan benefits), and diversifies Trust assets, then the discount rate would be based on the Trust's expected long-term investment return. This might result in a higher (such as a 7%) discount rate. However, the appropriate discount rate will be determined based on the plan's actual asset diversification.





Another key assumption is future healthcare inflation rates. Actual premiums for 2006 were used. The inflation rate for HMO's starts at 11% (the increase in 2007 premiums over 2006) and grades down to 4% (2017 premiums over 2016) and remains at 4% into the future. The inflation rate for PPO's starts at 12% (the increase in 2007 premiums over 2006) and grades down to 5% (2017 premiums over 2016) and remains at 5% into the future. This assumption means healthcare is assumed to increase, on the average, 7.0% for HMO's and 7.5% for PPO's a year for the next 10 years. Furthermore, since the valuation's general inflation assumption is 3%, it also means healthcare is assumed to level off at 1% to 2% over general inflation.

**BENEFIT PROMISE**

The following tables summarize the County's retiree healthcare benefits.

| <b>Sick Leave Conversion</b> |  |  |   |
|------------------------------|--|--|---|
| <b>■ Eligibility</b>         | <ul style="list-style-type: none"> <li>● Retire directly from the County, except extra helps and elected officials</li> <li>● Minimum 120 hours unused sick leave</li> <li>● One time choice at retirement</li> <li>● Can not be banked to a later date</li> </ul> |  |   |
|                              | <b>Law Enforcement</b>   | <b>Management<sup>7</sup></b>  | <b>Public Service<sup>8</sup></b>   |
|                              | <ul style="list-style-type: none"> <li>● 8 hrs/month – EE</li> <li>● 16 hrs/month – EE+1</li> <li>● Max – 1,800 hrs</li> </ul>   | <ul style="list-style-type: none"> <li>● 8 hrs/month – EE</li> <li>● 16 hrs/month – EE+1</li> <li>● Max – 1,800 hrs</li> </ul> | <ul style="list-style-type: none"> <li>● 8 hrs/month – EE</li> <li>● Max – 1,248 hrs</li> </ul> |
|                              | <ul style="list-style-type: none"> <li>● Apply accumulated sick leave hours to medical or dental premiums (Medical premium based on Kaiser \$5 plan)</li> <li>● No surviving spouse benefit</li> </ul>   |  |   |
| <b>■ Sick Leave Accrual</b>  | ● 96 hours/year  | ● 96 hours/year  | ● 96 hours/year   |

<sup>7</sup> Includes Confidential, classified, non-classified and court employees in the same classification

<sup>8</sup> Includes court employees in the same classification



| Long Term Service and Other Benefits |   |   |                |             |                |                 |      |         |         |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |       |                             |  |
|--------------------------------------|---|---|----------------|-------------|----------------|-----------------|------|---------|---------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|-------|-----------------------------|--|
|                                      | Law Enforcement   | Management  | Public Service |             |                |                 |      |         |         |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |       |                             |  |
| ■ Long-Term Service Conversion       | ● n/a   | ● Retire directly from the County, except extra helps<br>● 50&20<br>● County pays single party medical premium until age 65<br>● Premium based on Kaiser \$5 plan   |                |             |                |                 |      |         |         |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |       |                             |  |
| ■ Lifetime Benefit                   | ● n/a   | ● Non-classified only<br>● Incl. elected officials<br>● 8 years County Svc<br>● 5+ yrs Non-Classified<br>● County pays medical, dental and vision family coverage for life of retiree and spouse<br>● Termination – Deferred Benefits | ● n/a          |             |                |                 |      |         |         |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |       |                             |  |
| ■ PEMHCA Minimum                     | ● Effective 2002<br>● Not eligible for above benefits and participating in PEMHCA<br>● Include in County paid benefit<br>● Unequal method: <table><tr><td><u>Year</u></td><td><u>Actives</u></td><td><u>Retirees</u></td></tr><tr><td>2002</td><td>\$16.00</td><td>\$10.00</td></tr><tr><td>2003</td><td>16.00</td><td>10.80</td></tr><tr><td>2004</td><td>32.20</td><td>12.41</td></tr><tr><td>2005</td><td>48.40</td><td>14.83</td></tr><tr><td>2006</td><td>64.60</td><td>18.06</td></tr><tr><td>2007</td><td>80.80</td><td>22.10</td></tr><tr><td>2008</td><td>97.00</td><td>26.95</td></tr><tr><td>2009+</td><td colspan="2">Increased by healthcare CPI</td></tr></table> |   |                | <u>Year</u> | <u>Actives</u> | <u>Retirees</u> | 2002 | \$16.00 | \$10.00 | 2003 | 16.00 | 10.80 | 2004 | 32.20 | 12.41 | 2005 | 48.40 | 14.83 | 2006 | 64.60 | 18.06 | 2007 | 80.80 | 22.10 | 2008 | 97.00 | 26.95 | 2009+ | Increased by healthcare CPI |  |
| <u>Year</u>                          | <u>Actives</u>  | <u>Retirees</u>   |                |             |                |                 |      |         |         |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |       |                             |  |
| 2002                                 | \$16.00   | \$10.00   |                |             |                |                 |      |         |         |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |       |                             |  |
| 2003                                 | 16.00   | 10.80   |                |             |                |                 |      |         |         |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |       |                             |  |
| 2004                                 | 32.20   | 12.41   |                |             |                |                 |      |         |         |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |       |                             |  |
| 2005                                 | 48.40   | 14.83   |                |             |                |                 |      |         |         |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |       |                             |  |
| 2006                                 | 64.60   | 18.06   |                |             |                |                 |      |         |         |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |       |                             |  |
| 2007                                 | 80.80   | 22.10   |                |             |                |                 |      |         |         |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |       |                             |  |
| 2008                                 | 97.00   | 26.95   |                |             |                |                 |      |         |         |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |       |                             |  |
| 2009+                                | Increased by healthcare CPI   |   |                |             |                |                 |      |         |         |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |       |                             |  |
| ■ Courts                             | ● Retired < 1/1/01 – County responsibility<br>● Hired < 1/1/01 – County share based on service as of 1/1/01<br>● Hired > 1/1/01 – Not County responsibility   |   |                |             |                |                 |      |         |         |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |       |                             |  |