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**BILL REQUEST - CODE REVISER'S OFFICE**

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BILL REQ. #: Z-0219.1/05

ATTY/TYPIST: LL:seg

BRIEF DESCRIPTION: Receiving a disability allowance under the law enforcement officers' and fire fighters' retirement system, plan 2.

1 AN ACT Relating to receiving a disability allowance under the law  
2 enforcement officers' and fire fighters' retirement system, plan 2;  
3 amending RCW 41.26.470; and declaring an emergency.

4 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF WASHINGTON:

5 **Sec. 1.** RCW 41.26.470 and 2004 c 4 s 1 are each amended to read as  
6 follows:

7 (1) A member of the retirement system who becomes totally  
8 incapacitated for continued employment by an employer as determined by  
9 the director shall be eligible to receive an allowance under the  
10 provisions of RCW 41.26.410 through 41.26.550. Such member shall  
11 receive a monthly disability allowance computed as provided for in RCW  
12 41.26.420 and shall have such allowance actuarially reduced to reflect  
13 the difference in the number of years between age at disability and the  
14 attainment of age fifty-three, except under subsection (7) of this  
15 section.

16 (2) Any member who receives an allowance under the provisions of  
17 this section shall be subject to such comprehensive medical  
18 examinations as required by the department. If such medical  
19 examinations reveal that such a member has recovered from the

1 incapacitating disability and the member is no longer entitled to  
2 benefits under Title 51 RCW, the retirement allowance shall be canceled  
3 and the member shall be restored to duty in the same civil service  
4 rank, if any, held by the member at the time of retirement or, if  
5 unable to perform the duties of the rank, then, at the member's  
6 request, in such other like or lesser rank as may be or become open and  
7 available, the duties of which the member is then able to perform. In  
8 no event shall a member previously drawing a disability allowance be  
9 returned or be restored to duty at a salary or rate of pay less than  
10 the current salary attached to the rank or position held by the member  
11 at the date of the retirement for disability. If the department  
12 determines that the member is able to return to service, the member is  
13 entitled to notice and a hearing. Both the notice and the hearing  
14 shall comply with the requirements of chapter 34.05 RCW, the  
15 Administrative Procedure Act.

16 (3) Those members subject to this chapter who became disabled in  
17 the line of duty on or after July 23, 1989, and who receive benefits  
18 under RCW 41.04.500 through 41.04.530 or similar benefits under RCW  
19 41.04.535 shall receive or continue to receive service credit subject  
20 to the following:

21 (a) No member may receive more than one month's service credit in  
22 a calendar month.

23 (b) No service credit under this section may be allowed after a  
24 member separates or is separated without leave of absence.

25 (c) Employer contributions shall be paid by the employer at the  
26 rate in effect for the period of the service credited.

27 (d) Employee contributions shall be collected by the employer and  
28 paid to the department at the rate in effect for the period of service  
29 credited.

30 (e) State contributions shall be as provided in RCW 41.45.060 and  
31 41.45.067.

32 (f) Contributions shall be based on the regular compensation which  
33 the member would have received had the disability not occurred.

34 (g) The service and compensation credit under this section shall be  
35 granted for a period not to exceed six consecutive months.

36 (h) Should the legislature revoke the service credit authorized  
37 under this section or repeal this section, no affected employee is  
38 entitled to receive the credit as a matter of contractual right.

1 (4)(a) If the recipient of a monthly retirement allowance under  
2 this section dies before the total of the retirement allowance paid to  
3 the recipient equals the amount of the accumulated contributions at the  
4 date of retirement, then the balance shall be paid to the member's  
5 estate, or such person or persons, trust, or organization as the  
6 recipient has nominated by written designation duly executed and filed  
7 with the director, or, if there is no such designated person or persons  
8 still living at the time of the recipient's death, then to the  
9 surviving spouse, or, if there is neither such designated person or  
10 persons still living at the time of his or her death nor a surviving  
11 spouse, then to his or her legal representative.

12 (b) If a recipient of a monthly retirement allowance under this  
13 section died before April 27, 1989, and before the total of the  
14 retirement allowance paid to the recipient equaled the amount of his or  
15 her accumulated contributions at the date of retirement, then the  
16 department shall pay the balance of the accumulated contributions to  
17 the member's surviving spouse or, if there is no surviving spouse, then  
18 in equal shares to the member's children. If there is no surviving  
19 spouse or children, the department shall retain the contributions.

20 (5) Should the disability retirement allowance of any disability  
21 beneficiary be canceled for any cause other than reentrance into  
22 service or retirement for service, he or she shall be paid the excess,  
23 if any, of the accumulated contributions at the time of retirement over  
24 all payments made on his or her behalf under this chapter.

25 (6) A member who becomes disabled in the line of duty, and who  
26 ceases to be an employee of an employer except by service or disability  
27 retirement, may request a refund of one hundred fifty percent of the  
28 member's accumulated contributions. Any accumulated contributions  
29 attributable to restorations made under RCW 41.50.165(2) shall be  
30 refunded at one hundred percent. A person in receipt of this benefit  
31 is a retiree.

32 (7)(a) A member who becomes disabled in the line of duty shall be  
33 entitled to receive a minimum retirement allowance equal to ten percent  
34 of such member's final average salary. The member shall additionally  
35 receive a retirement allowance equal to two percent of such member's  
36 average final salary for each year of service beyond five(~~(, and shall~~  
37 ~~have the allowance actuarially reduced to reflect the difference in the~~  
38 ~~number of years between age at disability and the attainment of age~~

1 ~~fifty-three~~)). An additional benefit shall not result in a total  
2 monthly benefit greater than that provided in subsection (1) of this  
3 section.

4 (b) A member who is totally disabled in the line of duty is  
5 entitled to receive a retirement allowance equal to seventy percent of  
6 such member's final average salary. A member shall be considered  
7 totally disabled if he or she is unable to perform any substantial  
8 gainful activity due to a physical or mental condition that may be  
9 expected to result in death or that has lasted or is expected to last  
10 at least twelve months. Substantial gainful activity is defined as  
11 average earnings of no more than eight hundred ten dollars a month in  
12 2004 adjusted annually for inflation as determined by the director.

13 NEW SECTION. **Sec. 2.** This act is necessary for the immediate  
14 preservation of the public peace, health, or safety, or support of the  
15 state government and its existing public institutions, and takes effect  
16 immediately.

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# DRAFT FISCAL NOTE

REQUEST NO.

RESPONDING AGENCY:	CODE:	DATE:	BILL NUMBER:
Office of the State Actuary	035	12/21/04	LEOFF 2 Total Disability

## SUMMARY OF BILL:

This bill impacts the Law Enforcement Officer's and Fire Fighters Retirement System plan 2 (LEOFF 2) by establishing a total disability benefit equal to 70 percent of a member's final average salary if they are disabled to the point where they cannot perform any substantial gainful activity. Substantial gainful activity is defined as average earnings of no more than \$810 per month in 2004, which shall be adjusted annually for inflation as determined by the director.

Effective Date: Immediately upon passage.

## CURRENT SITUATION:

Currently, disabled LEOFF 2 members are entitled to receive a minimum retirement allowance equal to 10 percent of such member's final average salary. The member shall additionally receive a retirement allowance equal to two percent of such member's average final salary for each year of service beyond five, and shall have the allowance actuarially reduced to reflect the difference in the number of years between age at disability and the attainment of age 53.

## MEMBERS IMPACTED:

We estimate that all of the 14,560 active members of this system, as well as all future active members could be affected by this bill. For a typical member, currently about 40 years of age with 11 years of service, an annual salary of \$66,000, and final average salary of \$61,000, the increase in annual disability benefits are shown below:

Current disability provision = 2% of average final compensation per year of service, actuarially reduced from 53 to age 40 =  $2\% \times \$61,000 \times 11 \times 0.3059 = \$4,105$  per year.

Proposed disability provision, non-duty related or non-total duty related disability = 2% of average final compensation per year of service, actuarially reduced (same as current provision) =  $2\% \times \$61,000 \times 11 \times 0.3059 = \$4,105$  per year.

Proposed disability provision, duty-related, total disability = 70% of average final compensation, no actuarial reduction =  $70\% \times \$61,000 = \$42,700$  per year.

We expect that in the first year after the effective date, approximately 11 members would have duty-related total disabilities.

**ASSUMPTIONS:**

The costs depend on our assumptions for the probability of disablement and post-disablement mortality. This includes assumptions for total disability and duty-related disability. We needed to increase our existing assumptions for rates of disability because currently members who become disabled may elect to receive terminated vested benefits or retirement benefits because the disability benefits are the actuarial equivalent of those benefits. The availability of the tax-free 70% of pay benefit would change members' selection of benefits.

We changed our disability assumption to use rates based on the disabment rates used by the Colorado Fire and Police Pension Association Death and Disability Fund for their January 1, 2004 valuation prepared by Mellon. We used 85% of the Colorado rates to reflect our assumption that 85% of disabilities are duty-related. We assume that 18% of all duty-related disabilities are total disabilities.

Otherwise, we used the same assumptions as disclosed in the 2003 actuarial valuation report. We did not change our assumption for post-disablement mortality (although the mortality experience for those severely disabled would be expected to be less favorable than for those with occupational disabilities). Also, we did not include any waiting period for benefit commencement.

We used geometric interpolation for the rates in between the following ages:

<b>Age</b>	<b>Annual Rate of Disablement Per 1,000 Members</b>
20	1.01
30	1.28
40	2.47
45	3.36
50	11.76
55	28.91

For example, for a 55 year old member, we used a rate of 85% of 18% of 0.0289, or 0.004423, for total disability.

We reduced our decrements from other causes such as termination and retirement to be consistent with the higher disability rates. The total number of expected members leaving the system each year remained the same. In other words, we shifted some members from the category of termination or retirement to disability.

We assumed that disability rates would continue past eligibility for early and normal retirement. We considered but did not include any liability for members who might choose a taxable retirement benefit based on long service, such as greater than 40 years, over the 70% of pay tax-free disability benefit. In other words, because the 70% is tax-free, we assumed that members would choose to take this disability benefit instead of a greater retirement benefit that is taxable.

We changed the disability assumptions to determine the base liabilities first, then added the proposed disability benefits. With everything else being equal, using higher disability rates would reduce the plan liabilities, because the mortality experience of disabled pensioners is less favorable than the experience of healthy pensioners. The cost of the proposed benefit improvement is based on the difference in the liabilities after the assumption change.

The assumption that 85% of disabilities are duty related is constant at all ages. Alternatively, we could have assumed that the percentage of disabilities that are duty related are higher at the younger ages and lower at the higher ages. This would have reduced the costs slightly.

**FISCAL IMPACT:**

**Actuarial Determinations:**

The bill will impact the actuarial funding of the system by increasing the present value of benefits payable under the System and the required actuarial contribution rate as shown below:

<b>System: Law Enforcement Officers' and Firefighters' Plan 2</b>			
<i>(Dollars in Millions)</i>	<b>Current</b>	<b>Increase</b>	<b>Total</b>
<b>Actuarial Present Value of Projected Benefits</b> (The Value of the Total Commitment to all Current Members)	\$4,382.92	\$49.64	\$4,432.56
<b>Unfunded Actuarial Accrued Liability</b> (The Portion of the Plan 1 Liability that is Amortized at 2024)	\$0.00	\$0.00	\$0.00
<b>Unfunded Liability (PBO)</b> (The Value of the Total Commitment to all Current Members Attributable to Past Service)	\$(546.57)	\$30.14	\$(516.43)
<b>Increase in Contribution Rates: (Effective 09/01/2005)</b>			
Employee	0.25%		
Employer	0.15%		
State	0.10%		



## Fiscal Budget Determinations:

As a result of the higher required contribution rate, the increase in funding expenditures is projected to be:

<b>Costs (in Millions):</b>	<b><u>LEOFF 2</u></b>
<b>2005-2007</b>	
<b>State:</b>	
General Fund	\$2.2
Non-General Fund	<u>0.0</u>
<b>Total State</b>	<b>\$2.2</b>
Local Government	\$3.3
Total Employer	\$5.5
Total Employee	\$5.5
<b>2007-2009</b>	
<b>State:</b>	
General Fund	\$2.6
Non-General Fund	<u>0.0</u>
<b>Total State</b>	<b>\$2.6</b>
Local Government	\$4.0
Total Employer	\$6.6
Total Employee	\$6.6
<b>2005-2030</b>	
<b>State:</b>	
General Fund	\$53.3
Non-General Fund	<u>0.0</u>
<b>Total State</b>	<b>\$53.3</b>
Local Government	\$80.0
Total Employer	\$133.3
Total Employee	\$133.3

## STATEMENT OF DATA AND ASSUMPTIONS USED IN PREPARING THIS FISCAL NOTE:

The costs presented in this fiscal note are based on our understanding of the bill as well as generally accepted actuarial standards of practice including the following:

1. Costs were developed using the same membership data, methods, assets and assumptions as those used in preparing the September 30, 2003 actuarial valuation report of the Law Enforcement Officers' and Firefighters' Retirement System except for the disability rates disclosed in this fiscal note.
2. As with the costs developed in the actuarial valuation, the emerging costs of the System will vary from those presented in the valuation report or this fiscal note to the extent that actual experience differs from that projected by the actuarial assumptions.
3. Additional assumptions used to evaluate the cost impact of the bill which were not used or disclosed in this fiscal note or the actuarial valuation report include the following: None.
4. The analysis of this bill does not consider any other proposed changes to the system. The combined effect of several changes to the system could exceed the sum of each proposed change considered individually.
5. This fiscal note is intended for use only during the 2005 Legislative Session.
6. The funding method used for Plan 1 utilizes the Plan 2/3 employer/state rate as the Normal Cost and amortizes the remaining liability (UAAL) by the year 2024. Benefit increases to Plan 2/3 will change the UAAL in Plan 1. The cost of benefit increases to Plan 1 increases the UAAL.
7. Plan 2/3 utilizes the Aggregate Funding Method. The cost of Plan 2/3 is spread over the average working lifetime of the current active Plan 2/3 members.
8. The cost increases for the bill used to determine the increase in funding expenditures for future new entrants are 0.18% for LEOFF Plan 2 members and 0.18% for LEOFF Plan 2 employers, based on 50% of a total entry age normal cost increase of 0.36% for members and employers.

## GLOSSARY OF ACTUARIAL TERMS:

**Actuarial Present Value:** The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions (i.e. interest rate, rate of salary increases, mortality, etc.)

**Projected Benefits:** Pension benefit amounts which are expected to be paid in the future taking into account such items as the effect of advancement in age as well as past and anticipated future compensation and service credits.

**Normal Cost:** Computed differently under different funding methods, the normal cost generally represents the portion of the cost of projected benefits allocated to the current plan year.

**Unfunded Actuarial Accrued Liability (UAAL):** The cost of Plan 1 is divided into two pieces:

- The Normal Cost portion is paid over the working lifetime of the Plan 1 active members. The remaining cost is called the UAAL.
- The UAAL is paid for by employers as a percent of the salaries of all plan 1, 2 and 3 members until the year 2024.

**Pension Benefit Obligation (PBO):** The portion of the Actuarial Present Value of future benefits attributable to service credit that has been earned to date (past service).

**Unfunded Liability (Unfunded PBO):** The excess, if any, of the Pension Benefit Obligation over the Valuation Assets. This is the portion of all benefits earned to date that are not covered by plan assets.

# DRAFT FISCAL NOTE

REQUEST NO.

RESPONDING AGENCY:	CODE:	DATE:	BILL NUMBER:
<b>Office of the State Actuary</b>	<b>035</b>	<b>12/21/04</b>	<b>LEOFF 2 Duty Disability</b>

## SUMMARY OF BILL:

This bill impacts the Law Enforcement Officer's and Fire Fighters Retirement System plan 2 (LEOFF 2) by eliminating the actuarial reduction for a member experiencing a duty-related disability.

Effective Date: Immediately upon passage.

## CURRENT SITUATION:

Currently, disabled LEOFF 2 members are entitled to receive a minimum retirement allowance equal to 10 percent of such member's final average salary. The member shall additionally receive a retirement allowance equal to two percent of such member's average final salary for each year of service beyond five, and shall have the allowance actuarially reduced to reflect the difference in the number of years between age at disability and the attainment of age 53.

## MEMBERS IMPACTED:

We estimate that all of the 14,560 active members of this system, as well as all future active members could be affected by this bill. For a typical member, currently about 40 years of age with 11 years of service, an annual salary of \$66,000, and final average salary of \$61,000, the increase in annual disability benefits are shown below:

Current disability provision = 2% of average final compensation per year of service, actuarially reduced from 53 to age 40 =  $2\% \times \$61,000 \times 11 \times 0.3059 = \$4,105$  per year.

Proposed disability provision, non-duty related = 2% of average final compensation per year of service, actuarially reduced (same as current provision) =  $2\% \times \$61,000 \times 11 \times 0.3059 = \$4,105$  per year.

Proposed disability provision, duty-related disability = 2% of average final compensation per year of service, no actuarial reduction =  $2\% \times \$61,000 \times 11 = \$13,420$  per year.

We expect that in the first year after the effective date, approximately 59 members would have duty-related disabilities.

**ASSUMPTIONS:**

The costs depend on our assumptions for the probability of disablment and post-disablement mortality. This includes assumptions for duty-related disability. We needed to increase our existing assumptions for rates of disability because currently members who become disabled may elect to receive terminated vested benefits or retirement benefits because the disability benefits are the actuarial equivalent of those benefits. The removal of the actuarial equivalent reduction factor would change members' selection of benefits.

We changed our disability assumption to use rates based on the disability rates used by the Colorado Fire and Police Pension Association Death and Disability Fund for their January 1, 2004 valuation prepared by Mellon. We used 85% of the Colorado rates to reflect our assumption that 85% of disabilities are duty-related.

Otherwise, we used the same assumptions as disclosed in the 2003 actuarial valuation report. We did not change our assumption for post-disablement mortality. Also, we did not include any waiting period for benefit commencement.

We used geometric interpolation for the rates in between the following ages:

<b>Age</b>	<b>Annual Rate of Disablement Per 1,000 Members</b>
20	1.01
30	1.28
40	2.47
45	3.36
50	11.76
55	28.91

For example, for a 55 year old member, we used a rate of 85% of 0.02891, or 0.024574, for duty disability.

We reduced our decrements from other causes such as termination and retirement to be consistent with the higher disability rates. The total number of expected members leaving the system each year remained the same. In other words, we shifted some members from the category of termination or retirement to disability.

We assumed that disability rates would continue past eligibility for early and normal retirement.

We changed the disability assumptions to determine the base liabilities first, then added the proposed disability benefits. With everything else being equal, using higher disability rates would reduce the plan liabilities, because the mortality experience of disabled pensioners is less favorable than the experience of healthy pensioners. The cost of the proposed benefit improvement is based on the difference in the liabilities after the assumption change.

**FISCAL IMPACT:**

**Actuarial Determinations:**

The bill will impact the actuarial funding of the system by increasing the present value of benefits payable under the System and the required actuarial contribution rate as shown below:

<b>System: Law Enforcement Officers' and Firefighters' Plan 2</b>			
<i>(Dollars in Millions)</i>	<b>Current</b>	<b>Increase</b>	<b>Total</b>
<b>Actuarial Present Value of Projected Benefits</b> (The Value of the Total Commitment to all Current Members)	\$4,382.92	\$44.54	\$4,427.46
<b>Unfunded Actuarial Accrued Liability</b> (The Portion of the Plan 1 Liability that is Amortized at 2024)	\$0.00	\$0.00	\$0.00
<b>Unfunded Liability (PBO)</b> (The Value of the Total Commitment to all Current Members Attributable to Past Service)	\$(546.57)	\$29.03	\$(517.50)
 <b>Increase in Contribution Rates: (Effective 09/01/2005)</b>			
Employee	0.23%		
Employer	0.14%		
State	0.09%		

## Fiscal Budget Determinations:

As a result of the higher required contribution rate, the increase in funding expenditures is projected to be:

<b>Costs (in Millions):</b>	<b><u>LEOFF 2</u></b>
<b>2005-2007</b>	
<b>State:</b>	
General Fund	\$2.0
Non-General Fund	<u>0.0</u>
<b>Total State</b>	<b>\$2.0</b>
Local Government	\$3.0
Total Employer	\$5.0
Total Employee	\$5.0
<b>2007-2009</b>	
<b>State:</b>	
General Fund	\$2.3
Non-General Fund	<u>0.0</u>
<b>Total State</b>	<b>\$2.3</b>
Local Government	\$3.6
Total Employer	\$5.9
Total Employee	\$5.9
<b>2005-2030</b>	
<b>State:</b>	
General Fund	\$44.1
Non-General Fund	<u>0.0</u>
<b>Total State</b>	<b>\$44.1</b>
Local Government	\$67.2
Total Employer	\$111.3
Total Employee	\$111.3

## STATEMENT OF DATA AND ASSUMPTIONS USED IN PREPARING THIS FISCAL NOTE:

The costs presented in this fiscal note are based on our understanding of the bill as well as generally accepted actuarial standards of practice including the following:

1. Costs were developed using the same membership data, methods, assets and assumptions as those used in preparing the September 30, 2003 actuarial valuation report of the Law Enforcement Officers' and Firefighters' Retirement System except for the disability rates disclosed in this fiscal note.
2. As with the costs developed in the actuarial valuation, the emerging costs of the System will vary from those presented in the valuation report or this fiscal note to the extent that actual experience differs from that projected by the actuarial assumptions.
3. Additional assumptions used to evaluate the cost impact of the bill which were not used or disclosed in this fiscal note or the actuarial valuation report include the following: None.
4. The analysis of this bill does not consider any other proposed changes to the system. The combined effect of several changes to the system could exceed the sum of each proposed change considered individually.
5. This fiscal note is intended for use only during the 2005 Legislative Session.
6. The funding method used for Plan 1 utilizes the Plan 2/3 employer/state rate as the Normal Cost and amortizes the remaining liability (UAAL) by the year 2024. Benefit increases to Plan 2/3 will change the UAAL in Plan 1. The cost of benefit increases to Plan 1 increases the UAAL.
7. Plan 2/3 utilizes the Aggregate Funding Method. The cost of Plan 2/3 is spread over the average working lifetime of the current active Plan 2/3 members.
8. The cost increases for the bill used to determine the increase in funding expenditures for future new entrants are 0.14% for LEOFF Plan 2 members and 0.14% for LEOFF Plan 2 employers, based on 50% of a total entry age normal cost increase of 0.28% for members and employers.

## GLOSSARY OF ACTUARIAL TERMS:

**Actuarial Present Value:** The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions (i.e. interest rate, rate of salary increases, mortality, etc.)

**Projected Benefits:** Pension benefit amounts which are expected to be paid in the future taking into account such items as the effect of advancement in age as well as past and anticipated future compensation and service credits.

**Normal Cost:** Computed differently under different funding methods, the normal cost generally represents the portion of the cost of projected benefits allocated to the current plan year.

**Unfunded Actuarial Accrued Liability (UAAL):** The cost of Plan 1 is divided into two pieces:

- The Normal Cost portion is paid over the working lifetime of the Plan 1 active members. The remaining cost is called the UAAL.
- The UAAL is paid for by employers as a percent of the salaries of all plan 1, 2 and 3 members until the year 2024.

**Pension Benefit Obligation (PBO):** The portion of the Actuarial Present Value of future benefits attributable to service credit that has been earned to date (past service).



**Unfunded Liability (Unfunded PBO):** The excess, if any, of the Pension Benefit Obligation over the Valuation Assets. This is the portion of all benefits earned to date that are not covered by plan assets.

# DRAFT FISCAL NOTE

REQUEST NO.

RESPONDING AGENCY:	CODE:	DATE:	BILL NUMBER:
Office of the State Actuary	035	12/08/04	LEOFF 2 Disability

## SUMMARY OF BILL:

This bill impacts the Law Enforcement Officer's and Fire Fighters Retirement System plan 2 (LEOFF 2) by eliminating the actuarial reduction for a member experiencing a duty disability and establishing a total disability benefit equal to 70 percent of a member's final average salary if they are disabled to the point where they cannot perform any substantial gainful activity. Substantial gainful activity is defined as average earnings of no more than \$810 per month in 2004, which shall be adjusted annually for inflation as determined by the director.

Effective Date: Immediately upon passage.

## CURRENT SITUATION:

Currently, disabled LEOFF 2 members are entitled to receive a minimum retirement allowance equal to 10 percent of such member's final average salary. The member shall additionally receive a retirement allowance equal to two percent of such member's average final salary for each year of service beyond five, and shall have the allowance actuarially reduced to reflect the difference in the number of years between age at disability and the attainment of age 53.

## MEMBERS IMPACTED:

We estimate that all of the 14,560 active members of this system, as well as all future active members could be affected by this bill. For a typical member, currently about 40 years of age with 11 years of service, an annual salary of \$66,000, and final average salary of \$61,000, the increase in annual disability benefits are shown below:

Current disability provision = 2% of average final compensation per year of service, actuarially reduced from 53 to age 40 =  $2\% \times \$61,000 \times 11 \times 0.3059 = \$4,105$  per year.

Proposed disability provision, non-duty related = 2% of average final compensation per year of service, actuarially reduced (same as current provision) =  $2\% \times \$61,000 \times 11 \times 0.3059 = \$4,105$  per year.

Proposed disability provision, duty-related, occupational disability = 2% of average final compensation per year of service, no actuarial reduction =  $2\% \times \$61,000 \times 11 = \$13,420$  per year.

Proposed disability provision, duty-related, total disability = 70% of average final compensation per year of service, no actuarial reduction =  $70\% \times \$61,000 = \$42,700$  per year.

We expect that in the first year after the effective date, approximately 11 members would have duty-related total disabilities, and that about 48 members would have occupational duty-related disabilities.

**ASSUMPTIONS:**

The costs depend on our assumptions for the probability of disability and post-disablement mortality. This includes assumptions for total disability, occupational disability, and duty-related disability. We needed to increase our existing assumptions for rates of disability because currently members who become disabled may elect to receive terminated vested benefits or retirement benefits because the disability benefits are the actuarial equivalent of those benefits. The removal of the actuarial equivalent reduction factor or the availability of the tax-free 70% of pay benefit would change members' selection of benefits.

We changed our disability assumption to use rates based on the disability rates used by the Colorado Fire and Police Pension Association Death and Disability Fund for their January 1, 2004 valuation prepared by Mellon. We used 85% of the Colorado rates to reflect our assumption that 85% of disabilities are duty-related. We assume that 18% of all disabilities are total disabilities and 82% are occupational disabilities (the inability to continue working in law enforcement or firefighting).

Otherwise, we used the same assumptions as disclosed in the 2003 valuation report. We did not change our assumption for post-disablement mortality (although the mortality experience for those severely disabled would be expected to be less favorable than for those with occupational disabilities). Also, we did not include any waiting period for benefit commencement.

We used linear interpolation for the rates in between the following ages:

<b>Age</b>	<b>Annual Rate of Disablement Per 1,000 Members</b>
20	1.01
30	1.28
40	2.47
45	3.36
50	11.76
55	28.91

For example, for a 55 year old member, we used a rate of 85% of 18% of 0.0289, or 0.004423, for total disability and 85% of 82% of 0.0289, or 0.020150, for occupational.

We reduced our decrements from other causes such as termination and retirement to be consistent with the higher disability rates. The total number of expected members leaving the system each year remained the same. In other words, we shifted some members from the category of termination or retirement to disability.

We assumed that disability rates would continue past eligibility for early and normal retirement. We considered but did not include any liability for members who might choose a taxable retirement benefit based on long service such as greater than 40 years, over the 70% of pay tax-free disability benefit. In other words, because the 70% is tax-free, we assumed that members would choose to take this disability benefit instead of a greater retirement benefit that is taxable.

We changed the disability assumptions to determine the base liabilities first, then added the proposed disability benefits. With everything else being equal, using higher disability rates would reduce the plan liabilities, because the mortality experience of disabled pensioners is less favorable than the experience of healthy pensioners. The cost of the proposed benefit improvement is based on the difference in the liabilities after the assumption change.

**FISCAL IMPACT:**

**Actuarial Determinations:**

The bill will impact the actuarial funding of the system by increasing the present value of benefits payable under the System and the required actuarial contribution rate as shown below:

<b>System: Law Enforcement Officers' and Firefighters' Plan 2</b>			
<i>(Dollars in Millions)</i>	<b>Current</b>	<b>Increase</b>	<b>Total</b>
<b>Actuarial Present Value of Projected Benefits</b> (The Value of the Total Commitment to all Current Members)	\$4,382.92	\$93.69	\$4,476.61
<b>Unfunded Actuarial Accrued Liability</b> (The Portion of the Plan 1 Liability that is Amortized at 2024)	\$0.00	\$0.00	\$0.00
<b>Unfunded Liability (PBO)</b> (The Value of the Total Commitment to all Current Members Attributable to Past Service)	\$(546.57)	\$48.86	\$(497.71)
<b>Increase in Contribution Rates: (Effective 09/01/2005)</b>			
Employee	0.43%		
Employer	0.25%		
State	0.18%		

## Fiscal Budget Determinations:

As a result of the higher required contribution rate, the increase in funding expenditures is projected to be:

<b>Costs (in Millions):</b>	<b><u>LEOFF 2</u></b>
<b>2005-2007</b>	
<b>State:</b>	
General Fund	\$3.9
Non-General Fund	<u>0.0</u>
<b>Total State</b>	<b>\$3.9</b>
Local Government	\$5.5
Total Employer	\$9.4
Total Employee	\$9.4
<b>2007-2009</b>	
<b>State:</b>	
General Fund	\$4.7
Non-General Fund	<u>0.0</u>
<b>Total State</b>	<b>\$4.7</b>
Local Government	\$6.6
Total Employer	\$11.3
Total Employee	\$11.3
<b>2005-2030</b>	
<b>State:</b>	
General Fund	\$91.8
Non-General Fund	<u>0.0</u>
<b>Total State</b>	<b>\$91.8</b>
Local Government	\$133.3
Total Employer	\$225.1
Total Employee	\$225.1

## STATEMENT OF DATA AND ASSUMPTIONS USED IN PREPARING THIS FISCAL NOTE:

The costs presented in this fiscal note are based on our understanding of the bill as well as generally accepted actuarial standards of practice including the following:

1. Costs were developed using the same membership data, methods, assets and assumptions as those used in preparing the September 30, 2003 actuarial valuation report of the Law Enforcement Officers' and Firefighters' Retirement System except for the disability rates disclosed in this fiscal note.
2. As with the costs developed in the actuarial valuation, the emerging costs of the System will vary from those presented in the valuation report or this fiscal note to the extent that actual experience differs from that projected by the actuarial assumptions.
3. Additional assumptions used to evaluate the cost impact of the bill which were not used or disclosed in this fiscal note or the actuarial valuation report include the following: None.
4. The analysis of this bill does not consider any other proposed changes to the system. The combined effect of several changes to the system could exceed the sum of each proposed change considered individually.
5. This fiscal note is intended for use only during the 2005 Legislative Session.
6. The funding method used for Plan 1 utilizes the Plan 2/3 employer/state rate as the Normal Cost and amortizes the remaining liability (UAAL) by the year 2024. Benefit increases to Plan 2/3 will change the UAAL in Plan 1. The cost of benefit increases to Plan 1 increases the UAAL.
7. Plan 2/3 utilizes the Aggregate Funding Method. The cost of Plan 2/3 is spread over the average working lifetime of the current active Plan 2/3 members.
8. The cost increases for the bill used to determine the increase in funding expenditures for future new entrants are 0.30% for LEOFF Plan 2 members and 0.30% for LEOFF Plan 2 employers, based on 50% of a total entry age normal cost increase of 0.60% for members and employers.

## GLOSSARY OF ACTUARIAL TERMS:

**Actuarial Present Value:** The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions (i.e. interest rate, rate of salary increases, mortality, etc.)

**Projected Benefits:** Pension benefit amounts which are expected to be paid in the future taking into account such items as the effect of advancement in age as well as past and anticipated future compensation and service credits.

**Normal Cost:** Computed differently under different funding methods, the normal cost generally represents the portion of the cost of projected benefits allocated to the current plan year.

**Unfunded Actuarial Accrued Liability (UAAL):** The cost of Plan 1 is divided into two pieces:

- The Normal Cost portion is paid over the working lifetime of the Plan 1 active members. The remaining cost is called the UAAL.
- The UAAL is paid for by employers as a percent of the salaries of all plan 1, 2 and 3 members until the year 2024.

**Pension Benefit Obligation (PBO):** The portion of the Actuarial Present Value of future benefits attributable to service credit that has been earned to date (past service).

**Unfunded Liability (Unfunded PBO):** The excess, if any, of the Pension Benefit Obligation over the Valuation Assets. This is the portion of all benefits earned to date that are not covered by plan assets.

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December 10, 2004

Law Enforcement Officers' & Firefighters' Plan 2 Retirement Board  
P.O. Box 40918  
Olympia, Washington 98504-0918

Re: Actuarial review of contribution rate impact of Duty Disability  
Benefit improvements

Chairman Fox and Members of the Board:

There follow the results of our actuarial review of the LEOFF 2 contribution rate increases contained in the LEOFF 2 draft fiscal note of December 8, 2004 of the Office of the State Actuary.

**Background**

Currently, members "disabled in the line of duty" can elect to receive either 150% of their contribution account or an annuity equal to the member's accrued benefit actuarially reduced for early retirement, with a 10% of final average salary minimum. The benefit improvements currently being considered would remove the early retirement reduction for members disabled in the line of duty and, for those duty disablements found to be "totally disabled", would increase the annuity to 70% of final average salary.

The recommended contribution rate increases contained in the draft fiscal note of the Office of the State Actuary are shown below.

Employee	0.43%
Employer	0.25%
<u>State</u>	<u>0.18%</u>
Total	0.86%

In order to value this benefit, (1) assumptions as to incidences of disability were changed to reflect the design the new disability benefits and (2) mortality rates of future disabled who under the current benefit structure would have taken vested terminated benefits were changed from healthy to disabled mortality. The contribution rate increases shown above are based on these new assumptions.



## Results of Review

### *Assumptions*

Rates of disablement are based on experience of the Colorado Fire and Police Pension Association Death and Disability Fund, which provides benefits that are similar in design and administration to those being contemplated, and on the percentage of duty disablements under LEOFF 1 (85%). In addition, it has been assumed that, due to the favorable tax treatment afforded the 70% benefit, totally disabled members eligible for retirement will elect the 70% duty disability benefit rather than the service retirement benefit. We agree that these assumptions are reasonable for pricing this benefit.

### *Retroactive Provisions*

As currently outlined, the improvement would not be retroactive. Should a retroactive provision be added, the contribution rate increases shown should be revised accordingly.

### *Contribution Rates*

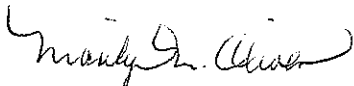
We independently calculated the increases in the LEOFF 2 Actuarial Present Value of Projected Benefits and the resulting contribution rate increases. Our results fell within a reasonable range of the State Actuary's results.

### *Conclusions*

Contribution rates shown in the draft fiscal note of the Office of the State Actuary are appropriate for costing the contemplated benefit improvements.

The undersigned is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Sincerely,



Marilyn M. Oliver, F.S.A., M.A.A.A.  
Actuary and Principal  
Oliver Consulting  
Contractor



John E. Bartel, A.S.A., M.A.A.A.  
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Peer Review

Cc.  
Steve Nelsen, Executive Director  
Matthew M. Smith, State Actuary