# NDPERS BOARD MEETING
# Agenda

**Bismarck Location:**
**ND Association of Counties**
**1661 Capitol Way**
**Fargo Location:**
**BCBS, 4510 13th Ave SW**

**April 29, 2010** **Time: 8:30 AM**

**I. MINUTES**
   A. March 25, 2010
   B. April 7, 2010

**II. PERSLink**
   A. ICON Contract – Sharon (Board Action)
   B. Update – Sharon (Information)
   C. Quarterly Report – Bryan (Information)

**III. GROUP INSURANCE**
   A. Health Plan Strategies – Sparb (Board Action)
   B. Health Bid – Sparb (Board Action)
   C. BCBS Update – Sparb (Information)

**IV. RETIREMENT**
   A. Experience Study – Sparb (Board Action)
   B. Judges Plan – Sparb (Information)

**V. DEFERRED COMPENSATION**
   A. Provider Issues – Kathy (Board Action)

**VI. MISCELLANEOUS**
   A. Quarterly Consultant Fees – Jim (Information)
   B. SIB Agenda
   C. Review – Sparb

Any individual requiring an auxiliary aid or service must contact the NDPERS ADA Coordinator at 328-3900, at least 5 business days before the scheduled meeting.

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# Memorandum

**TO:** PERS Board

**FROM:** Sharon Schiermeister

**DATE:** April 19, 2010

**SUBJECT:** PERSLink Data Conversion (ICON)

In June 2009, the PERS Board provided approval to hire a vendor, ICON Integration, to assist with the PERSLink data conversion effort. The firm was retained and has provided services with the data reconciliation process. The contract for this effort was $120,000. The cost of this contract was absorbed within the project budget through a re-allocation of the cost savings from the backfile conversion effort.

We are completing the initial round of data reconciliation which consists of matching information on the mainframe with information on PERSLink. Items we looked at include member counts by plan, status and employer, service credit, salary balances, contribution balances, pension payment amounts, and insurance premiums. This process has allowed us to identify records on the mainframe that may require correcting and to fine-tune the logic that is being used to convert data into PERSLink. It has also provided an increased level of confidence that critical data has been converted correctly, which could not be achieved by just a random sampling of converted records.

Throughout the remainder of the project, we are planning to convert data 3 more times. As part of the data conversion process, we feel it is prudent to also perform the data reconciliation process. We are proposing that we contract with ICON Integration to assist with this process. ICON has provided the following proposal:

| Task | Fixed Fee | On-Site Hourly Rate ($150) | Off-Site Hourly Rate ($125) |
|---|---|---|---|
| Reconciliation Cycle #1 | $ 6,250 | | $ 5,625 |
| Reconciliation Cycle #2 – parallel testing | $ 6,250 | | $ 5,625 |
| Reconciliation Cycle #3 – final for go-live | $ 6,250 | $ 6,750 | |
| TOTAL | $18,750 | $ 6,750 | $11,250 |

The proposal consists of a fixed fee and also up to 45 hours of additional time for each conversion run. The fixed fee is the cost to complete the reconciliation process as currently defined, assuming there are no changes in business rules or conversion rules. However, because we are still fine-tuning the conversion logic, we felt it was necessary to ask ICON to include a reasonable estimate of hours assuming we will have some changes. ICON felt that 45 hours per conversion run would be reasonable. The additional hours would only be billed based upon identification of a change that is pre-approved by NDPERS. ICON suggests that the Cycle #1 and Cycle #2 be completed off-site and Cycle #3 be performed on-site. However, this is also at the discretion of NDPERS.

The total cost of this contract would be $36,750. This assumes the additional 45 hours are used for each Cycle, and Cycle #1 and Cycle #2 are off-site and Cycle #3 is on-site. As part of our original project budget, there is a contingency line item of $730,640 which could be allocated for this contract.

**Staff Recommendation:** Retain ICON to assist the PERSLink project team with the data reconciliation process.

**Board Action Requested: Approve reallocation of project budget to contract with ICON for data conversion assistance up to $36,750.**

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# Memorandum

**TO:** PERS Board

**FROM:** Sharon Schiermeister

**DATE:** April 20, 2010

**SUBJECT:** PERSLink Project Update

As we near completion of the PERSLink project, we thought it would be useful to provide more frequent updates to the Board. Presentations will be made in April, June, August and October to keep you informed of project activities.

The presentation today will focus on the current status of the project, major activities remaining to be accomplished, communication activities, change management, and ongoing support & maintenance.

Future presentations will cover more specific topics, such as the training plan for internal and external users and an overview of web self-service functionality for employers and members.

**North Dakota Public Employees Retirement System**

# NDPERS PERSLink

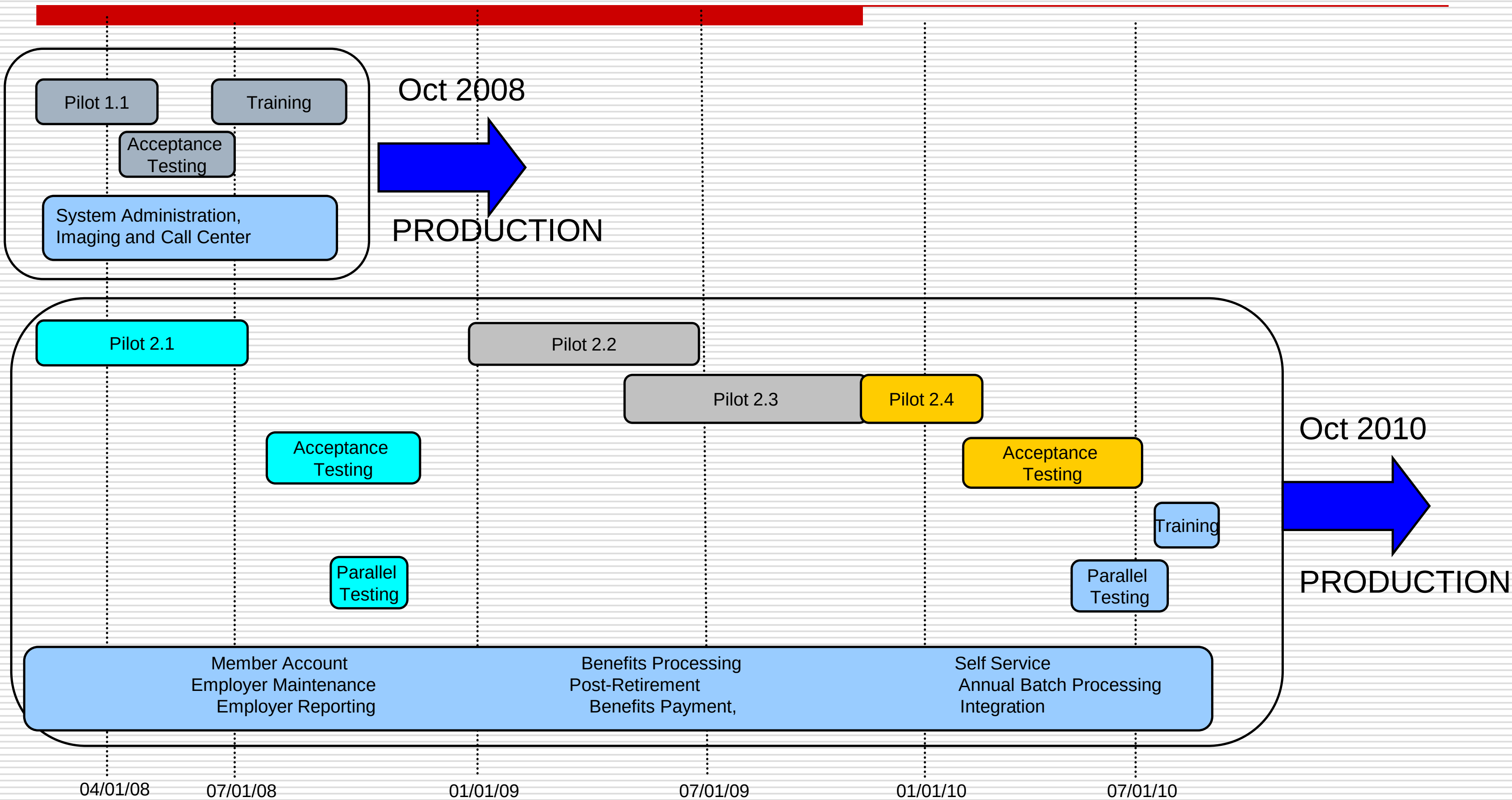
## Board Presentation
## April 29, 2010

"We commit to successfully implement a robust, reliable, secure web-enabled, integrated benefit administration system that improves NDPERS' business operations and service."

# Project Status

- Start Date:  October 1, 2007
- Project Status:  Green – within 10% variance on schedule and budget
- Scheduled End Date:  October 1, 2010 – however, we are currently tracking 1 month behind

# Overall Project Schedule



# Key Remaining Activities

- Completion of User Acceptance Testing
- Completion of Parallel Testing
- Finalize Data Conversion
- Complete testing with employers and vendors
- Complete training of NDPERS staff and employers
- Completion of Deployment Tasks

# Project Schedule

- Tracking 1 month behind
- Testing is taking longer
  - limited PERS resources
- Evaluating options
  - focus is on quality

# Communication Events

- Board Updates – April, June, August, October
- Increase visibility of PERSLink
  - Notice to employers on employer reporting changes
  - Employer Newsletter Article
  - Employee Newsletter Article

# Change Management Goals

- Eliminate Silos within NDPERS
- Provide better backups through cross training and multi functional positions
- Prepare Staff
  - Determine new roles and responsibilities
  - Provide in house training on new areas of responsibility
  - Provide Comprehensive Training on PERSLink
  - Provide tools to assist – On Line Help, Video Scripts

# Short/Long Term Support for PERSLink

- Reviewed IT staffing needs post go live and providing necessary specialized training
- Planning to Utilize ITD Service Desk Model to assist in support for members and employers after go live
- Need to determine the best Post Warranty Support Model for NDPERS
  - Full outsourcing
  - Full in house staffing
  - Mix of outsourcing/in house staffing

# Support & Maintenance

- A support system needs to be in place to continue to maintain and enhance the system:
  - Ongoing operations and production support – running batches, troubleshooting problems, specialized inquiries, external interfaces, etc.
  - Enhancements and software updates:  New legislation with new benefit plans, tax law changes, etc. will require modifications and updates to the system
  - Hardware maintenance and support- LAN, servers, desktops, printers, etc.

- Staff will present support and maintenance options and associated costs at May Board meeting

# Summary

- Satisfied with vendor commitment and quality of product being delivered
- Staff likes what they see
- Project team remains committed to delivering a quality product

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# Memorandum

**TO:** PERS Board

**FROM:** Sparb

**DATE:** April 21, 2010

**SUBJECT:** Pharmacy Program Strategies

At the February meeting we heard a presentation from BCBS on pharmacy strategies (Attachment #1). Attachment #2 is a memo from BCBS with their recommendations on which strategy PERS should consider implementing.

**Staff Recommendation**

Accept the recommendations of BCBS with the exception of Option #1 (please note BCBS is not recommending Option #5 at this time and staff agrees as well). Specifically accept:

- Option 2 – implement a specialty pharmacy program
- Option 3 – make available more education material to our members relating to Prime Mail
- Option 4 – implement a step therapy program

Staff is recommending to not accept recommendation #1 to move to the Prime Select network. We are recommending deferring this decision until after the bid.

# NDPERS 2010 Opportunities
# NDPERS + BCBSND + Prime

Strategic Pharmacy Approaches

February 25, 2010

PRIME THERAPEUTICS®

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# Overall pharmacy management spectrum

Member Centric ⟷ Cost Focused

+

NDPERS Placement on Spectrum = +

NDPERS highlighted in BLUE

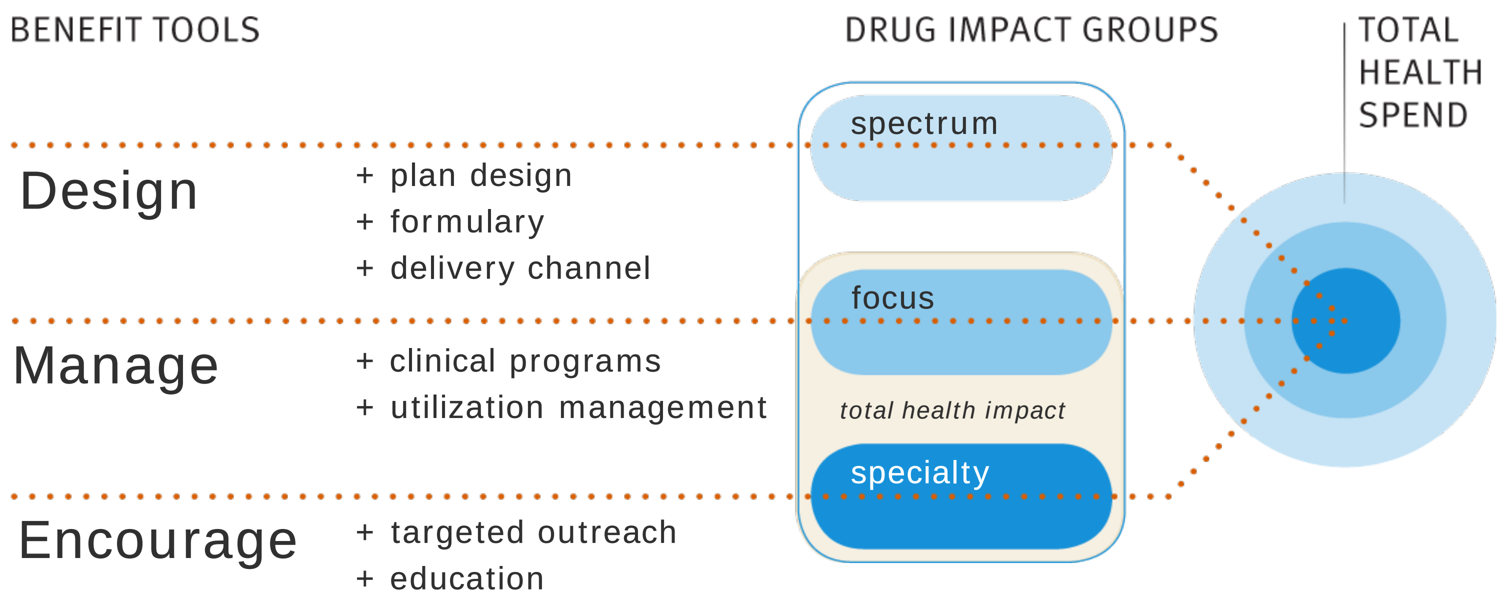
| Characteristics | Characteristics |
|---|---|
| > **Open formulary** | > **Highly managed formulary** |
| > **100 day channel neutral** | > 100 day channel promotes mail |
| > **Few Utilization Management Programs** | > Actively managed with Utilization Management Programs with limited grandfathering |
| > Low member cost sharing | > **Higher (>25%) member cost sharing** |
| > **Highest pharmacy access** | > Restricted Pharmacy Network |

| Cost Implications | Cost Implications |
|---|---|
| > Lower rebates | > Higher rebates |
| > **Less competitive network** | > Most competitive network |
| > Lower generic utilization | > High generic utilization/low unit cost |
| > Higher administrative costs | > Lower administrative costs |

| Tactics | Tactics |
|---|---|
| > **Two tier benefit structures** | > Maximizing formulary |
| > Low, or free, generics | > Mandatory mail |
| > **Member support tools and education programs** | > Step edits and quantity limits without grandfathering |
| > **Inclusive network contracting approach** | > Drug class closures and/or lockouts |
| > **Channel neutral (retail / mail)** | > Limited networks, improving network rates |

# Leveraging pharmacy for NDPERS in 2010

- Appropriate management of **Pharmacy Utilization** and **Drug Mix** can impact **Total Health Spend**
- Emphasis on Lower PMPM Costs differentiates Prime and BCBSND from others in the Market



# Opportunities for focused NDPERS efforts in 2010

- Keeping the following points of impact (+ or -) in mind:

  * Cost * Quality & Outcome * Members * Providers * BCBSND & NDPERS

| | Cost of Care | Outcomes | Members | Providers | BCBSND & NDPERS |
|---|---|---|---|---|---|
| Formulary Mgmt | ↓ | No Change | +/- | No Change | +/- |
| Benefit Design | ↓ | +/- | +/- | No Change | +/- |
| Utilization Mgmt | ↓ | No Change | No Change or (-) | No Change or (-) | +/- |
| Network Mgmt | ↓ | No Change | + | - | +/- |
| Specialty Mgmt | ↓ | + | + | No Change or (-) | +/- |
| PrimeMail | ↓ | + | + | - | +/- |

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# Menu of clinical products and services

- Integrated programs incorporate medical diagnoses, generating the greatest potential to positively impact health outcomes and hold down total cost

| | | | | |
|---|---|---|---|---|
| Integrated Programs | **Efficiency Assessment** | Assessment combines pharmacy and medical data and applies predictive modeling logic to identify members at high risk for an adverse medical event; targeted interventions can then be applied | **Utilization Management** | Clinical pharmacy programs cover step therapy, prior authorization and quantity limits; all include clinical protocols and administrative support |
| Integrated Programs | **Adherence Program** | Diagnostic reporting and interventions that target members to increase adherence to drug therapies | **Drug Alerts** | Timely alerts on new generics, drug safety issues and drug withdrawals sent to employers, physicians, members and plans |
| Integrated Programs | **Drug Utilization Review (DUR)** | Concurrent and retrospective DUR combines reporting and interventions to alert physicians of drug safety or utilization issues | **Triessent® Specialty Pharmacy Program** | Specialty pharmacy solutions that support a superior member experience while balancing the real-world financial and logistical considerations of employers |
| Standard | **$0 Generic Copay Program** | Targets members with chronic conditions to encourage formulary compliance and generic drug use | **Generic Opportunity Program** | Reporting and consultation help identify and prioritize opportunities to improve generic utilization |

# Utilization management savings opportunities

| Program Name | Impacted Members | Drug Cost Savings |
|---|---|---|
| PPI Step Therapy | Medium | $$$ - $$$$ |
| ACE/ARB Step Therapy | Medium | $$ - $$$ |
| Bisphosphonate Step Therapy | Low | $ |
| Insomnia Step Therapy | Low | $ - $$ |

| Program Name | Impacted Members | Drug Cost Savings |
|---|---|---|
| PPI Class Closure | High | $$$$ Plus |
| NSAH Class Closure | Low | $ |

| SCALE | Impacted Members | SCALE | Drug Cost Savings |
|---|---|---|---|
| Low | Under 200 | $ | $10,000 to $50,000 |
| Medium | 500 to 2,800 | $$ | $50,000 to $200,000 |
| High | 2,800 or more | $$$ | $200,000 to $500,000 |
| | | $$$$ | $500,000 or more |

# Generics Plus formulary savings opportunity

## NDPERS

**Generics Plus Formulary:**

- Consists of all generics (except those with safety concerns) and the minimum clinically necessary number of brands.
- Impacts (reduces) manufacturer rebates due to lower brand utilization

**Savings Assumptions:**

- Every 1% increase in Generic Utilization Rate = 1 to 1.5% savings in total cost

| Current Generic Utilization | GUR |
|---|---|
| NDPERS (non-specialty) | 69.1% |

| | GUR | Increase to GUR | Total Paid Savings* | Annual Savings* |
|---|---|---|---|---|
| "Low Range" Estimated under Generics Plus | 77.3% | +8.2 pts | 10.2% | $$ |
| "High Range" Estimated under Generics Plus | 84.1% | +15.0 pts | 22.5% | $$$$$ |

| Drug Cost Savings |
|---|
| Every $ = $1 Million |
| |

*Savings are estimates and should not be considered binding

# Triessent® specialty drug program savings

NDPERS 2009 Specialty PMPM Trend = 17.1% ($2.9M Annual Spend)
NDPERS 2009 Non-Specialty PMPM Trend = -0.7% ($30M Annual Spend)

| NDPERS Specialty Drugs | Claims | Utilizers | Estimated Annual Savings | Percent of Specialty Savings |
|---|---|---|---|---|
| Total | 1,403 | 310 | $100,000 | 3.32% |

triessent™

Triessent provides specialty pharmacy solutions supporting a superior member experience, while balancing the real-world financial and logistical considerations of members and plan sponsors.

# What is PrimeMail?

- PrimeMail is the mail-service pharmacy for Blue Cross Blue Shield of North Dakota
  - > Superior levels of quality and timeliness
    - – 99.99% dispensing accuracy[1]
    - – 95% member satisfaction[2]
    - – 1 day average in-house script turnaround[3]
  - > State-of-the-art efficiencies
    - – 5+ million prescriptions shipped annually[1]
    - – Dispensing capacity of more than 15 million prescriptions annually
    - – 150,000 square feet combined space
    - – VIPPS certified for safety, quality and security
    - – URAC accredited

1. PrimeMail data, 2009.
2. 2009 Prime Therapeutics annual member survey.
3. PrimeMail data, January-September 2009.

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# NDPERS PrimeMail savings opportunity

- **Lower pharmacy costs**
  - > PrimeMail on average yields $60 in total savings per prescription compared to retail[1]
- **Increased adherence, which can lead to lower total health care costs**
  - > 90-day supplies offered through PrimeMail can increase adherence to maintenance medications
- **PrimeMail delivers convenience to members**
  - > Members choose where their prescriptions are sent
  - > Medications can be ordered easily online, over the phone or through the mail
  - > 90-day medication supplies from PrimeMail require fewer refills and increased convenience
  - > Plain-labeled packaging protects the privacy of members

*Example:*

If a plan sponsor with 500,000 annual retail prescriptions shifted 5% of those scripts to mail, it could result in an average total savings of $1,500,000 each year

1. PrimeMail data, 2009.

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# Overall Prime Performance

Proven Prime + BCBS PBM Results

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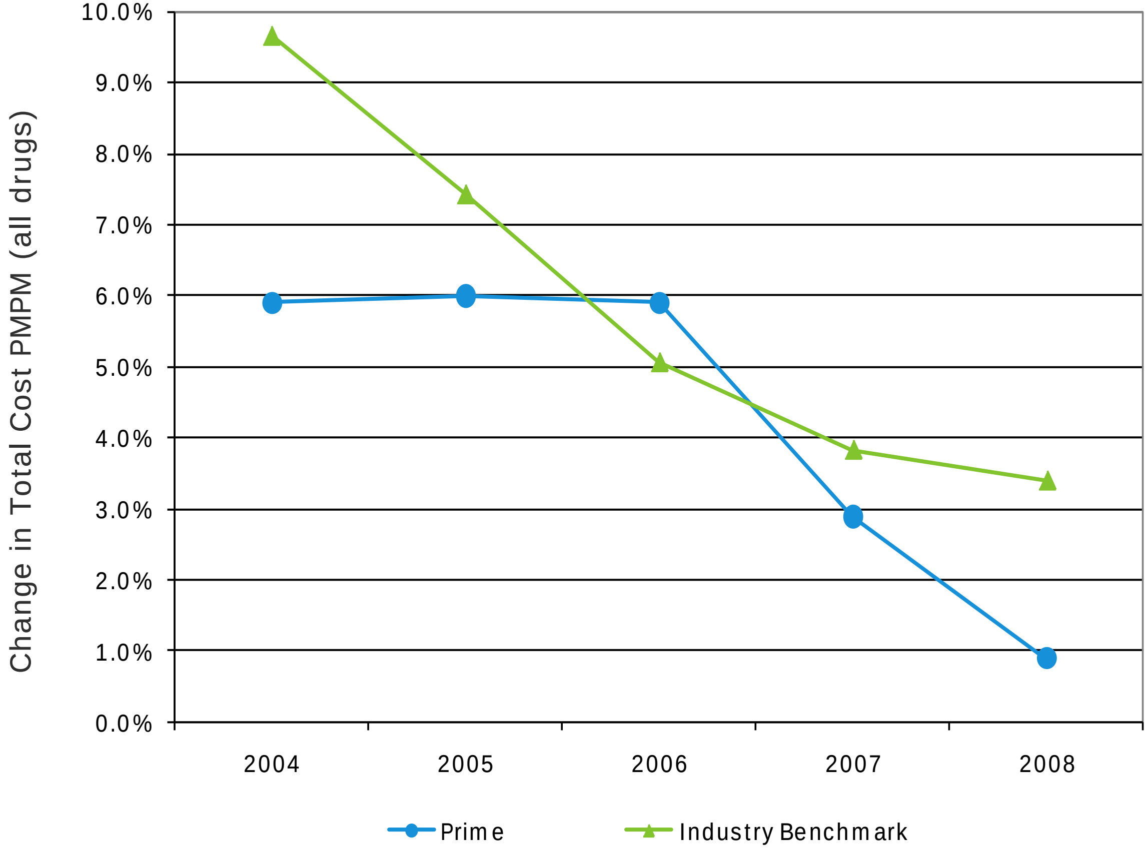
# Proven results: drug trend

- Prime's drug trend consistently tracks better than industry benchmarks




**2008 Commercial Trend Performance**

| PBM | PMPM Trend (all drugs) |
|---|---|
| CVS Caremark | 3.90% |
| Express Scripts | 3.00% |
| Medco Health | 3.30% |
| Prime | 0.90% |

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# Proven results: competitive pricing

- Prime outperforms competition in total Ingredient/Rx and Generic Fill Rate

| | **Prime** | **Standalone PBM 1** | **Standalone PBM 2** | **Standalone PBM 3** | **National Health Plan PBM** |
|---|---|---|---|---|---|
| Generics | | | | | |
| Adjusted Claims Count | 16,950,835 | 905,356 | 1,012,698 | 1,193,781 | 13,459,615 |
| Ingredient Cost/Rx | $18.48 | $21.36 | $21.72 | $23.30 | $19.49 |
| Discount % | 69.3% | 68.5% | 64.0% | 64.5% | 65.9% |
| Days of Therapy/Rx | 23.28 | 25.06 | 22.80 | 24.20 | 22.37 |
| Cost Per Day | $0.79 | $0.85 | $0.95 | $0.96 | $0.87 |
| GFR | **64.9%** | 61.5% | 55.2% | 56.0% | 63.7% |
| Brand Drugs | | | | | |
| Adjusted Claims Count | 9,248,292 | 566,108 | 821,535 | 939,835 | 7,681,702 |
| Ingredient Cost/Rx | $140.39 | $135.59 | $125.66 | $128.98 | $138.61 |
| Discount % | 17.5% | 21.9% | 19.4% | 20.9% | 16.8% |
| Days of Therapy/Rx | 27.31 | 27.65 | 26.77 | 27.94 | 26.30 |
| Cost Per Day | $5.14 | $4.90 | $4.69 | $4.62 | $5.27 |
| Total | | | | | |
| Total Ingredient/Rx | **$61.27** | $65.31 | $68.27 | $69.85 | $62.77 |

- Prime’s financial competitiveness was validated by Ingenix in an independent study

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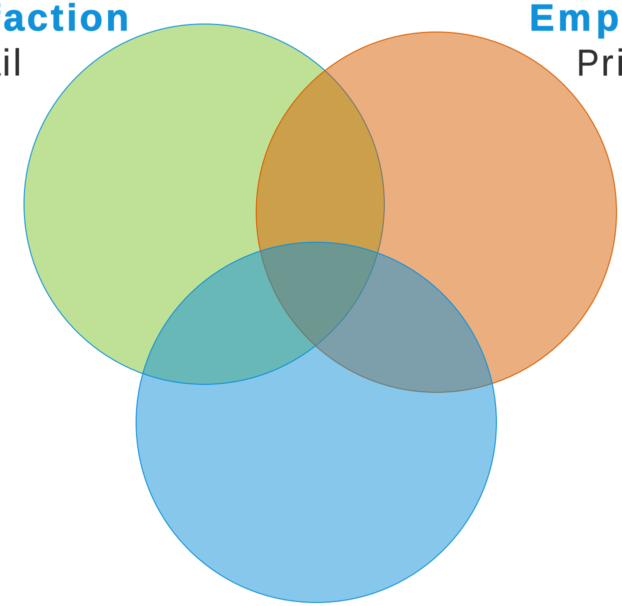
# High satisfaction rates for employers and members

- Administrative ease and operational excellence are proven by high employer and member satisfaction

**2008 Member Satisfaction**
94% at PrimeMail
93% at Retail

**Employer Group Satisfaction**
Prime ranked 2nd in overall employer satisfaction

(2008 PBMI Survey)



**2008 Prime Internal**
Quality Metrics
97.6%

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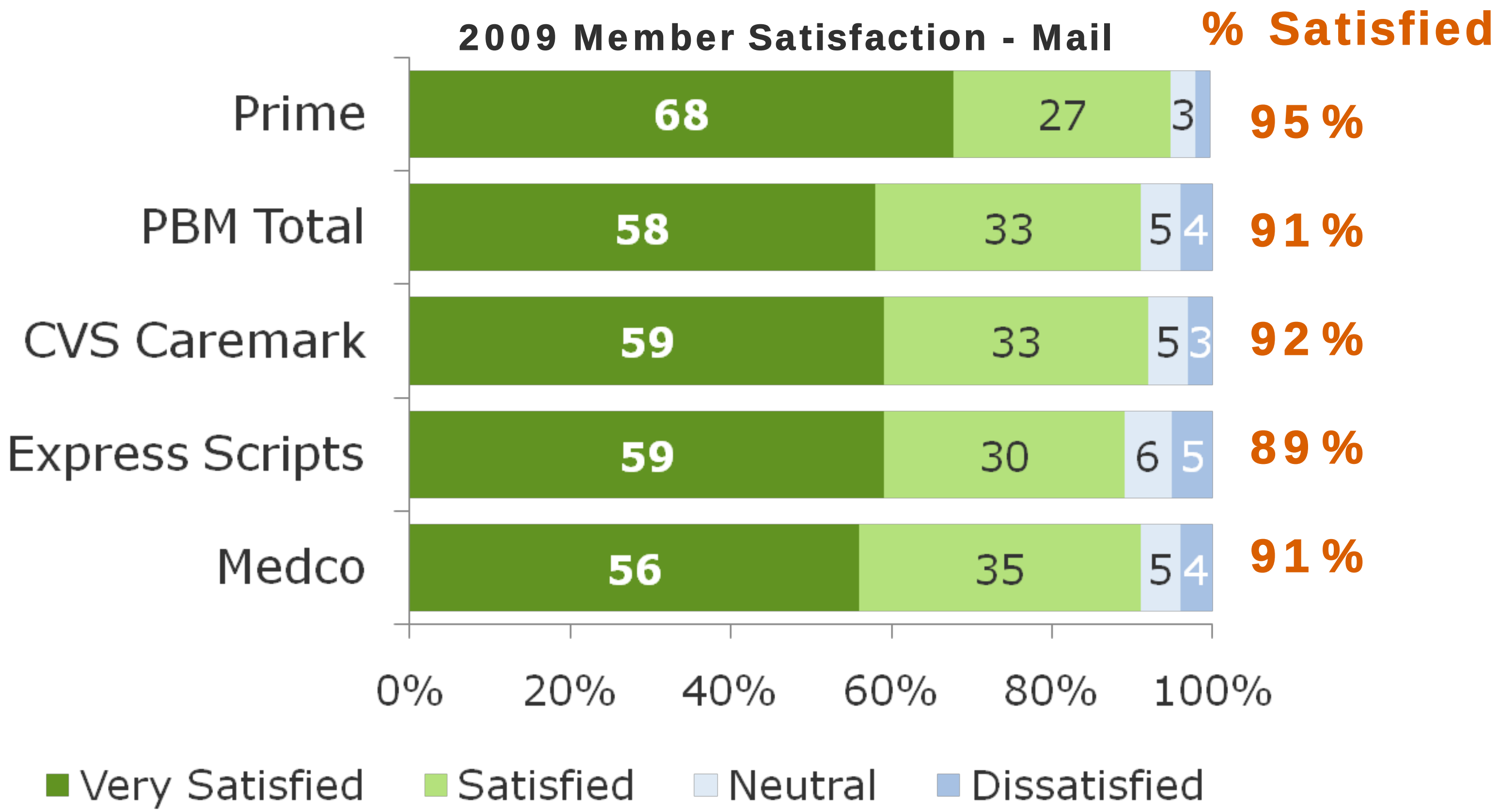
# Our approach and focus to our Clients also leads to best in class member service

- Member satisfaction is at the core of everything we do, as illustrated by our competitive survey benchmarks




Information provided from Prime Therapeutics Annual Member Satisfaction Survey, December 2008

# Contact Information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## Strategic Pharmacy Approaches

Managing a pharmacy benefit plan requires balance between cost, member impact and administrative concerns. To stem increasing drug costs this balance requires management tools designed to minimize member impact, improve administrative oversight, and increasing drug costs. Each option contains a brief review of potential cost savings, member impact and administrative considerations, and Blue Cross Blue Shield North Dakota's (BCBSND) recommendation. An attempt was made to present the programs on a continuum of least to greatest member impact.

### ***Option 1: Transition to the Prime Select Network***

Prime Therapeutics maintains two retail pharmacy networks, the **Prime Select** and the **Prime National** networks. Most pharmacies in North Dakota, and throughout the United States, have contracts in both networks. The **Prime Select** network has modestly deeper discounts on brand medications and lower dispensing fees.

BCBSND currently reimburses pharmacies located in North Dakota, and those out-of-state pharmacies located within one contiguous county along the North Dakota border, under the **Prime National** network contract. Other out-of-state pharmacy locations are reimbursed under the **Prime Select** network contract.

***Cost Impact:*** Prime Therapeutics estimates that transitioning the NDPERS membership to the Prime Select network would result in annual savings of approximately $800,000 to $1 million.

***Member Impact:*** Transitioning the NDPERS membership to the Prime Select network would have very little member impact. There are only five North Dakota pharmacies participating in the Prime National network that do not participate in the Prime Select Network. In 4$^{th}$ Quarter 2009, 396 NDPERS members utilized the five pharmacies not currently contracted in the Prime Select network.

***Administrative Consideration:*** Although the vast majority of North Dakota pharmacies have **Prime Select** pharmacy network contracts in place, there is the possibility a number of pharmacies could cancel their current contracts and seek more favorable reimbursement rates. Prime would work to negotiate with all non-contracted pharmacies to ensure a broad network of participating pharmacies should NDPERS membership transition to the **Prime Select** network.

***BCBSND recommends transitioning the NDPERS membership to the Prime Select network.***

## Option 2: Triessent Specialty Pharmacy Program

Triessent is Prime Therapeutics' specialty pharmacy program. The program is designed to help improve the health of members with specialty conditions (like rheumatoid arthritis, hepatitis C, and multiple sclerosis). Triessent offers safe and efficient medication delivery, member education, and guidance from pharmacists and nurses experienced with specialty conditions. Triessent offers modestly deeper discounts on specialty medication than retail pharmacy networks.

***Cost Impact:*** Prime Therapeutics estimates that exclusive use of Triessent Specialty Pharmacy Program services would yield approximately $100,000 in annual savings

***Member Impact:*** In 2009, approximately 310 NDPERS members filed claims for a specialty medication. Under an exclusive specialty pharmacy program, these members would be required to obtain their medications through Triessent. Currently, most NDPERS members use retail pharmacies for their specialty medication needs, so the use of a specialty pharmacy involves a different member experience. Some employer groups have experienced member disruption implementing the Triessent program (transferring prescriptions, arranging delivery schedules) when they entered into an exclusive, fixed start date with Triessent. Member disruption issues may be avoided initially in a voluntary program.

***Administrative Considerations:*** Specialty medications are the fastest growing segment of the pharmaceutical market, both in terms of new products and inflationary pricing. While specialty medications account for only a very small number of claims filed by a very small number of members, the specialty class of drugs is driving the overall pharmacy cost trend. In 2009, NDPERS' specialty medication PMPM trend was 17%. The non-specialty medication PMPM trend was a deflationary -0.7%. It appears that managing these products apart from the general drug benefit would be beneficial. Benefit changes may be needed to support this arrangement.

***BCBSND recommends we enter into an exclusive arrangement through Triessent on behalf of NDPERS membership. Doing so now minimizes member impact and establishes the program to better manage the increased utilization of specialty medications in the future.***

## Option 3: Maintenance Drugs at PrimeMail

PrimeMail is Prime Therapeutics' fully integrated mail-service pharmacy providing safe, convenient, cost-effective home delivery of medications. PrimeMail helps manage total health care spend by offering significant discounts on medications and no dispensing fees.

***Cost Impact:*** Prime Therapeutics estimates annual savings of approximately $800,000 assuming 100% of maintenance medications go to PrimeMail.

***Member Impact:*** In 2009, approximately 15,000 NDPERS members filed a claim for a maintenance medication. Currently, most NDPERS members use retail pharmacies for their maintenance medication needs, so the use of a mail service pharmacy involves a different member experience. A mandatory mail benefit for maintenance medications will force some members into a distribution channel not of their first choice.

***Administrative Considerations:*** Under non-exclusive mail service arrangements, members still need to do comparison shopping on generic medications. In addition, the retail pharmacy market strongly opposes mandatory mail benefits.

***Due to the high member impact and recommended move to the Prime Select network, BCBSND recommends greater efforts be made at promoting PrimeMail to ensure Member awareness of this service. BCBSND, on NDPERS behalf, may desire entering into an exclusive maintenance medication arrangement with PrimeMail at a later date.***

## Option 4: Utilization Management Programs

Prime Therapeutics offers a number of utilization management programs designed to ensure members receive the safest, most cost effective medications. In particular, step therapy programs drive safety and cost savings by encouraging members to try a first-line medication, usually a generic alternative, before coverage is provided for a second-line medication, usually a more costly, brand-name medication.

***Cost Impact:*** Cost savings vary by the step therapy program implemented. Recommended step therapy programs and associated cost saving estimates include: PPI step therapy ($528K), ACE/ARB step therapy ($433K), Biphosphonate step therapy ($32K), Insomnia step therapy ($54K).

***Member Impact:*** Member impact also varies by the step therapy program implemented. Recommended step therapy programs and associated member impact estimates include: PPI step therapy (1,440), ACE/ARB step therapy (1,712), Biphosphonate step therapy (176), Insomnia step therapy (331). Prior to implementing a step therapy program, attempts are made to notify members of the impending program. Despite best efforts, some members will first become aware of the program at the point of the dispensing pharmacy.

***Administrative Considerations:*** Step therapy can ease the transition to more highly managed programs such as the GenericPlus Formulary. On the other hand, step therapy can increase the burden of exception requests and appeals.

***BCBSND recommends that NDPERS adopt the use of cost-beneficial step therapy programs and would assist in determining which program(s) to implement at this time.***

## Option 5: Generic Plus Formulary

The Generics Plus Formulary is a clinically sound formulary that encourages the use of lower cost generic medications. The formulary consists of all generic medications (except those with safety concerns) and the minimum clinically necessary number of brand medications.

***Cost Impact:*** Savings associated with the Generics Plus Formulary depend on the benefit design put in place to drive compliance with the formulary. More restrictive benefit designs (closed formulary) yield the greatest potential savings (approximately $5 million annually). Less restrictive benefit designs (open formulary) yield lesser savings (approximately $2 million annually).

***Member Impact:*** Prime estimates that approximately 13,000 members are currently filing claims for current formulary brand drugs that are not on the Generic Plus Formulary.

***Administrative Considerations:*** The BCBSND absolute year-to-year increase in the generic dispensing rate has averaged approximately 4% per annum over the last seven years. It is likely the trend will continue over the next several years. Step therapy programs offer a more focused approach to increasing generic dispensing rates and may ease the transition toward a generic formulary.

***At this time, BCBSND recommends the implementation of step therapy programs in lieu of implementing a Generic Plus Formulary, which would have a large impact on members.***

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# Memorandum

**TO:** PERS Board

**FROM:** Sparb

**DATE:** April 21, 2010

**SUBJECT:** Group Health Insurance Bid

Deloitte will be at the April 29 Board meeting to review the draft group health insurance Request for Proposal.

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# Memorandum

**TO:** PERS Board

**FROM:** Sparb

**DATE:** April 21, 2010

**SUBJECT:** BCBS Update

Jon Strinden and I are to meet with the BCBS Board on Friday April 23rd. Attached, for your information, is the PowerPoint that will be reviewed with them. We will provide you a further update at our board meeting on the 29th.

North Dakota Public Employees Retirement System

# DAKOTA PLAN

*Presentation to the*
*Blue Cross Blue Shield*
*Board of Directors*


*Jon Strinden, Chair NDPERS*

*Sparb Collins, Executive Director, NDPERS*

# Thank you

- For your staff
- For your support
- For your efforts
- For your interest

# Today

- Background
- Our Challenge
- Our Vision
- Discussion

# Background Information

- PERS
- PERS/BCBS

North Dakota Public Employees Retirement System

# PERS

# PERS BOARD

| | |
|---|---|
| • *Jon Strinden* | *Chair* |
| • *Howard Sage* | *Elected - Retirees* |
| • *Joan Ehrhardt* | *Elected - Actives* |
| • *Mike Sandal* | *Elected - Actives* |
| • *Levi Erdmann* | *Elected - Actives* |
| • *Arvy Smith* | *Health Officer* |
| • *Tom Trenbeath* | *Attorney General* |

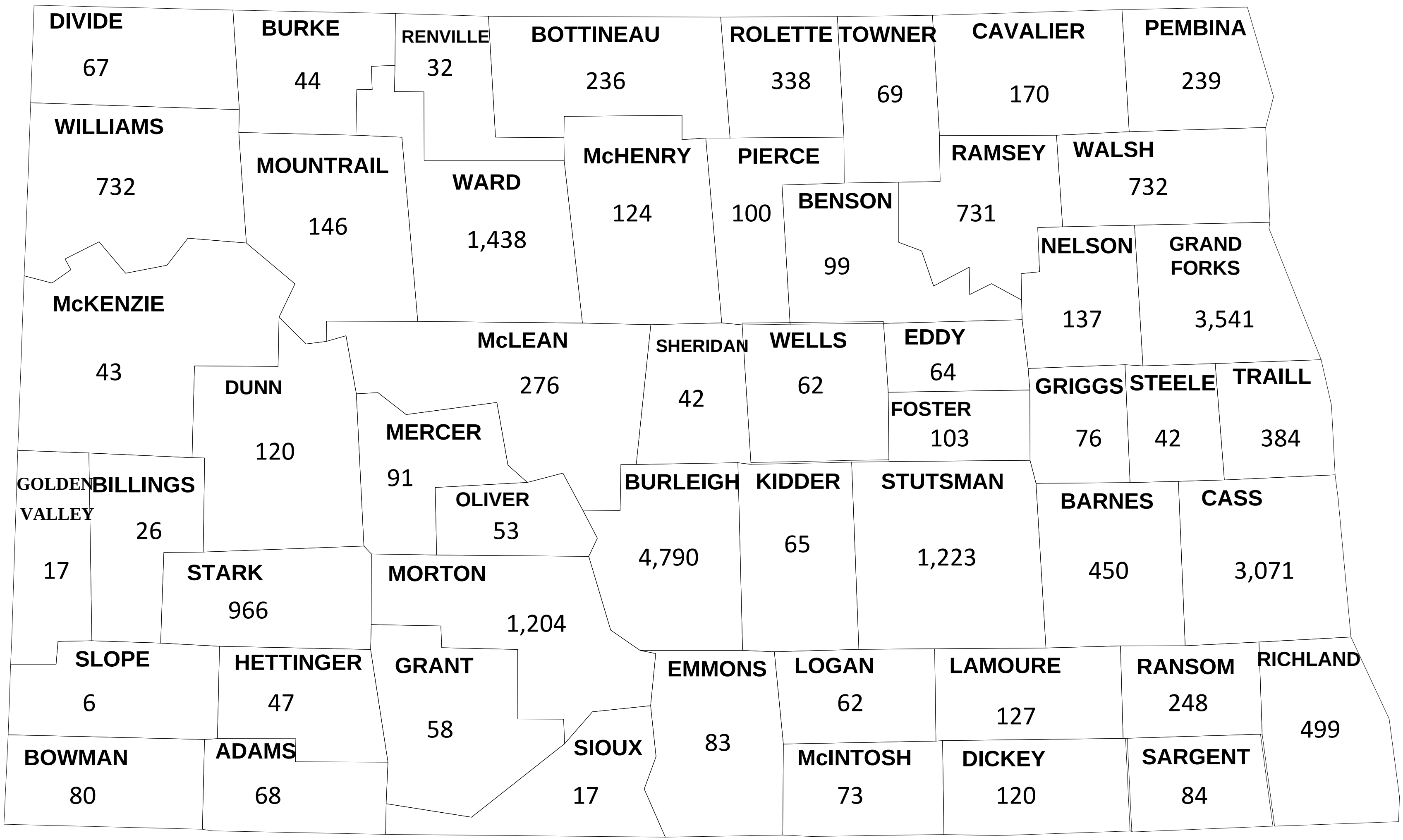
# PROGRAMS

- *RETIREMENT*
  - *Five defined benefit plans*
  - *Two defined contribution plans*
- *GROUP INSURANCE*
  - *Health*
  - *Dental*
  - *LTC*
  - *Life*
  - *Retiree Health*
- *FLEX COMP*
- *EMPLOYEE ASSISTANCE*

| | RETIREMENT | HEALTH | LIFE | DENTAL | VISION | EAP | DEFERRED COMP | FLEXCOMP |
|---|---|---|---|---|---|---|---|---|
| PARTICIPATION | | | | | | | | |
| AGENCY | | | | | | | | |
| State | 99 | 99 | 99 | 99 | 99 | 99 | 99 | 99 |
| Counties | 47 | 39 | 28 | | | | 48 | - |
| School Dist | 110 | 28 | 5 | | | | 55 | - |
| Cities | 78 | 57 | 22 | | | | 35 | - |
| Others | 64 | 65 | 22 | | | | 21 | |
| | *398* | *288* | *176* | *99* | *99* | *99* | *258* | *99* |
| EMPLOYEES | | | | | | | | |
| State | 10,813 | 14,682 | 15,358 | 4,796 | 3,774 | 15,358 | 4,482 | 8,375 |
| Counties | 3,391 | 1,865 | 2,439 | | | | 1,502 | - |
| School Dist | 5,026 | 1,180 | 123 | | | | 495 | - |
| Cities | 1,280 | 1,009 | 180 | | | | 719 | - |
| Others | 502 | 521 | 281 | | | | 285 | |
| Legislators | 0 | 127 | | | | | | - |
| Retirees | 7,537 | 5,694 | 2,977 (1) | 1,361 | 764 | | 1,817 | - |
| COBRA | | 354 | | 36 | 17 | | | - |
| | *28,549* | *25,432* | *21,358* | *6,193* | *4,555* | *15,358* | *9,300* | *8,375* |

# NDPERS Health Contracts

## January 2010



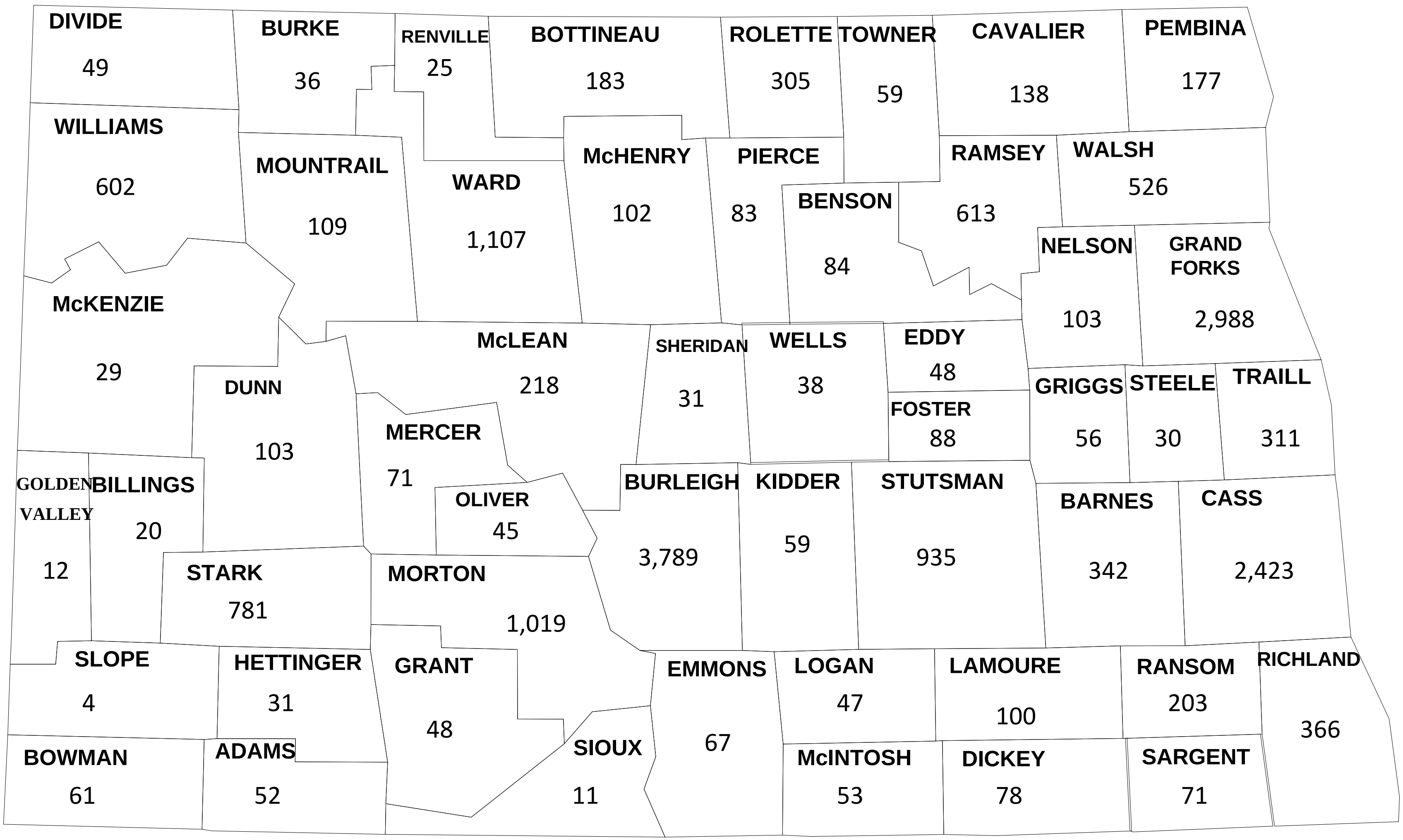

Out-of-State – 2,046

Total – 25,760

Average Contract Size = 2.24

# NDPERS Health Contracts – Age < 65

## January 2010



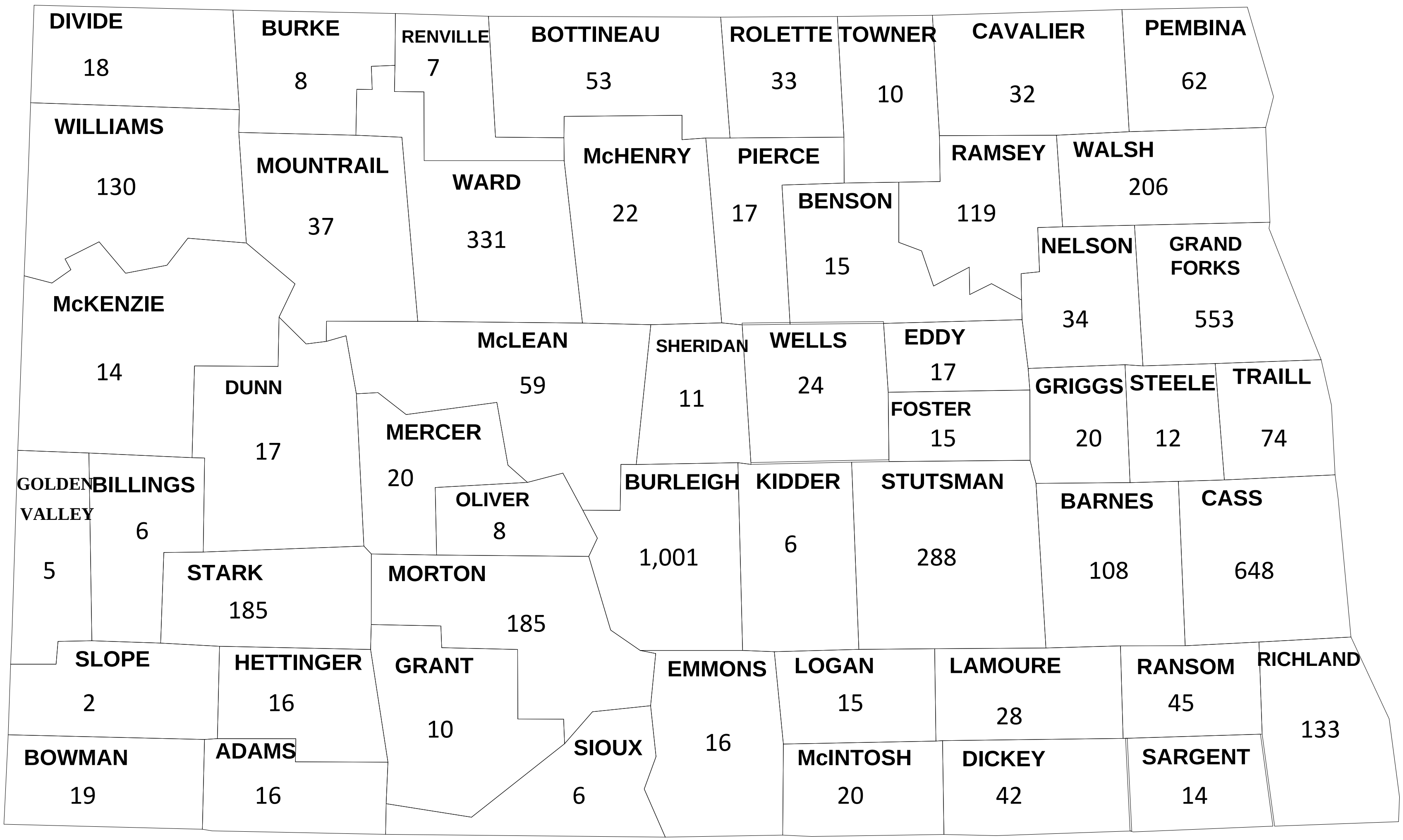

Out-of-State – 1,305

Total – 20,230

Average Contract Size = 2.47

# NDPERS Health Contracts – Age 65+

## January 2010

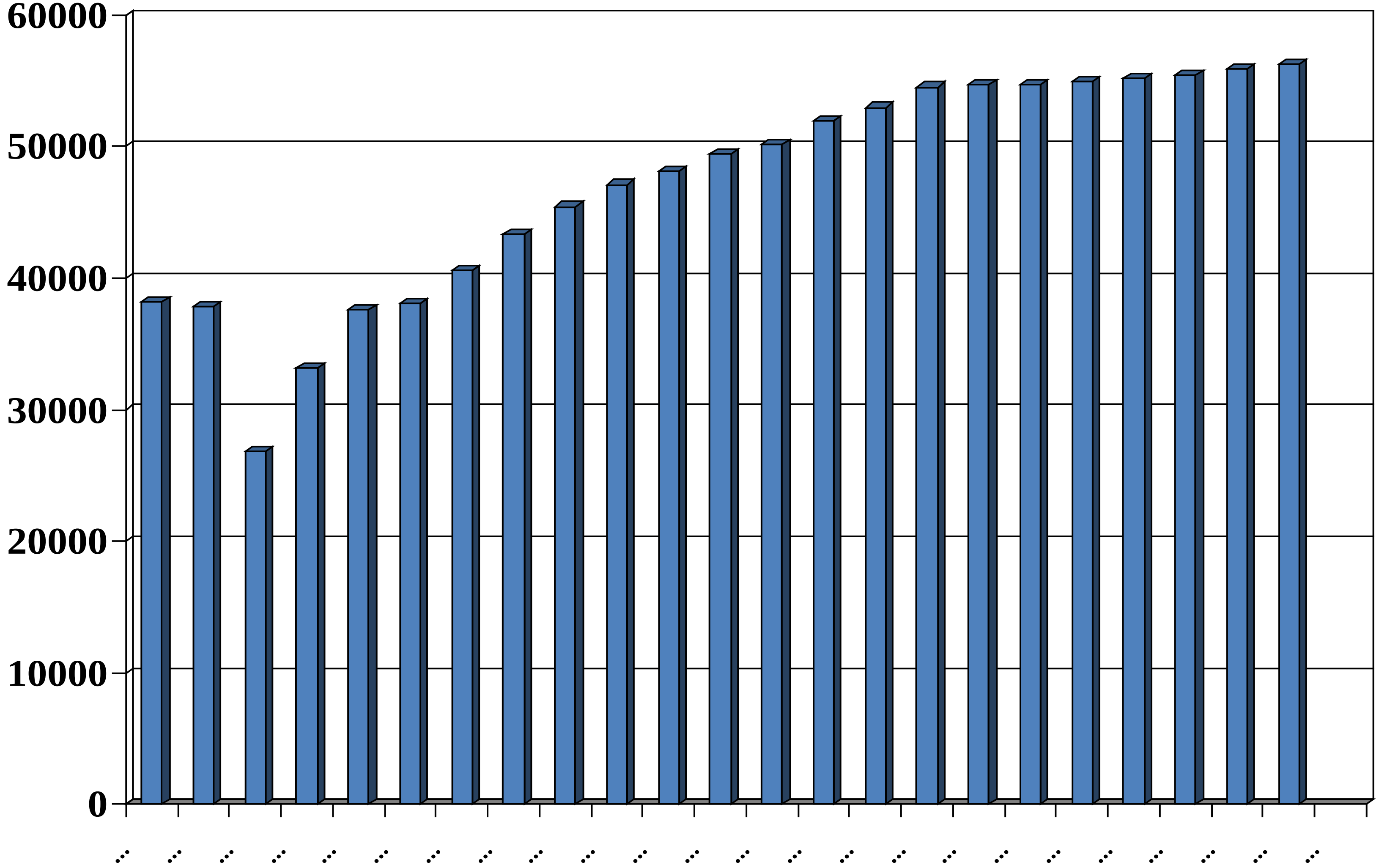



Out-of-State – 742

Total – 5,530

Average Contract Size = 1.38

NDPERS Health Plan Membership



NDPERS Active Health Insurance Out-Of-Pocket
July-June Fiscal Year ending:

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|---|---|---|
| Active Contracts | 16,565 | 17,253 | 17,632 | 17,573 | 17,889 | 18,114 | 18,303 | 18,589 |
| | | | | | | | | |
| Deductibles | $2,307,596 | $1,789,727 | $1,967,859 | $5,765,933 | $5,080,986 | $4,859,625 | $5,006,043 | $8,862,624 |
| Coinsurance | $6,427,972 | $7,340,161 | $8,424,109 | $9,315,964 | $11,044,560 | $11,358,692 | $11,932,003 | $10,519,042 |
| RX Sanctions | $0 | $0 | $0 | $795,964 | $0 | $0 | $0 | $1,443,755 |
| Copayments | $5,188,715 | $8,445,132 | $8,768,553 | $7,456,340 | $7,533,643 | $7,546,375 | $7,686,951 | $9,191,945 |
| Exceed Max | $247,044 | $361,158 | $672,490 | $378,841 | $550,479 | $744,321 | $549,843 | $2,727,629 |
| Exclusions | $1,560,268 | $1,702,808 | $1,847,570 | $2,322,307 | $2,516,646 | $2,919,717 | $3,112,107 | $3,900,148 |
| TOTAL | $15,731,595 | $19,638,986 | $21,680,581 | $26,035,349 | $26,726,314 | $27,428,730 | $28,286,947 | $36,645,143 |
| | | | | | | | | |
| Per Contract | $950 | $1,138 | $1,230 | $1,482 | $1,494 | $1,514 | $1,545 | $1,971 |

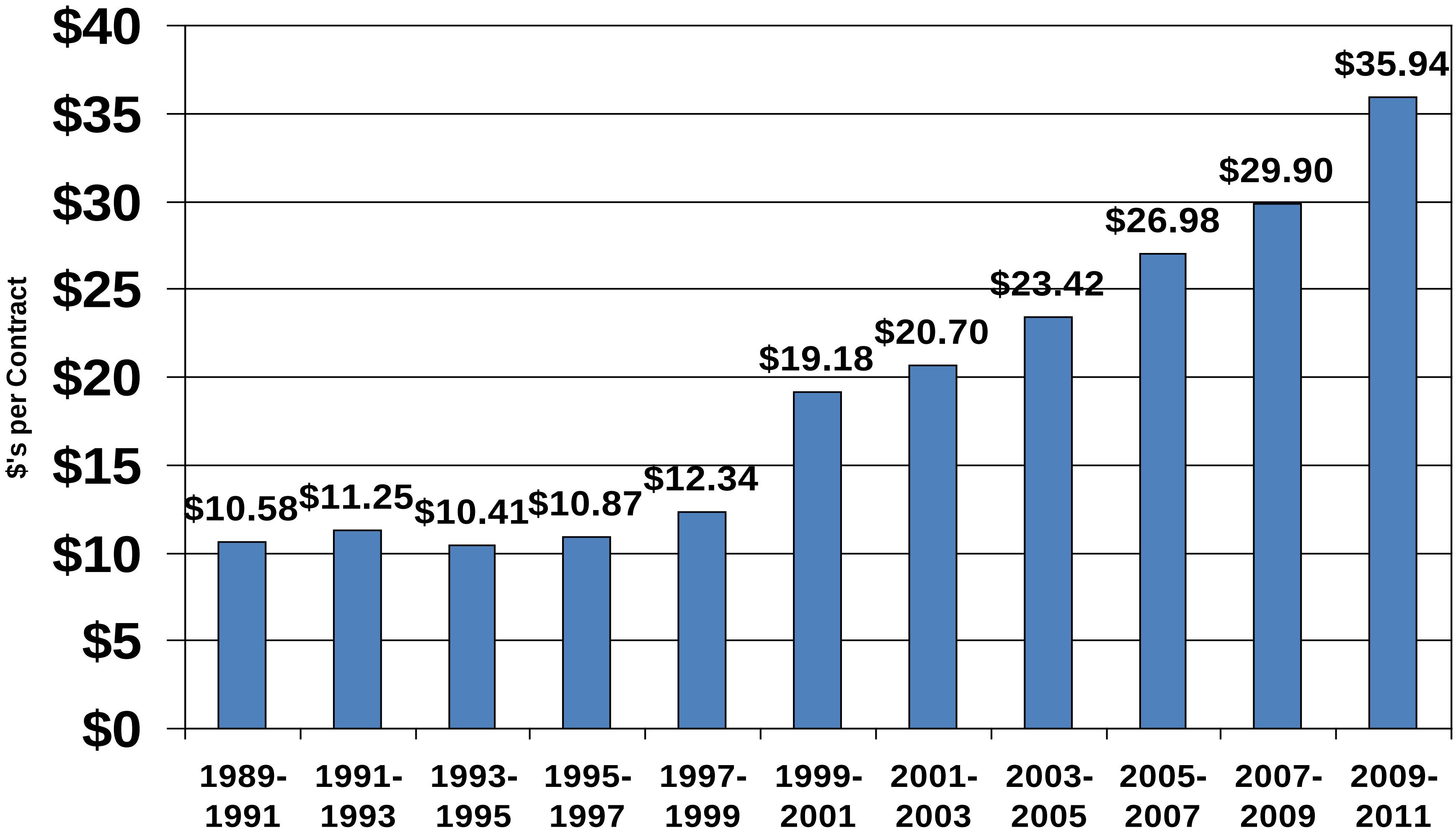
# PERS/BCBS

# History

- Prior to 1989 PERS was self-insured with BCBS
- Since 1989 PERS has had a modified fully insured plan with BCBS

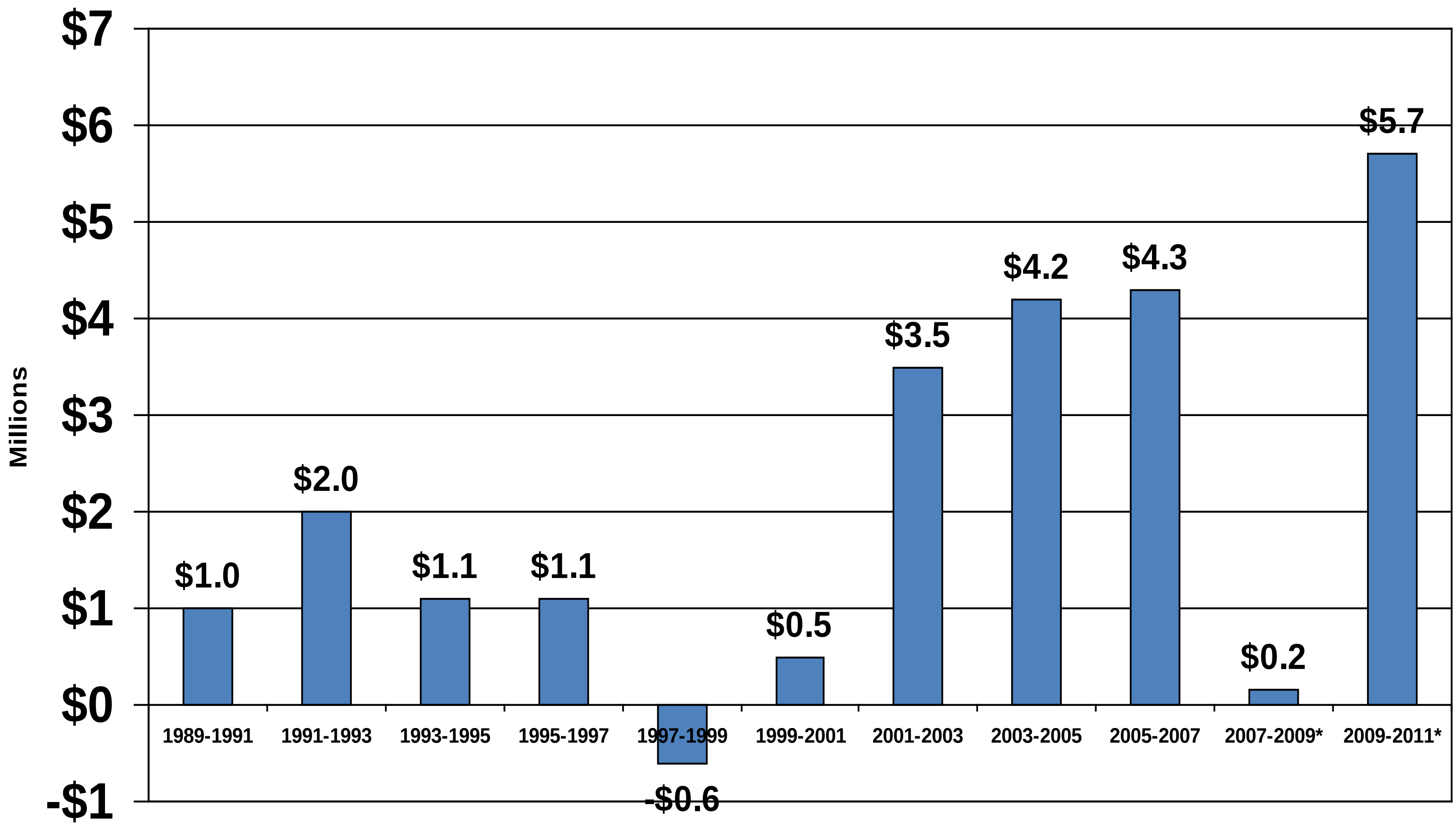
# BCBS Administration

## NDPERS Health Plan



# BCBS Gain

Includes: Risk Charge, Gain Sharing, Interest, and Losses
NDPERS Health Plan



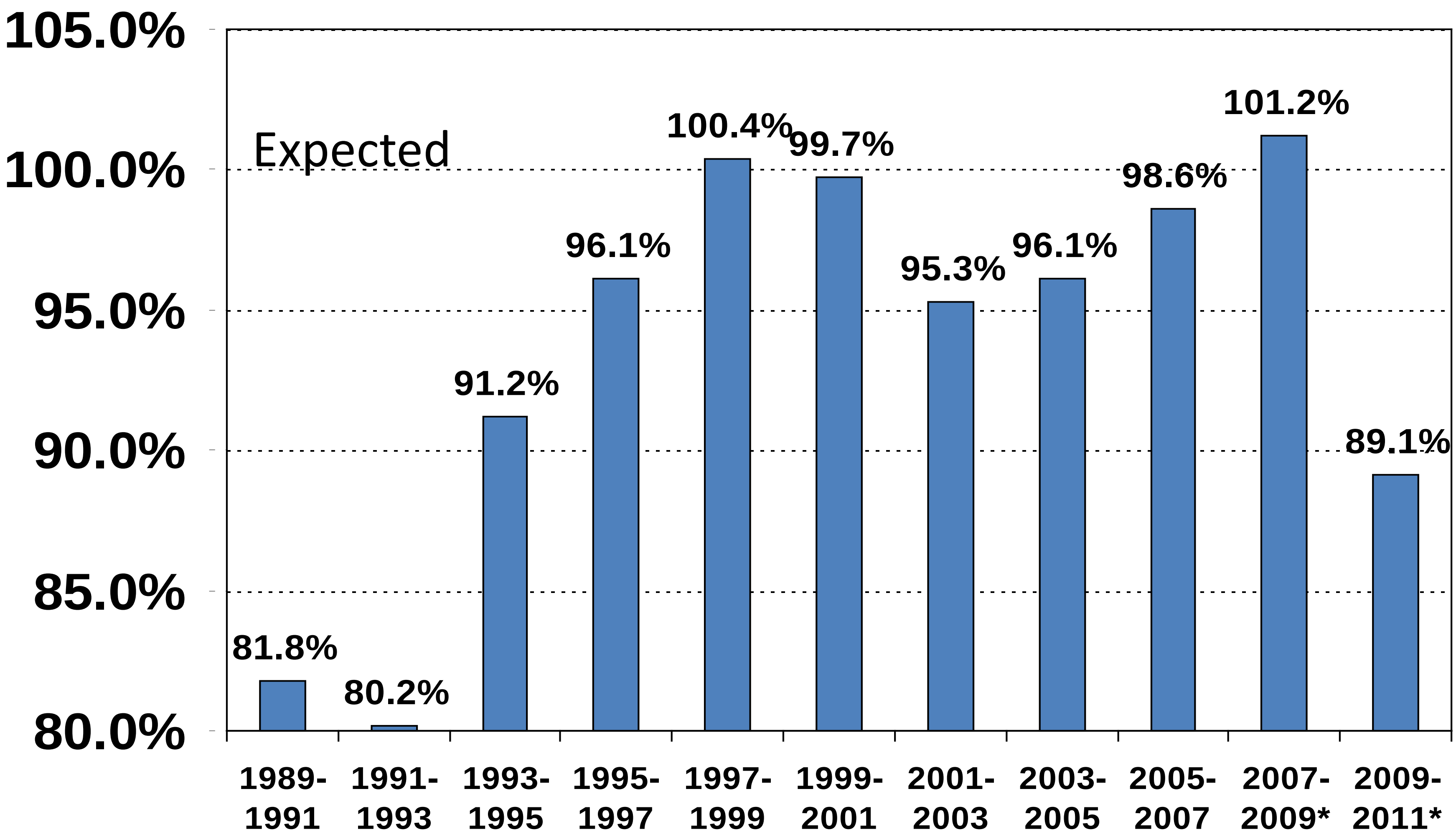

* - Estimated

# NDPERS Health Plan

Expected VS Actual History

Net Premium vs Claims Paid

(Excludes any Risk Charge)

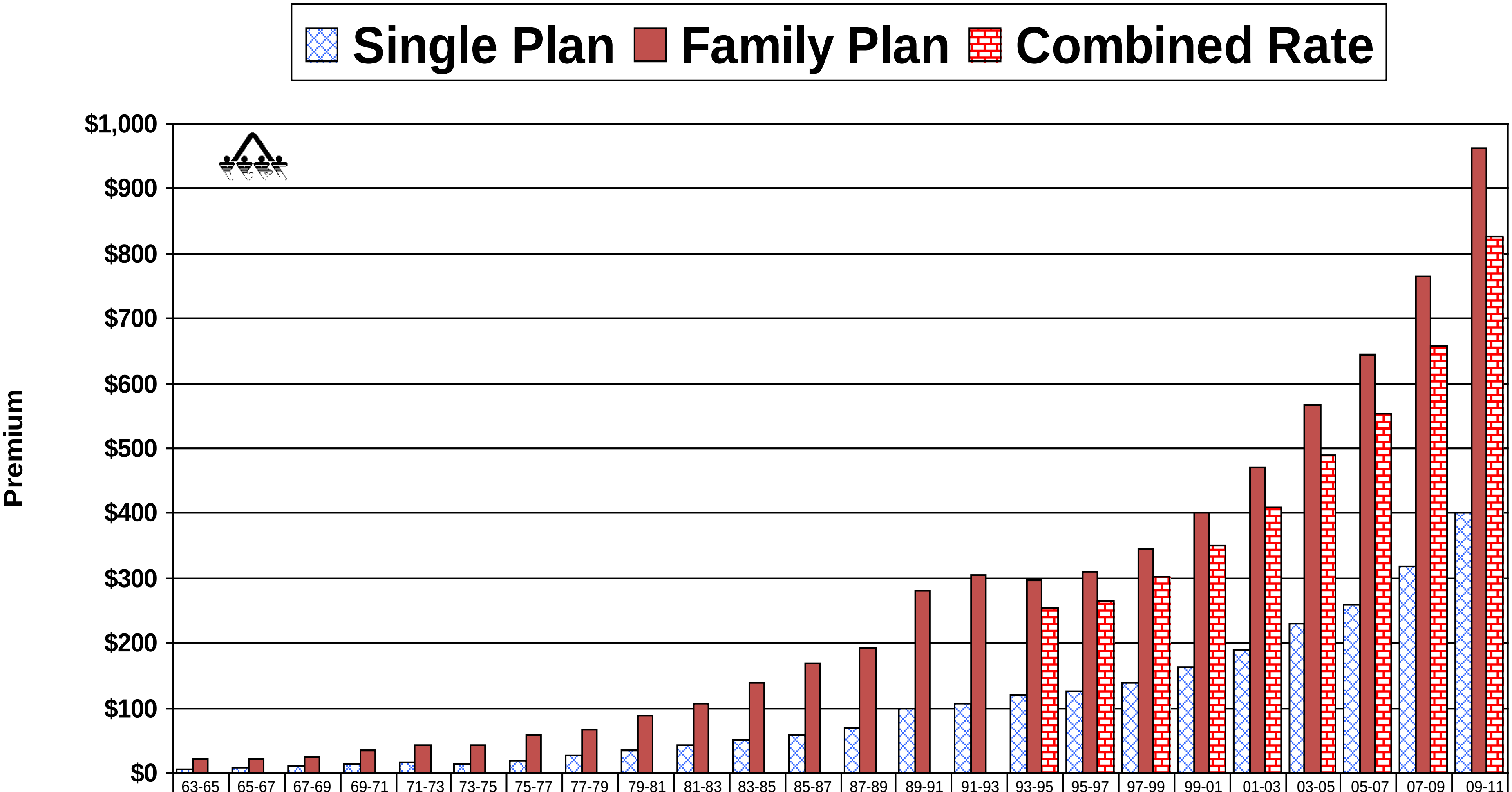



* - Estimated

# Our Challenge

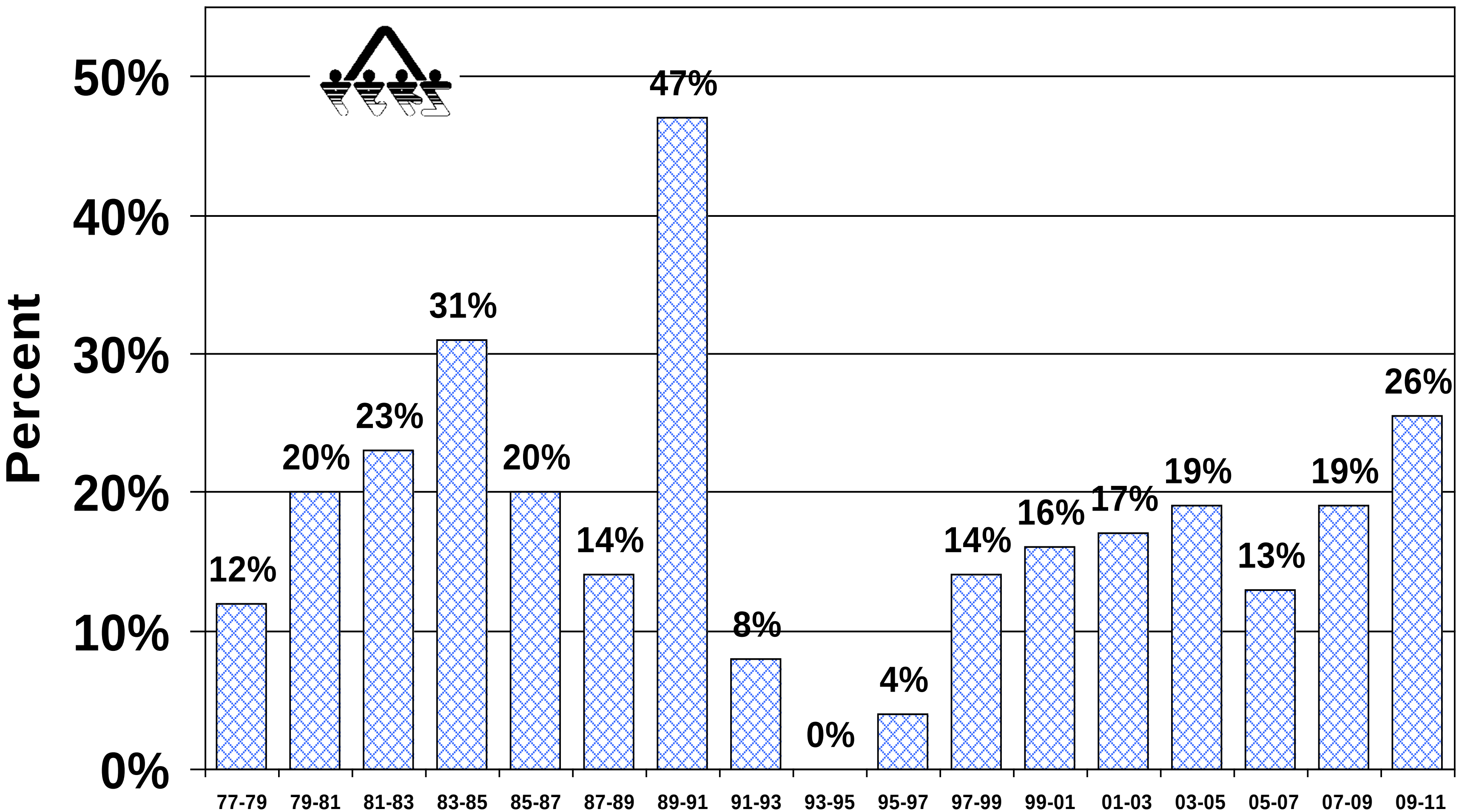
- Cost
- Outcomes

# Active State Billed Health Insurance Premium




| | 63-65 | 65-67 | 67-69 | 69-71 | 71-73 | 73-75 | 75-77 | 77-79 | 79-81 | 81-83 | 83-85 | 85-87 | 87-89 | 89-91 | 91-93 | 93-95 | 95-97 | 97-99 | 99-01 | 01-03 | 03-05 | 05-07 | 07-09 | 09-11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Single Plan | $5.00 | $8.55 | $10.75 | $14.45 | $15.95 | $14.46 | $19.50 | $25.50 | $34.84 | $42.68 | $50.28 | $60.00 | $68.28 | $99.82 | $108.00 | $120.00 | $125.00 | $139.69 | $162.48 | $190.33 | $229.93 | $260.62 | $318.30 | $400.06 |
| Family Plan | $21.00 | $21.50 | $25.00 | $34.90 | $41.90 | $41.90 | $59.95 | $67.42 | $87.40 | $107.07 | $140.28 | $168.00 | $191.28 | $280.39 | $304.00 | $297.00 | $309.00 | $345.32 | $401.67 | $469.78 | $567.52 | $643.12 | $764.02 | $962.84 |
| Combined Rate | | | | | | | | | | | | | | | | $254.00 | $265.00 | $301.00 | $349.72 | $409.09 | $488.70 | $553.94 | $658.08 | $825.66 |

# State Health Premium Percentage Increase



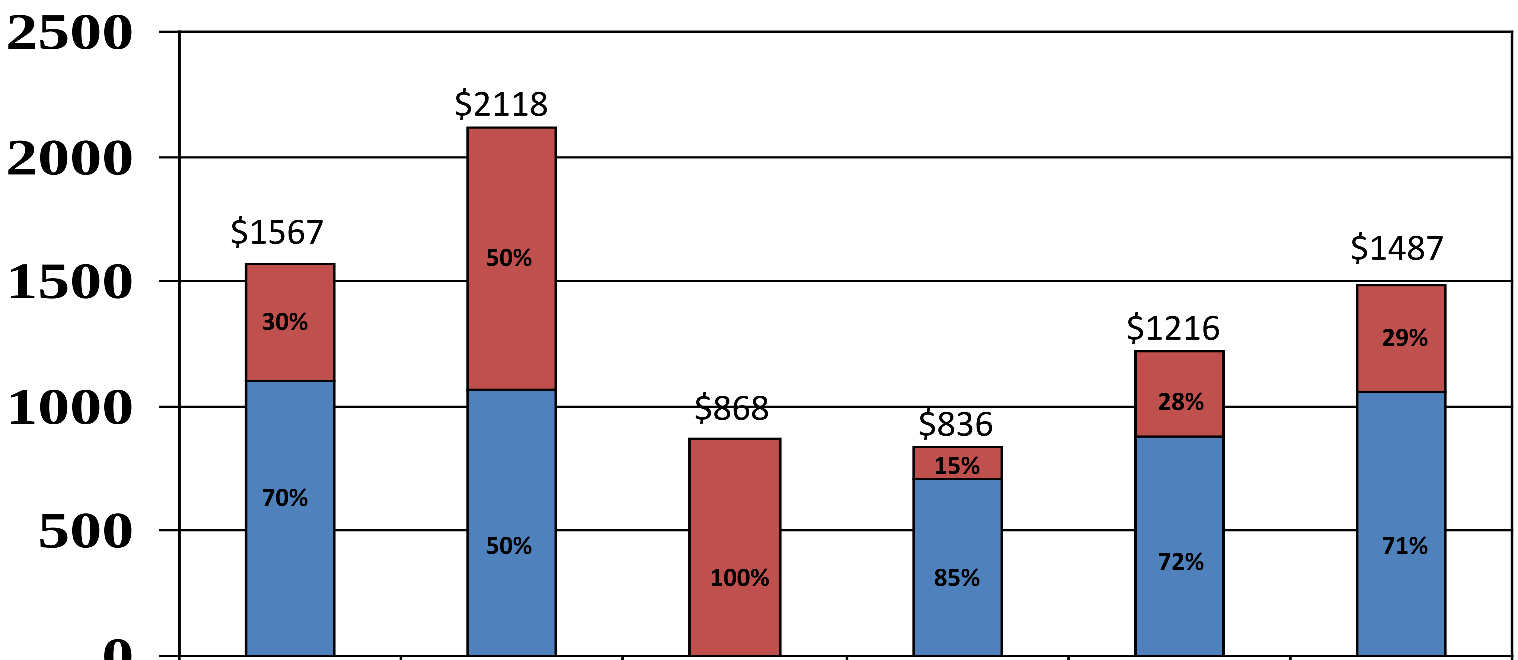
## State of North Dakota Health Plan Appropriations (Excludes Higher Education)

| | Total Budget Appropriation | FTE | Health Premium | Health Plan Appropriation | % of Total Appropriation s |
|---|---|---|---|---|---|
| 1991-93 | 2,771,064,605 | 8,179 | $254.00 | $49,859,184 | 1.80% |
| 1993-95 | 2,935,767,081 | 8,216 | $254.00 | $50,084,736 | 1.71% |
| 1995-97 | 3,107,356,520 | 8,024 | $265.00 | $51,032,640 | 1.64% |
| 1997-99 | 3,347,823,922 | 8,118 | $301.00 | $58,644,432 | 1.75% |
| 1999-01 | 3,767,007,536 | 8,400 | $349.72 | $70,503,552 | 1.87% |
| 2001-03 | 4,325,559,659 | 8,538 | $409.09 | $83,827,450 | 1.94% |
| 2003-05 | 4,587,351,203 | 8,392 | $488.70 | $98,428,090 | 2.15% |
| 2005-07 | 5,186,963,789 | 8,438 | $553.94 | $112,179,497 | 2.16% |
| 2007-09 | 5,843,419,715 | 8,808 | $658.08 | $139,111,900 | 2.38% |
| 2009-11* | 6,930,935,156 | 8,987 | $825.66 | $178,080,198 | 2.57% |

* - Executive Recommendation

# NDPERS Retirees with Health Credit

## 2009 Average Health Premium & Remaining Benefit
## (Excludes COBRA Retirees)




| | Non-Med Single | Non-Med Family | Non-Med Family 3+ | Medicare Single* | Medicare Family* | Medicare One On* |
|---|---|---|---|---|---|---|
| Health Premium | 469.66 | 1054.6 | 868.13 | 127.49 | 341.06 | 428.18 |
| Retiree Benefit | 1096.93 | 1063.66 | 0 | 708.21 | 875.39 | 1058.69 |

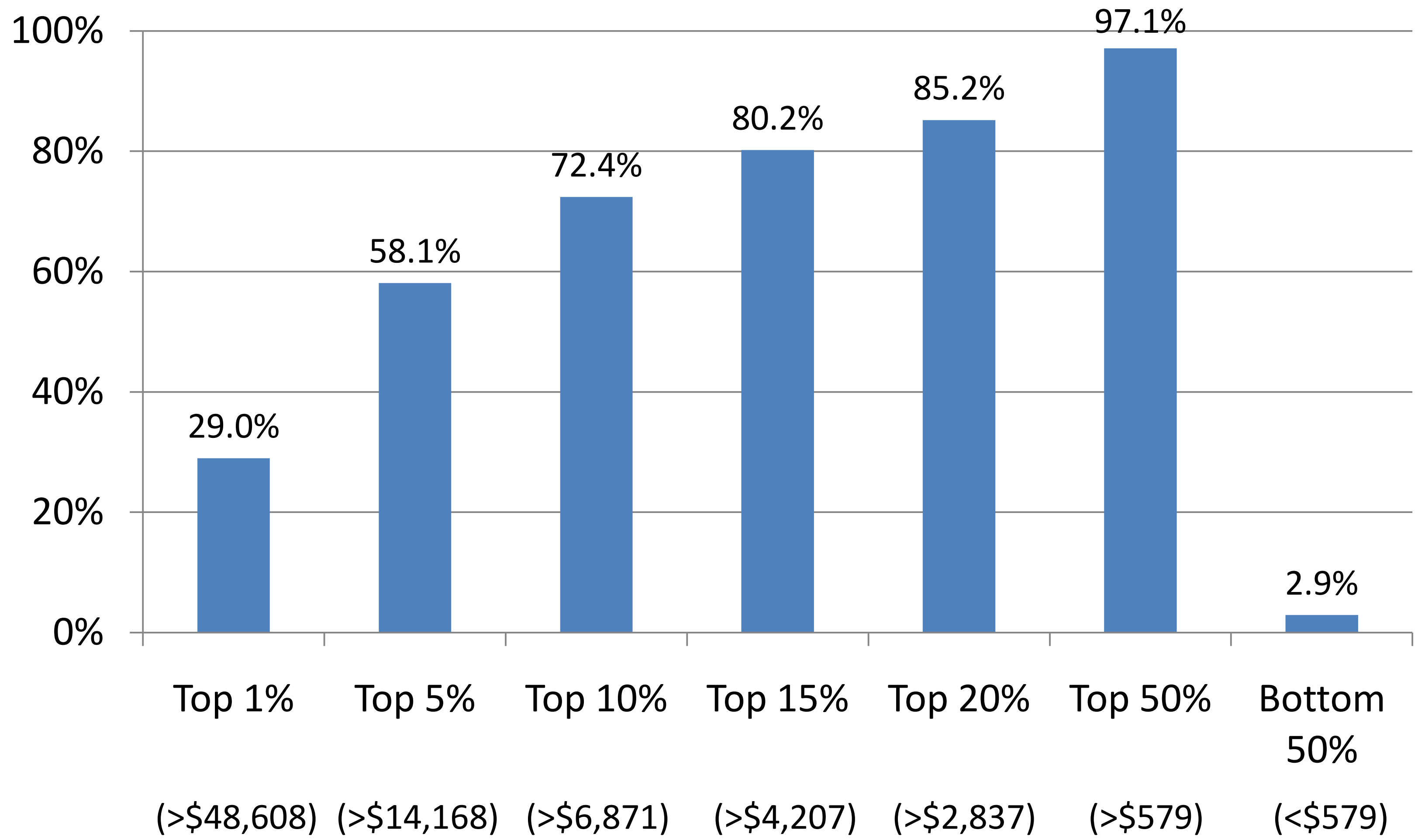
Contracts: 301 104 4 2315 956 188

* - Medicare contracts must also pay $96.40 per person for Medicare coverage.

# Outcomes

- Health care services
- Member health

# Concentration of Per Member NDPERS Health Care Spending in 2009




Includes Hospital, Physician/Clinic and Pharmacy Claims paid through February, 2010.

# Our Vision

Good business leaders create a vision, articulate the vision, passionately own the vision, and relentlessly drive it to completion.
-*John Welch*

- Value
- Quality

# Our vision is to deliver:

1. Value
    1. For our members
    2. For our participating employers
2. Quality
    1. Patient oriented
    2. Positive outcomes

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April 21, 2009

Mr. Dennis Elbert, Chair
BCBSND Board

Mr. Tim Huckle, Interim CEO
BCBSND
4510 13th Avenue SW
Fargo, ND 58121

Thank your for attending our March NDPERS Board meeting. Pursuant to your invitation we are sending this letter. The PERS Board appreciates this opportunity to share its thoughts with the BCBS Board concerning our relationship. In this letter we would like to discuss our expectations and our assessment of BCBS's performance.

**Expectations**

PERS expectations are:

1) Affordable health insurance premiums that increase at a reasonable rate.
2) Staff incentives aligned with the needs of the employers/members.
3) Quality customer service.
4) Effective and affordable program administration.
5) PERS investments in BCBS should be matched with results.
6) A synergistic partnership.

**Performance Assessment**

The following is our assessment of BCBS's performance as it relates to each expectation.

**1) Affordable health insurance premiums that increase at a reasonable rate.**

*BCBS has failed in this area in recent years.* We would note the following results:

| Expectation |
|---|
| Affordable health insurance premiums that increase at a reasonable rate. |
| Staff compensation/incentives that support affordable health care. |
| Quality customer service. |
| Effective and affordable program administration. |
| PERS investments in BCBS should be matched with results. |
| A synergistic partnership. |

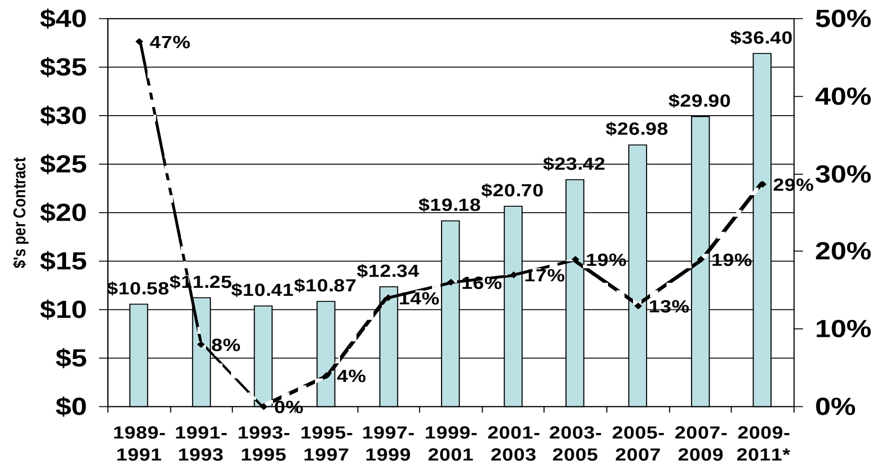
# Value

| | March Performance | Goal |
|---|---|---|
| Claims Processing Accuracy | 99.63% | **97%** |
| Claims Financial Accuracy | 99.58% | **99%** |
| Claims Timeliness | 99.87% | **97%** |

| | 1st Quarter Performance | Goal |
|---|---|---|
| Claims Processing Accuracy | 99.71% | **97%** |
| Claims Financial Accuracy | 99.82% | **99%** |
| Claims Timeliness | 99.78% | **97%** |
| Inquiry Timeliness | 98.60% | **90%** |
| Call Abandoned Rate | .40% | **5%** |
| Call Blockage Rate | 0% | **8%** |

# BCBS Administration

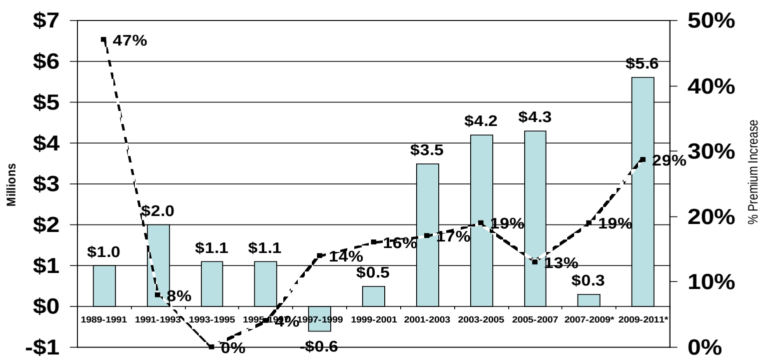
## NDPERS Health Plan




* - Proposed

# BCBS Gain

Includes: Risk Charge, Gain Sharing, Interest, and Losses
NDPERS Health Plan




* - Estimated

1. Wellness/Lifestyle ✓
2. Member Information
3. Evidence Based Medicine
4. Quality Reimbursement

*PERS/BCBS Meeting 2006*

# Quality

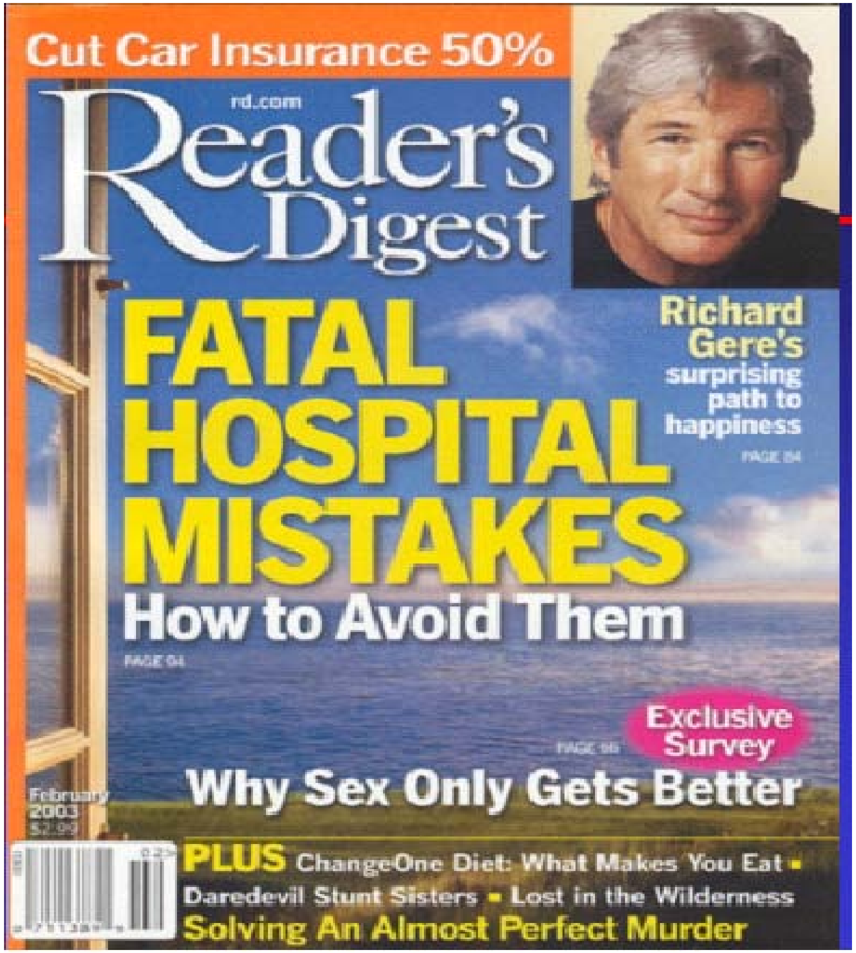
# 1. Wellness

# Wellness - Accomplishments

- PERS Wellness Premium
- Employer based programs (covering over 95% of members
- BCBS Programs
    - Health Center
    - On- Line Programs
- Addition of new BCBS Wellness Coordinator for PERS

# 2. Member - Information

# High quality care costs less!

# Information

- Limited to:
  - Health plan overviews
  - General satisfaction surveys
  - Reputation surveys of providers or provider level surveys

# Information Concepts

- Needs to be available (cost and effectiveness)
  - By outcomes
  - By procedures
  - By practitioner
- Enhanced Communications
  - Web
  - Social Media

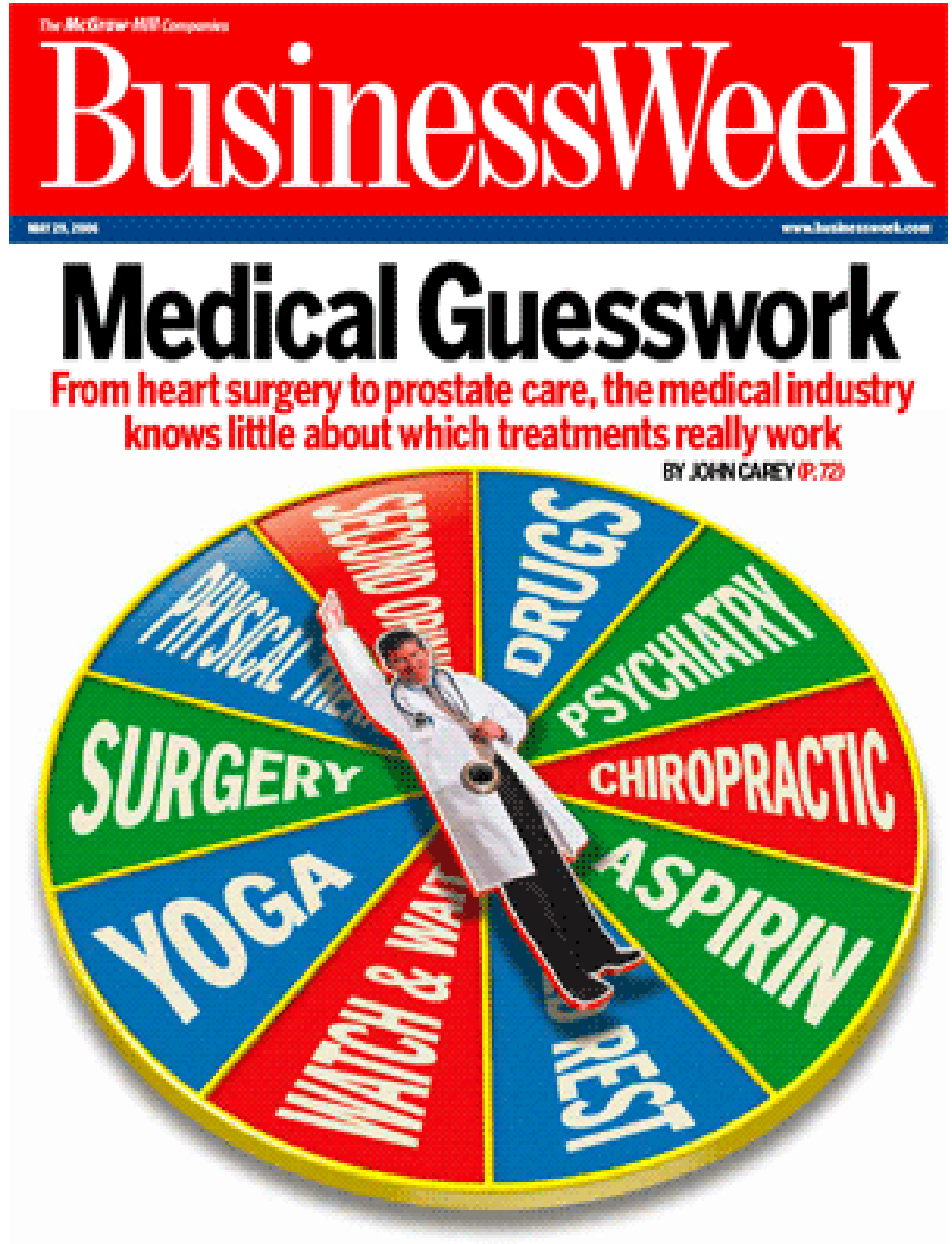
# Medical Information

- Establish database on practitioners and procedures

- Make it available to members

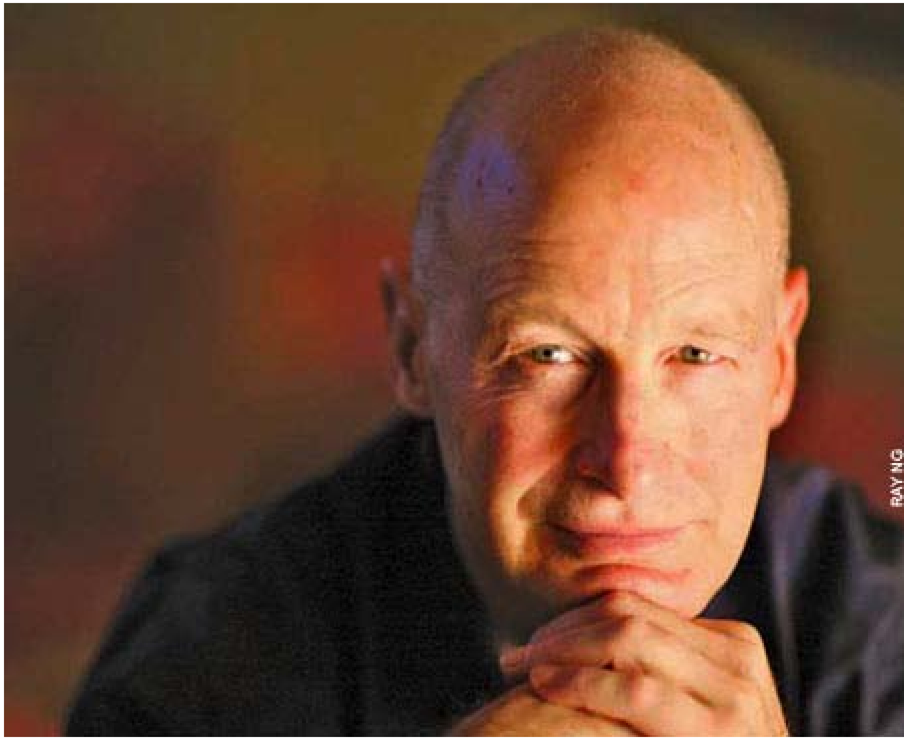
# 3. Evidence Based Medicine

Evidence Based Medicine



**<u>Treatments are based largely on rules and traditions, not scientific evidence</u>**

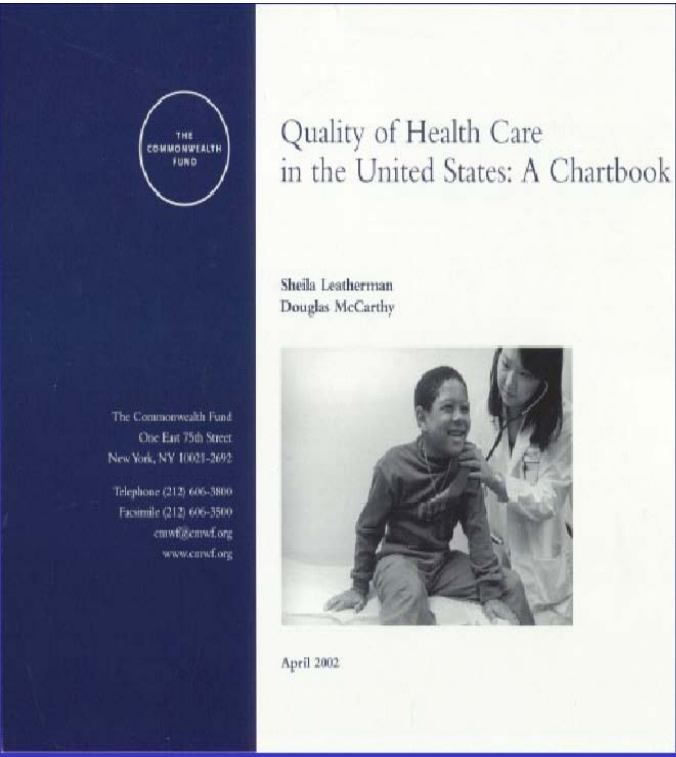
"I've spent 25 years proving that what we lovingly call clinical judgment is woefully outmatched by the complexities of medicine," says Dr. David Eddy, heart surgeon turned mathematician and health-care economist. Think about the implications for helping patients make decisions "Go to one doctor, and get one answer. Go to another, and get a different one." Or think about expert testimony. "You don't have to hire an expert to lie. You can just find one who truly believes the number you want."

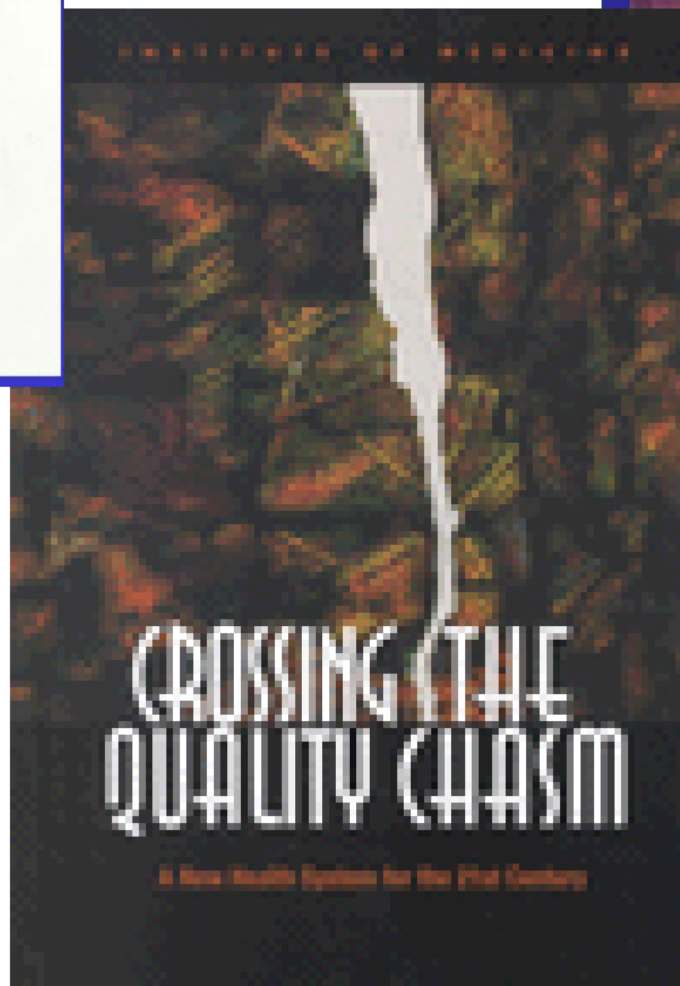


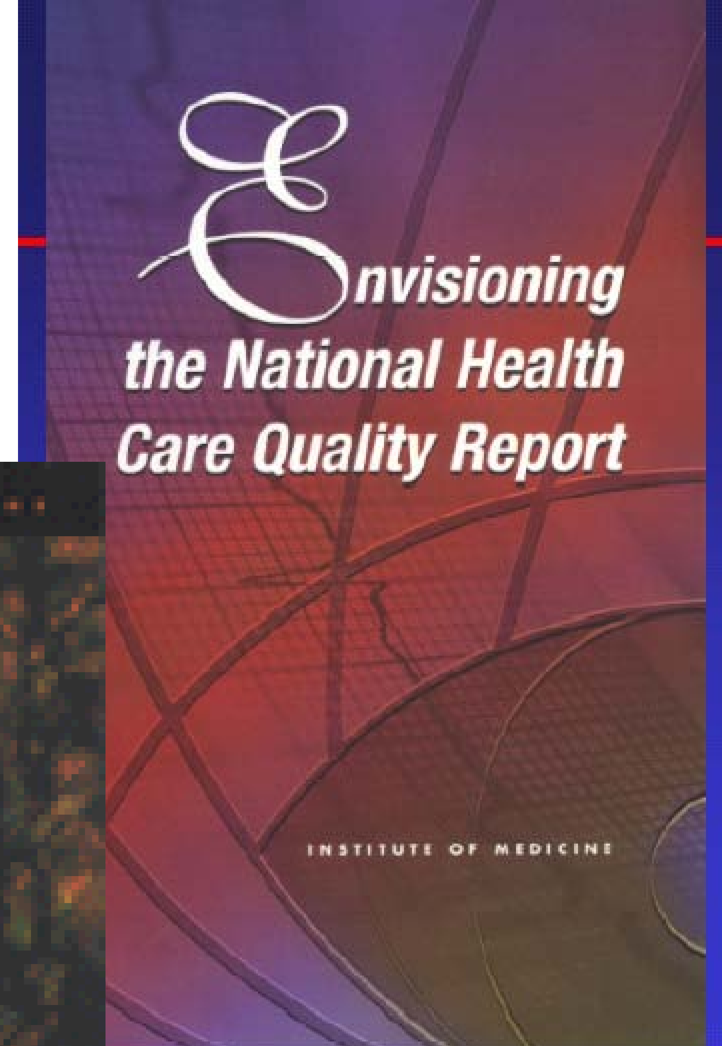
# Evidence based medicine - concepts

- Need to find methods to more quickly integrate new information
- Maybe we need projects to improve this for certain procedures each year which include both the provider and the patient
- Reimbursement needs to reflect this information

# 4. Quality-Reimbursement


THE COMMONWEALTH FUND
Quality of Health Care in the United States: A Chartbook
Sheila Leatherman
Douglas McCarthy
The Commonwealth Fund
One East 75th Street
New York, NY 10021-2692
Telephone (212) 606-3800
Facsimile (212) 606-3500
cmwf@cmwf.org
www.cmwf.org
April 2002


CROSSING THE QUALITY CHASM


Envisioning the National Health Care Quality Report
INSTITUTE OF MEDICINE

# Quality Reimbursement

- Today we use a standard reimbursement schedule that assumes all treatment is equal and therefore quality is a constant ("Lake Wobegon effect, where everybody claims – impossibly – to be above average")

# Quality/Reimbursement Concepts

- Provider payments should be outcome oriented
- Provider payments should be specific not general
- Need to be focused on practitioner not clinics

# Need to align ourselves more with the patient

- Encourage evidence-based practice
- Quality reimbursement

Members:

- *Wellness/lifestyle*
- *Medical Information*

# We need a partner(s)

- Leadership
- Vision

# A Synergistic Partnership

Dedicated To:

## Quality

- Member Data Resources
- Quality Based Reimbursement
- Evidence Based Medicine
- Member Initiatives

## Value

- Affordable Premiums
- Aligned with the needs of the member
- Quality customer service
- Effective and Affordable Administration
- Emphasis on matching investment with results

“The right kind of competition drives stunning value improvements in other parts of the economy, and it will do so in health care. Health care, by its very nature, is ripe for a value revolution. Better quality in health care is often less costly due to more accurate diagnoses, fewer complications and errors, less invasive treatments, faster recoveries, and reduced risk of severity of disease.”

We believe that a truly synergistic partnership is based upon a shared vision.

We look forward to a further exchange of information between the BCBS Board and PERS Board on our visions for health care in North Dakota.

**North Dakota**
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**Sparb Collins**
Executive Director
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# Memorandum

**TO:** PERS Board

**FROM:** Sparb Collins

**DATE:** April 21, 2010

**SUBJECT:** Experience Study and Amortization Period

At this meeting we will follow-up on the experience study conducted by Segal that was presented at the February meeting and the paper by Segal included in the March meeting about extending the amortization schedule for the retirement plans from 20 years to 30 years. Segal will be at the meeting to answer questions and review the recommended changes.

## Experience Study – Attachment #1

The experience study is completed every 5 years to test the actuarial assumptions that are used to value the plan each year. The test is to compare how our plan has performed in relation to each assumption (disabilities, mortality, retirement rates, etc). Based upon this review Segal has recommended the following changes in assumptions (the investment and inflation assumption are not recommending to change):

| Assumption | Background | Segal Recommendation |
|---|---|---|
| **Salary** increase (p. 13) | Increases in the salary of a member between the date of the valuation to the date of separation from active service. This assumption has three components:<br>➢ Inflationary salary increases,<br>➢ Real “across the board” salary | Increase the overall salary increase assumption. Maintain the current inflationary salary increase assumption at 3.50% and the current real “across the board” salary increase assumption at 0.50% for Judges and 1.00% for the rest of PERS and HPRS as discussed in Section III(C***)***. In addition to the combined inflationary and real “across the board” increases, increase the promotional and merit increases to those developed in Section IV(F). |

| Assumption | Background | Segal Recommendation |
|---|---|---|
| | increases, and<br>➢ Promotional and merit increases. | |
| Retirement Rates (p. 17) | The probability of retirement at each age at which participants are eligible to retire | Adjust the current retirement rates to those developed in Section IV(A). |
| Mortality Rates (p. 31) | The probability of dying at each age. Mortality rates are used to project life expectancies. | Update the current mortality table by decreasing pre- and post-retirement mortality rates for non-disabled members as developed in Section IV(B). Decrease mortality rates for disabled members as developed in Section IV(C). |
| Termination Rates (p. 38) | The probability of leaving employment at each age and receiving either a refund of contributions or a deferred vested retirement benefit. | Decrease the current termination rates to those developed in Section IV(D). In addition, apply an assumption that a member will choose between a refund of contributions and a deferred vested benefit based on which option is more valuable as discussed in Section IV(G). |
| Disability Incidence Rates (p. 45) | The probability of becoming disabled at each age. | Decrease the current disability rates overall for PERS members to those developed in Section IV(E). |
| Percent Married (p. 23) | This assumption is for the percent of members that are married when they retire. | Segal is recommending a slight increase in this assumption to 80% for male members and 65% for female members. These same assumptions will be applied to National Guard and Law Enforcement. For Judges and Highway Patrol, we recommend maintaining those assumptions at 100% and 90% respectively. |
| Spouse age difference (p. 24) | Since the value of the survivor's benefit is dependent on the survivor's age and sex, we must also have assumptions for the age and sex of the survivor. | The recommended assumption for the age of the survivor is shown below. These assumptions will continue to be monitored in future experience studies.<br><br>**Survivor's Age as Compared to Member's Age**<br>**Beneficiary Sex** — **Recommended Assumption**<br>Male — 3 years older<br>Female — 3 years younger |
| | | |

<table>
<tr><th>Assumption</th><th>Background</th><th>Segal Recommendation</th></tr>
<tr><td>Refund of Employee Contributions (p. 56)</td><td>Upon termination of employment, vested members may withdraw their member contributions (as well as vested employer contributions if any) with interest in lieu of receiving a monthly benefit from PERS</td><td>Although the number is close to the assumption, we believe a better method would be to assume that vested members terminating from employment will elect a refund of contributions only when the member account balance has a higher value than the annuity they will forfeit by taking a refund. This is consistent with the assumption used for HPRS.</td></tr>
<tr><td>PEP participation (p. 57)</td><td>This sets the assumed number of members who elect to participate in this program</td><td>Our data indicates that over the last five years only about 2 to 3 percent of continuing active employees have begun to contribute to a deferred compensation plan each year. It is unknown whether they will continue to do so until termination of employment. Overall, roughly 35% of the active members of the Main System at July 1, 2009 have contributed to a deferred compensation plan. We propose that the current assumption for those who have contributed to a deferred compensation program remain that 100% will continue to do so, but those that have not contributed will be assumed to not contribute in the future.<br><br>In addition, we propose that the valuation assumption be that everyone maintains their current election in future years after the valuation date. Those currently contributing will continue to do so, and those not currently contributing will continue not to. If this recommendation is adopted</td></tr>
<tr><td>Retiree health participation rates (p. 58)</td><td>For purposes of determining the cost of the RHICF, an assumption is made regarding the percentage of members who will retire from active service and elect retiree medical coverage provided by PERS.</td><td>
<table>
<tr><th colspan="4">Main</th></tr>
<tr><th>Years of Service at Retirement</th><th>Current Participation Rate</th><th>Actual Participation Rate</th><th>Proposed Participation Rate</th></tr>
<tr><td>3 – 4</td><td>25.00%</td><td>35.29%</td><td>30.00%</td></tr>
<tr><td>5 – 9</td><td>50.00</td><td>48.83</td><td>50.00</td></tr>
<tr><td>10 – 14</td><td>70.00</td><td>59.47</td><td>65.00</td></tr>
<tr><td>15 – 19</td><td>80.00</td><td>72.40</td><td>80.00</td></tr>
<tr><td>20 – 24</td><td>95.00</td><td>74.93</td><td>85.00</td></tr>
<tr><td>25+</td><td>100.00</td><td>79.05</td><td>95.00</td></tr>
</table>
Recommended change<br><br>Except that Judges and Highway Patrol continue the assumption that no participation occurs before five years of service.</td></tr>
<tr><td>Retiree health J & S option election rates (p. 60)</td><td>The cost of the RHICF depends on the annuity option the retiree elects as his/her form of payment in the Retirement</td><td>Recommend the following rates:
<table>
<tr><th></th><th colspan="2">% Electing Continuation</th></tr>
<tr><th></th><th>Males</th><th>Females</th></tr>
<tr><td>Main, National Guard and Law Enforcement</td><td>60%</td><td>25%</td></tr>
<tr><td>Judges</td><td>100%</td><td>100%</td></tr>
<tr><td>Highway Patrol</td><td>90%</td><td>90%</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Assumption</th><th>Background</th><th>Segal Recommendation</th></tr>
<tr><td></td><td>System. If the retiree elects a form of payment in the Retirement System that provides a lifetime benefit to his/her spouse, the benefit from the RHICF will continue to the spouse for his/her lifetime. On the other hand, if the retiree elects a form of payment in the Retirement System that ends upon the retiree's death, the benefit from the RHICF will end upon the retiree's death (unless the retiree elects an actuarial equivalent optional form of payment in the RHICF that continues for the lifetime of the spouse).</td><td></td></tr>
<tr><td>Administrative Expenses (p. 60)</td><td>Like benefit payments made to members, expenses incurred in connection with the plan's operation are paid from system assets. These expenses include fees for administrative, legal, accounting, and actuarial services, as well as routine costs for printing, mailings, computer-related activities, and other functions carried out by the retirement system.</td><td>Staff is recommending we change this assumption but not to the recommended level but rather the average level.<br><br>PERS ADMINISTRATIVE EXPENSES<br>(Dollars in Thousands)<br>
<table>
<tr><th>Year Ending June 30</th><th>Main</th><th>Judges</th><th>National Guard</th><th>Law Enforcement with Prior Main Service</th><th>Law Enforcement w/o Prior Main Service</th></tr>
<tr><td>2009</td><td>$1,231.9</td><td>$10.2</td><td>$3.2</td><td>$4.0</td><td>$11.6</td></tr>
<tr><td>2008</td><td>1,087.8</td><td>10.6</td><td>4.3</td><td>3.3</td><td>12.2</td></tr>
<tr><td>2007</td><td>1,091.2</td><td>7.5</td><td>2.4</td><td>2.0</td><td>6.2</td></tr>
<tr><td>2006</td><td>1,024.2</td><td>4.8</td><td>2.5</td><td>1.3</td><td>4.7</td></tr>
<tr><td>2005</td><td>1,062.3</td><td>4.5</td><td>1.3</td><td>1.2</td><td>3.0</td></tr>
<tr><td>Average</td><td>1,099.5</td><td>7.5</td><td>2.7</td><td>2.4</td><td>7.5</td></tr>
<tr><td>Expected</td><td>710.0</td><td>5.0</td><td colspan="3">5.0 for NG and Law Enf. Combined</td></tr>
<tr><td>Proposed</td><td>1,300.0</td><td>11.0</td><td>4.0</td><td>4.0</td><td>10.0</td></tr>
</table>
<br>HPRS AND RHICF ADMINISTRATIVE EXPENSES<br>(Dollars in Thousands)<br>
<table>
<tr><th>Year Ending June 30</th><th>HPRS</th><th>RHICF</th></tr>
<tr><td>2009</td><td>$19.1</td><td>$115.2</td></tr>
<tr><td>2008</td><td>18.4</td><td>89.9</td></tr>
<tr><td>2007</td><td>19.4</td><td>105.0</td></tr>
<tr><td>2006</td><td>17.5</td><td>88.6</td></tr>
<tr><td>2005</td><td>16.1</td><td>85.3</td></tr>
<tr><td>Average</td><td>18.1</td><td>96.8</td></tr>
<tr><td>Expected</td><td>16.0</td><td>65.0</td></tr>
<tr><td>Proposed</td><td>20.0</td><td>110.0</td></tr>
</table></td></tr>
<tr><td>HP indexing (p. 63)</td><td>For terminated vested Highway Patrol members who have not yet commenced a retirement benefit, their vested benefits are indexed at a rate set by the Retirement Board.</td><td>The current assumption is that the Board will grant increases of 5% per annum. Based on the experience as well as the fact that the current and proposed payroll growth assumption for active members is 4.5%, we recommend lowering the assumption to 4.5% per annum.</td></tr>
</table>

**Staff Recommendation on Experience Study Changes:**

Staff recommends accepting the Segal recommendations with the exception of the Administrative Expense. At this time we would recommend from the expected to the average and not the proposed.

## Amortization Schedule – Attachment #2

In February we decided to look at our amortization assumption for our actuarially recommended contribution. Today the actuarially recommended contribution utilizes a 20 year open amortization schedule for our unfunded liabilities. Open means that each year the amount that is calculated assumes a new 20 year period. Attachment 2 discusses the various methods and the last two illustrations show the payments that are required under each method and the balance. If we were to extend our schedule from 20 to 30 years, we could reduce our annual actuarial recommended payment in the near term assuming we keep it open. However, the actuarial recommended payment will increase in the long term to reflect the interest on deferred payments.

**Staff Recommendation on Experience Study Changes:**

Maintain the current amortization period.

Attachment

SEGAL

Benefits, Compensation and HR Consulting

# North Dakota Public Employees Retirement System (PERS)
# North Dakota Highway Patrolmen's Retirement System
# North Dakota PERS Retiree Health Insurance Credit Fund

## ACTUARIAL EXPERIENCE STUDY

## Analysis of Actuarial Experience

**During the** Period July 1, 2004 through June 30, 2009

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February 16, 2010

Board Members
North Dakota Public Employees Retirement System
Bismarck, North Dakota

**Re: Review of Actuarial Assumptions and Methods for the July 1, 2010 Actuarial Valuations**

Dear Members of the Board:

We are pleased to submit this report of our review of the actuarial experience of the North Dakota Public Employees Retirement System (PERS), North Dakota Highway Patrolmen's Retirement Systems (HPRS) and North Dakota PERS Retiree Health Insurance Credit Fund (RHICF). This study utilizes the census data of the last five actuarial valuations. The study includes the proposed actuarial assumptions and methods to be used in future actuarial valuations starting with the July 1, 2010 actuarial valuations.

We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

We look forward to reviewing this report with you and answering any questions you may have.

Sincerely,

Brad Ramirez, FSA, FCA, MAAA, EA
Consulting Actuary

John Monroe, ASA, MAAA, EA
Vice President & Associate Actuary

Kurt Schneider, ASA, MAAA, EA
Associate Actuary

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## I. INTRODUCTION, SUMMARY, AND RECOMMENDATIONS

Actuarial valuations are prepared annually to determine whether the statutory contribution rates are sufficient to fund the retirement systems on an actuarial reserve basis. To project the cost and liabilities of the retirement systems, assumptions are made about all future events that could affect the amount and timing of the benefits to be paid and the assets to be accumulated. Each year actual experience is compared against the projected experience, and to the extent there are differences, the future contribution requirement is adjusted.

If assumptions are modified, actuarial contribution requirements are adjusted to take into account a change in the projected experience in all future years. There is a great difference in both philosophy and cost impact between recognizing the actuarial deviations as they occur annually and changing the actuarial assumptions. Taking into account one year's gains or losses without making a change in the assumptions means that that year's experience was temporary and that, over the long run, experience will return to what was originally assumed. Changing assumptions reflects a basic change in thinking about the future, and it has a much greater effect on the current actuarial contribution requirements than recognizing gains or losses as they occur.

The use of realistic actuarial assumptions is important in maintaining adequate funding, while paying promised benefit amounts to participants already retired and to those near retirement. These assumptions will be utilized in establishing future costs and projecting the funded status of the retirement system. Therefore, matching the assumptions as closely as possible to expected plan experience will allow for accurate planning for the level of contributions necessary to fund the retirement system.

The actuarial assumptions used do not determine the "actual cost" of the plan. The actual cost is determined solely by the benefits and administrative expenses paid out, offset by investment income received. However, it is desirable to estimate as closely as possible what the actual cost will be so as to permit an orderly method for setting aside contributions today to provide benefits in the future, and to maintain equity among generations of participants and taxpayers.

This study was undertaken in order to review the economic and demographic actuarial assumptions and to compare the actual experience with that expected under the current assumptions during the five year experience period from July 1, 2004 through June 30, 2009. The actuarial methods currently approved by the Board for use in actuarial valuations have also been reviewed. The study was performed in accordance with Actuarial Standard of Practice (ASOP) No. 35, "Selection of Demographic and Other Non-economic Assumptions for Measuring Pension Obligations" and ASOP No. 27 "Selection of Economic Assumptions for Measuring Pension Obligations." These Standards of Practice put forth guidelines for the selection of the various actuarial assumptions utilized in a pension plan actuarial valuation. Based on the study's results and expected near-term experience, we are recommending various changes in the current actuarial assumptions.

We are recommending changes in the assumptions for the incidence of retirement from active employment, average retirement age for deferred vested members, percent of participants with survivor benefits, pre-retirement mortality, healthy life post-retirement mortality, disabled life post-retirement mortality, turnover, disability, salary increases and other miscellaneous assumptions.

In some cases we have refined the structure of the assumptions as long as accuracy and predictive power are not lost in the process. For example, the assumption for termination that currently differentiates between males and females, reflects experience that is not significantly different enough to warrant establishing different assumptions by sex. This is also evident by the fact that the current male and female assumptions are similar. Our recommendations for the major actuarial assumption categories are as follows:

**Investment Return** – The estimated average future rate of return net of investment expenses on current and future assets of the systems as of the valuation date. This rate is used to discount liabilities.
***Recommendation: Maintain the current rate at 8.00% per annum for both PERS/HPRS and RHICF as discussed in Section III(B).***

**Inflation** – Future increases in the cost-of-living index which drives investment returns and active member salary increases.
***Recommendation: Maintain the current rate at 3.50% per annum as discussed in Section III(A).***

**Individual Salary Increases** – Increases in the salary of a member between the date of the valuation to the date of separation from active service. This assumption has three components:

- Inflationary salary increases,
- Real "across the board" salary increases, and
- Promotional and merit increases.

***Recommendation: Increase the overall salary increase assumption. Maintain the current inflationary salary increase assumption at 3.50% and the current real "across the board" salary increase assumption at 0.50% for Judges and 1.00% for the rest of PERS and HPRS as discussed in Section III(C). In addition to the combined inflationary and real "across the board" increases, increase the promotional and merit increases to those developed in Section IV(F).***

**Retirement Rates -** The probability of retirement at each age at which participants are eligible to retire.
***Recommendation: Adjust the current retirement rates to those developed in Section IV(A).***

**Mortality Rates -** The probability of dying at each age. Mortality rates are used to project life expectancies.
***Recommendation: Update the current mortality table by decreasing pre- and post-retirement mortality rates for non-disabled members as developed in Section IV(B). Decrease mortality rates for disabled members as developed in Section IV(C).***

**Termination Rates -** The probability of leaving employment at each age and receiving either a refund of contributions or a deferred vested retirement benefit.
***Recommendation: Decrease the current termination rates to those developed in Section IV(D). In addition, apply an assumption that a member will choose between a refund of contributions and a deferred vested benefit based on which option is more valuable as discussed in Section IV(G).***

**Disability Incidence Rates -** The probability of becoming disabled at each age.
***Recommendation: Decrease the current disability rates overall for PERS members to those developed in Section IV(E).***

**Actuarial Cost Methods -** No changes are recommended for the actuarial cost method or the method for determining the actuarial value of assets. These methods and the method for amortizing the unfunded actuarial accrued liability (UAAL) are Board policy decisions. The current methods used are widely accepted and permitted by relevant guidance. However, the Board may wish to consider further analysis of these methods in order to verify that the methods currently used serve your policy goals.

Section II provides some background on basic principles and the methodology used for the experience study and for the review of the economic and demographic actuarial assumptions. A detailed discussion of each assumption and methods and reasons for the proposed changes is found in Section III for the economic assumptions and Section IV for the demographic assumptions and actuarial methods. Section V shows the cost impact of the proposed assumption changes.

## II. BACKGROUND AND METHODOLOGY

In this report, we analyzed both economic and demographic (“non-economic”) assumptions. The primary economic assumptions reviewed are inflation, investment return, and salary increases. Demographic assumptions include the probabilities of certain events occurring in the population of members, referred to as “decrements,” e.g., termination from service, disability retirement, service retirement, and death after retirement.

### *Economic Assumptions*

Economic assumptions consist of:

*Inflation* – Increases in the price of goods and services. The inflation assumption reflects the basic return that investors expect from securities markets. It also reflects the expected basic salary increase for active employees.

*Investment Return* – Expected long term rate of return on the System’s investments after expenses. This assumption has a significant impact on actuarial contribution rates.

*Salary Increases* – In addition to inflationary increases, it is assumed that salaries will also grow by any “across the board” real pay increases in excess of price inflation. It is also assumed that employees will receive raises above these average increases as they advance in their careers. These are commonly referred to as promotional and merit increases. Payments to amortize any Unfunded Actuarial Accrued Liability (UAAL) are assumed to increase each year by the inflation rate plus any “across the board” pay increases that are assumed.

The setting of these assumptions is described in Section III.

### *Demographic Assumptions*

In order to determine the probability of an event occurring, we examine the “decrements” and “exposures” of that event. For example, taking termination from service, we compare the number of employees who actually terminate in a certain age and/or service category (i.e., the number of “decrements”) with those “who could have terminated” (i.e., the number of “exposures”). For example, if there were 500 active employees in the 20-24 age group at the beginning of the year and 50 of them terminate during the year, we would say the probability of termination in that age group is 50 ÷ 500 or 10%.

The reliability of the resulting probability is highly dependent on both the number of decrements and the number of exposures. For example, if there are only a few people in a high age category at the beginning of the year (number of exposures), we would not lend as much credence to the probability of termination developed for that age category, especially if it is out of line with the pattern shown for the other age groups. Similarly, if we are considering the death decrement, there may be a large number of exposures in, say, the age 20-24 category, but very few decrements (actual deaths); therefore, we would not be able to rely heavily on the probability developed for that category.

One reason we use several years of experience for such a study is to have more exposures and decrements, and therefore more statistical reliability. Another reason for using several years of data is to smooth out fluctuations that may occur from one year to the next. However, we also calculate the rates on a year-to-year basis to check for any trend that may be developing in the later years.

## III. ECONOMIC ASSUMPTIONS

The investment return assumption is comprised of two components: (i) Inflation; and (ii) Real Rate of Return.

### A. INFLATION

Unless an investment grows at least as fast as prices increase, investors will experience a reduction in the inflation-adjusted value of their investment. There may be times when "riskless" investments return more or less than inflation, but over the long term, investment market forces will generally require an issuer of fixed income securities to maintain a minimum return which protects investors from inflation.

The inflation assumption is long term in nature, so it is set using primarily historical information. Following is an analysis of 15 and 30 year moving averages of historical inflation rates:

**Historical Consumer Price Index – 1930 to 2009**

(U.S. City Average - All Urban Consumers)

| | $25^{th}$ Percentile | Median | $75^{th}$ Percentile |
|---|---|---|---|
| 15 year moving averages | 2.7% | 3.5% | 4.8% |
| 30 year moving averages | 3.3% | 4.3% | 5.0% |

The average inflation rates have continued to decline gradually over the last several years due to the relatively low inflationary period in the 1990s and early 2000s. However, the inflation rates for the past few years have started to show some increase. Also, the later of the 15-year averages during the period are lower as they do not include the high inflation years of the mid-1970s and early 1980s.

PERS's investment consultant, SEI Global Institutional Solutions (SEI), anticipates an annual inflation rate of 2.30%. Note that, in general, the investment consultants' time horizon for this assumption is shorter than the time horizon we use for the actuarial valuation.

In the 2009 public fund survey published by the National Association of State Retirement Administrators, the median inflation assumption used by 113 large public retirement funds in their 2008 valuations has remained unchanged from the 3.50% used in the 2007 valuations.

**Based on all of the above information, we recommend that the annual inflation assumption be maintained at 3.50% for the July 1, 2010 valuation.**

## B. REAL RATE OF INVESTMENT RETURN

This component represents the portfolio's incremental investment market returns over inflation. Theory has it that, as an investor takes a greater investment risk, the return on the investment is expected to also be greater, at least in the long run. This additional return is expected to vary by asset class and empirical data supports that expectation. For that reason, the real rate of return assumptions are developed by asset class. Therefore, the real rate of return assumption for a retirement system's portfolio will vary with the Board's asset allocation among asset classes.

The following is the System's target asset allocation and the assumed real rate of return assumptions by asset class. The first column of real rate of return assumptions are determined by netting SEI's total return assumptions by their assumed 2.30% for inflation. The second column of returns represents the average of a sample of real rate of return assumptions. The sample includes the expected annual real rate of returns provided to us by SEI and nine other investment advisory firms retained by Segal's public sector clients. We believe these assumptions reasonably reflect a consensus forecast of long term future market returns.

**Current Target Asset Allocations and Assumed Arithmetic Real Rate of Return Assumptions by Asset Class and for the Portfolios**

| Asset Class | PERS and HPRS | RHICF | SEI's Assumed Real Rate of Return[1] | Average from a Sample of Consultants to Segal's Public Sector Clients' Real Rates of Return[2] |
|---|---|---|---|---|
| Domestic Large Cap Equity | 30% | 37% | 8.40% | 7.19% |
| Domestic Small Cap Equity | 10 | 9 | 10.30 | 7.89 |
| Developed International Equity | 10 | 14 | 9.20 | 7.63 |
| Emerging Market Equity | 5 | 0 | 13.60 | 10.49 |
| Domestic Fixed Income | 24 | 40 | 3.90 | 2.74 |
| High Yield Fixed Income | 5 | 0 | 6.20 | 5.62 |
| International Fixed Income | 5 | 0 | 2.80 | 2.50 |
| Real Estate | 5 | 0 | 5.10 | 4.80 |
| Private Equity | 5 | 0 | 10.40 | 10.40[3] |
| Cash and Equivalents | 1 | 0 | 0.10 | 0.66 |
| Total Portfolio | 100% | 100% | | |
| PERS and HPRS | | | 7.31% | 6.06% |
| RHICF | | | 6.88% | 5.54% |

(1) *Derived by netting SEI's rate of return assumptions by their assumed 2.30% inflation rate.*

(2) *Including the county retirement systems of San Bernardino, Alameda, Contra Costa, San Diego, Orange, Sacramento, Ventura, Sonoma and Imperial, the City of Fresno, the LA City Employees' Retirement Systems, and North Dakota PERS.*

(3) *For this asset class SEI's assumption is applied in lieu of the average because there is a larger disparity in returns for this asset class among the firms surveyed and using SEI's assumption should more closely reflect the underlying investments made specifically for North Dakota PERS.*

These are based on projected arithmetic returns provided by the investment advisory firms.

Please note that the above are representative of "indexed" returns and do not include any additional returns ("alpha") from active management. This is consistent with the Actuarial Standard of Practice No. 27, Section 3.6.3.e, which states:

> "Investment Manager Performance — Anticipating superior (or inferior) investment manager performance may be unduly optimistic (pessimistic). Few investment managers consistently achieve significant above-market returns net of expenses over long periods."

The following are some observations about the returns provided above:

1. The investment consultants to our public sector clients have each provided us with their expected real rates of return for each asset class, over various future periods of time. However, in general, the returns available from investment consultants are projected over time periods shorter than the durations of a retirement plan's liabilities.

2. Using a sample average of expected real rates of return allows the System's investment return assumption to reflect a broader range of capital market information and should help reduce year to year volatility in the System's investment return assumption.

3. Therefore we recommend that the 6.06% portfolio real rate of return be used to determine the investment return assumption for PERS and HPRS and 5.54% for RHICF.

***Investment Expenses***

The real rate of return assumption for the portfolio needs to be adjusted for investment expenses expected to be paid from investment income.

The following table provides these expenses in relation to the actuarial value of assets for the five years ending June 30, 2009.

| Investment Expenses as a Percentage of Actuarial Value of Assets (All dollars in 000's) | | | | | | |
|---|---|---|---|---|---|---|
| | **PERS/HPRS** | | | **RHICF** | | |
| FYE | Actuarial Value of Assets* | Investment Expenses** | As a Percent of Actuarial Value of Assets | Actuarial Value of Assets* | Investment Expenses | As a Percent of Actuarial Value of Assets |
| 2005 | $1,276,811 | $5,316 | 0.42% | $30,892 | $62 | 0.20% |
| 2006 | 1,357,301 | 12,818 | 0.94 | 34,020 | 69 | 0.20 |
| 2007 | 1,551,308 | 9,479 | 0.61 | 38,881 | 128 | 0.33 |
| 2008 | 1,660,619 | 11,448 | 0.69 | 42,543 | 111 | 0.26 |
| 2009 | 1,667,345 | 6,637 | 0.40 | 44,829 | 75 | 0.17 |
| Average | | | 0.61% | | | 0.23% |

* *As of end of plan year*

** *Net of securities lending expenses. Because we do not assume any additional net return for this program, we effectively assume that any expenses will be offset by related income.*

The average expense percentage over this five year period is 0.61% for PERS and HPRS combined and 0.23% for RHICF. Based on this experience, we have used a future expense assumption of 0.60% for PERS and HPRS and 0.25% for RHICF. This assumption will be re-examined as new data becomes available.

### *Risk Adjustment*

The real rate of return assumption for the portfolio is adjusted to reflect the potential risk of shortfalls in the return assumptions. The System's asset allocation also determines this portfolio risk, since risk levels also are expected to vary by asset class. In the economic model that we advise our clients on setting the real rate of return assumptions, this portfolio risk is incorporated into the real rate of return assumption through a risk adjustment.

The purpose of the risk adjustment is to increase the likelihood of achieving the actuarial investment return assumption in the long term. The 6.06% expected real rate of return developed earlier in this report for PERS and HPRS was based on "mean" or average returns. This means there is a 50% chance of the actual return being at least as great as the average. The risk adjustment increases that probability. This is consistent with our experience that retirement boards generally would prefer that returns exceed the assumed rate more often than not.

For PERS and HPRS, the current 8.00% investment return assumption, together with the 3.50% inflation assumption recommended earlier in this report, implies a risk adjustment of 0.96%, reflecting a confidence level (described below) of 61%. This level is consistent with many of Segal's other public retirement practice clients.

The confidence level associated with a particular risk adjustment represents the likelihood that the System's actual mean return would equal or exceed the assumed value over a 15-year period. For example, if we set our real rate of return assumption using a risk adjustment that produces a confidence level of 60%, then there is a 60% chance (3 out of 5) that the average return over 15 years will be equal to or greater than the assumed value. This confidence level is determined using the System's portfolio standard deviation (which is 12.58% as calculated based on SEI's capital market assumptions) and assuming that the distribution of returns over that period follows the Normal statistical distribution[1].

The current annual investment return assumption adopted by the Board for RHICF is also 8.00%, although the asset mix is significantly different than PERS and HPRS. When combined with the other components recommended in this report, it implies a risk adjustment of 0.79% (i.e., 3.50% inflation plus 5.54% expected real rate of return minus 0.25% expenses, compared to the assumed return of 8.00%). A 0.81% risk adjustment for a System with an annual portfolio standard deviation of 12.53% (as calculated based on SEI's capital market assumptions) leads to about a 60% chance that the actual average return over 15 years would equal or exceed the assumed return, if the distribution of returns over that period follows the Normal statistical distribution.

We note that this 8.00% investment return assumption is within the most common range for this assumption among most of Segal's other public sector retirement systems. That range, with few exceptions, is from 7.75% to 8.00%.

[1] The theory that long-term investment returns follow a Normal distribution is debatable; however, we believe the Normal distribution assumption is not unreasonable for purposes of setting the risk adjustment.

*Recommended Investment Return Assumption*

The following table summarizes the components of the investment return assumption developed in the previous discussion.

**Calculation of Net Investment Return Assumption**

| Assumption Component | PERS and HPRS | RHICF |
|---|---|---|
| Inflation | 3.50% | 3.50% |
| Plus Portfolio Real Rate of Return | 6.06% | 5.54% |
| Minus Expense Adjustment | (0.60%) | (0.25%) |
| Minus Risk Adjustment | (0.96%) | (0.79%) |
| Total | 8.00% | 8.00% |

**Based on this analysis, we recommend that the investment return assumptions be maintained at 8.00%.**

## C. SALARY INCREASE

Salary increases impact plan costs in two ways: (i) by increasing members' benefits (since benefits are a function of the members' highest average pay) and future normal cost collections; and (ii) by increasing total active member payroll which in turn generates higher UAAL amortization payments (or higher amortization credits if the UAAL is negative). These two impacts are discussed separately below.

As an employee progresses through his or her career, increases in pay are expected to come from three sources:

1. Inflation – Unless pay grows at least as fast as consumer prices grow, employees will experience a reduction in their standard of living. There may be times when pay increases lag or exceed inflation, but over the long term, it is assumed that labor market forces will require an employer to maintain its employees' standards of living.

   **As discussed earlier in this report, we are recommending an assumed rate of inflation of 3.50%. This inflation component will be used as part of the salary increase assumption.**

2. Real "Across the Board" Pay Increases – These increases are sometimes termed "productivity" increases since they are considered to be derived from the ability of an organization or an economy to produce goods and services in a more efficient manner. As that occurs, at least some portion of the value of these improvements can provide a source for pay increases. These increases are typically assumed to extend to all employees "across the board." The State and Local Government Workers Employment Cost Index produced by the Department of Labor provides evidence that real "across the board" pay increases have averaged about 0.7% - 1.0% annually during the last 10 - 20 years.

   We have also reviewed the change in the average active salary over the last several years to determine if there is a need to adjust the current 4.50% (4.00% for Judges) combined inflation plus real "across the board" pay increases assumption. The results are provided in the following table.

| | PERS (excluding Judges) | | Judges | | Highway Patrol | |
|---|---|---|---|---|---|---|
| Plan Year Ending | Average Active Salary | Percentage Change | Average Active Salary | Percentage Change | Average Active Salary | Percentage Change |
| June 30, 1999 | $24,178 | | $82,329 | | $36,011 | |
| June 30, 2000 | 24,808 | 2.6% | 82,906 | 0.7% | 38,152 | 5.9% |
| June 30, 2001 | 25,702 | 3.6% | 83,282 | 0.5% | 39,302 | 3.0% |
| June 30, 2002 | 26,825 | 4.4% | 89,649 | 7.6% | 40,583 | 3.3% |
| June 30, 2003 | 27,756 | 3.5% | 95,993 | 7.1% | 40,928 | 0.9% |
| June 30, 2004 | 28,231 | 1.7% | 95,998 | 0.0% | 40,857 | (0.2%) |
| June 30, 2005 | 28,892 | 2.3% | 95,579 | (0.4%) | 42,393 | 3.8% |
| June 30, 2006 | 30,038 | 4.0% | 99,500 | 4.1% | 44,789 | 5.7% |
| June 30, 2007 | 31,203 | 3.9% | 103,683 | 4.2% | 46,082 | 2.9% |
| June 30, 2008 | 33,012 | 5.8% | 111,427 | 7.5% | 50,066 | 8.6% |
| June 30, 2009 | 34,795 | 5.4% | 115,741 | 3.9% | 52,701 | 5.3% |
| 5-yr Average (CPI 2.6%) | | 4.3% | | 3.8% | | 5.2% |
| 10-yr Average (CPI 2.6%) | | 3.7% | | 3.5% | | 3.9% |

Over the most recent 10-year period, increases in the average salary for PERS members (excluding Judges) have averaged 1.1% higher than corresponding increases in CPI. For HPRS members over that same period, the increases in average salary have averaged 1.4% more than the increases in CPI. We believe that the current "across the board" salary increase assumption of 1.00% is still sufficient for PERS (excluding Judges) and HPRS. The Judges increases in average salary continue to be lower than the rest of PERS, and over the last five years the Judges' increases in average salary have averaged 0.5% less than the rest of PERS (0.2% less over the last ten years).

**Considering these factors, we recommend maintaining the real "across the board" salary increase assumption at 0.50% for Judges and 1.00% for the rest of PERS and HPRS.**

3. Promotional and Merit Increases – As the name implies, these increases come from an employee's career advances. This form of pay increase differs from the previous two, since it is specific to the individual. For PERS and HPRS, there are age-specific assumed promotional and merit increases that vary by group. We have reviewed this promotional and merit component in the demographic section of this report.

   **Recommended promotional and merit assumptions are provided in the demographic section of this report.**

4. The above three forces will be incorporated into a salary increase assumption which is applied in the actuarial valuation to project future benefits and future normal cost contribution collections.

***Active Member Payroll***

Projected active member payrolls are used to develop the UAAL contribution rate. Future values are determined as a product of the number of employees in the workforce and the average pay for all employees. The average pay for all employees is assumed to increase only by inflation and real "across the board" pay increases. The merit and promotional increases are not an influence, because this average pay is not specific to an individual.

**Based upon the above analysis, we recommend that the active member payroll increase assumption be 4.00% for Judges and 4.50% for the rest of PERS and HPRS, consistent with the combined**

**inflation plus real "across the board" salary increase assumptions. Again, this is unchanged from the prior valuation.**

## IV. DEMOGRAPHIC ASSUMPTIONS

### A. RETIREMENT RATES

The age at which a member retires from service (i.e., who did not retire on a disability pension) will affect both the amount of the benefits that will be paid to that member as well as the period over which funding must take place.

The table on the following page shows the observed service retirement rates for Main members that are eligible for an unreduced retirement (either Rule of 85 or age 65 and over) based on the actual experience over the past five years. The observed service retirement rates were determined by comparing those members who actually retired from service to those eligible to retire from service. This same methodology is followed throughout this report and was described in Section II. Also shown are the current rates assumed and the rates we propose:

**Main (Eligible for Unreduced Retirement)**

| Age | Current Rate of Retirement | Actual Rate of Retirement | Proposed Rate of Retirement |
|---|---|---|---|
| 51 | 0.00% | 66.67% | 8.00% |
| 52 | 0.00 | 29.41 | 8.00 |
| 53 | 0.00 | 20.37 | 8.00 |
| 54 | 0.00 | 11.27 | 8.00 |
| 55 | 4.00 | 9.33 | 8.00 |
| 56 | 6.00 | 10.23 | 10.00 |
| 57 | 6.00 | 12.41 | 10.00 |
| 58 | 6.00 | 10.59 | 10.00 |
| 59 | 6.00 | 11.82 | 10.00 |
| 60 | 8.00 | 10.55 | 10.00 |
| 61 | 15.00 | 22.46 | 20.00 |
| 62 | 35.00 | 32.45 | 35.00 |
| 63 | 25.00 | 25.75 | 25.00 |
| 64 | 25.00 | 36.43 | 30.00 |
| 65 | 40.00 | 24.71 | 30.00 |
| 66 | 20.00 | 20.50 | 20.00 |
| 67 | 20.00 | 15.77 | 20.00 |
| 68 | 20.00 | 15.59 | 20.00 |
| 69 | 20.00 | 16.33 | 20.00 |
| 70 | 100.00 | 14.13 | 20.00 |
| 71 | 100.00 | 14.86 | 20.00 |
| 72 | 100.00 | 19.35 | 20.00 |
| 73 | 100.00 | 15.60 | 20.00 |
| 74 | 100.00 | 16.09 | 20.00 |
| 75 & Over | 100.00 | 14.83 | 100.00 |

As shown above, we are generally recommending increases in the retirement rates for Main members that are eligible for an unreduced retirement. We are also increasing the age at which 100% retirement is assumed from age 70 to age 75.

Chart 1 that follows later in this section compares actual experience with the current and proposed rates of retirement for Main members that are eligible for an unreduced retirement.

The following table shows the observed retirement rates for Main members that are not eligible for an unreduced retirement over the past five years. Also shown are the current rates assumed and the rates we propose:

**Main (Not Eligible for Unreduced Retirement)**

| Age | Current Rate of Retirement | Actual Rate of Retirement | Proposed Rate of Retirement |
|---|---|---|---|
| 55 | 4.00% | 0.94% | 2.00% |
| 56 | 4.00 | 1.08 | 2.00 |
| 57 | 4.00 | 1.01 | 2.00 |
| 58 | 4.00 | 1.64 | 2.00 |
| 59 | 4.00 | 2.44 | 2.00 |
| 60 | 6.00 | 2.62 | 4.00 |
| 61 | 12.00 | 7.77 | 10.00 |
| 62 | 25.00 | 14.69 | 20.00 |
| 63 | 20.00 | 10.38 | 15.00 |
| 64 | 20.00 | 8.45 | 10.00 |

We are recommending decreases in the retirement rates for Main members that are not eligible for an unreduced retirement.

Chart 2 compares actual experience with the current and proposed rates for Main members that are not eligible for an unreduced retirement.

The following table shows the observed retirement rates for Judges over the past five years. Also shown are the current rates assumed and the rates we propose:

**Judges**

| Age | Current Rate of Retirement | Actual Rate of Retirement | Proposed Rate of Retirement |
|---|---|---|---|
| 55 | 0.00% | 0.00% | 0.00% |
| 56 | 0.00 | 0.00 | 0.00 |
| 57 | 0.00 | 0.00 | 0.00 |
| 58 | 0.00 | 0.00 | 0.00 |
| 59 | 0.00 | 8.33 | 0.00 |
| 60 | 0.00 | 16.67 | 10.00 |
| 61 | 0.00 | 11.11 | 10.00 |
| 62 | 35.00 | 0.00 | 20.00 |
| 63 | 35.00 | 14.29 | 20.00 |
| 64 | 35.00 | 0.00 | 20.00 |
| 65 | 50.00 | 57.14 | 50.00 |
| 66 | 50.00 | 0.00 | 50.00 |
| 67 | 50.00 | 100.00 | 50.00 |
| 68 | 50.00 | 0.00 | 50.00 |
| 69 | 50.00 | 0.00 | 50.00 |
| 70 & over | 100.00 | 16.67 | 100.00 |

We are recommending changes in the retirement rates for Judges. Overall, these changes result in a small decrease in assumed retirements.

Chart 3 compares actual experience with the current and proposed rates for Judges.

The following table shows the observed retirement rates for National Guard and Law Enforcement over the past five years. Also shown are the current rates assumed and the rates we propose:

**National Guard and Law Enforcement**

| Age | Current Rate of Retirement | Actual Rate of Retirement | Proposed Rate of Retirement |
|---|---|---|---|
| 50 | 0.00% | 14.29% | 0.00% |
| 51 | 0.00 | 0.00 | 0.00 |
| 52 | 0.00 | 0.00 | 0.00 |
| 53 | 0.00 | 0.00 | 0.00 |
| 54 | 0.00 | 5.26 | 0.00 |
| 55 | 0.00 | 21.05 | 20.00 |
| 56 | 0.00 | 12.50 | 20.00 |
| 57 | 0.00 | 7.14 | 20.00 |
| 58 | 0.00 | 30.77 | 20.00 |
| 59 | 0.00 | 25.00 | 20.00 |
| 60 | 100.00 | 0.00 | 20.00 |
| 61 | 100.00 | 0.00 | 20.00 |
| 62 | 100.00 | 20.00 | 20.00 |
| 63 | 100.00 | 33.33 | 20.00 |
| 64 | 100.00 | 66.67 | 50.00 |
| 65 & over | 100.00 | 100.00 | 100.00 |

We are recommending increases in the retirement rates for National Guard and Law Enforcement members below age 60. We also recommend increasing the age at which 100% retirement is assumed from age 60 to age 65.

Chart 4 compares actual experience with the current and proposed rates for National Guard and Law Enforcement.

The following table shows the observed retirement rates for Highway Patrol members that are eligible for an unreduced retirement (either Rule of 80 or age 55 and above with at least 10 years of service) over the past five years. Also shown are the current rates assumed and the rates we propose:

**Highway Patrol**
**(Eligible for Unreduced Retirement)**

| Age | Current Rate of Retirement | Actual Rate of Retirement | Proposed Rate of Retirement |
|---|---|---|---|
| 48 | 0.00% | 100.00% | 0.00% |
| 49 | 0.00 | 0.00 | 0.00 |
| 50 | 100.00 | 0.00 | 100.00 |
| 51 | 100.00 | 100.00 | 100.00 |
| 52 | 100.00 | 75.00 | 100.00 |
| 53 | 100.00 | 80.00 | 100.00 |
| 54 | 100.00 | 100.00 | 100.00 |
| 55 & over | 100.00 | 100.00 | 100.00 |

We are recommending no changes in the retirement rates for Highway Patrol members that are eligible for an unreduced retirement.

Chart 5 compares actual experience with the current and proposed rates for Highway Patrol members that are eligible for an unreduced retirement.

The following table shows the observed retirement rates for Highway Patrol member that are not eligible for an unreduced retirement over the past five years. Also shown are the current rates assumed and the rates we propose:

**Highway Patrol**
**(Not Eligible for Unreduced Retirement)**

| Age | Current Rate of Retirement | Actual Rate of Retirement | Proposed Rate of Retirement |
|---|---|---|---|
| 50 | 50.00 | 0.00 | 0.00 |
| 51 | 50.00 | 0.00 | 0.00 |
| 52 | 50.00 | 0.00 | 0.00 |
| 53 | 50.00 | 0.00 | 0.00 |
| 54 | 50.00 | 0.00 | 0.00 |

We are recommending that retirement rates for Highway Patrol members that are not eligible for an unreduced retirement be reduced to zero based on the experience for the last five years.

Chart 6 compares actual experience with the current and proposed rates for Highway Patrol members that are not eligible for unreduced retirement.

Because the employee groups are substantially the same, we recommend that the same retirement rates be used in the actuarial valuation for the RHICF.

In prior valuations, deferred vested members were assumed to retire at the age upon which they were eligible to retire with an unreduced pension. For Main members this is the earlier of age 65 or eligibility for the Rule of 85 pension. The average age at retirement for Main members over the past five years was 62. We recommend decreasing the age at which Main deferred vested members are assumed to retire to the earlier of age 64 or eligibility for the Rule of 85 pension

The experience for other deferred vested members, i.e. Judges, National Guard, Law Enforcement and Highway Patrol was very limited, but seemed to support leaving the assumption unchanged at the age upon which they were eligible to retire with an unreduced pension. Therefore, we recommend no change for these members.

For Main, National Guard and Law Enforcement it was assumed that 75% of male members and 60% female members would be married when they retired. For Judges the assumption was 100% and for Highway Patrol it was 90%. We reviewed new retirees during the five year period and determined the actual percentage of these new retirees that had an eligible spouse at the time of retirement. The results of that analysis are shown below.

**New Retirees – Actual Percent with Eligible Spouse**

| | Male | Female |
|---|---|---|
| Main | 84% | 70% |
| Judges | 100% | 100% |
| Highway Patrol | 92% | N/A |

According to experience of Main members who retired during the last five years, about 84% of all male members and 70% of all female members were married at retirement. We recommend a slight increase in this assumption to 80% for male members and 65% for female members. These same assumptions will be applied to National Guard and Law Enforcement. For Judges and Highway Patrol, we recommend maintaining those assumptions at 100% and 90% respectively.

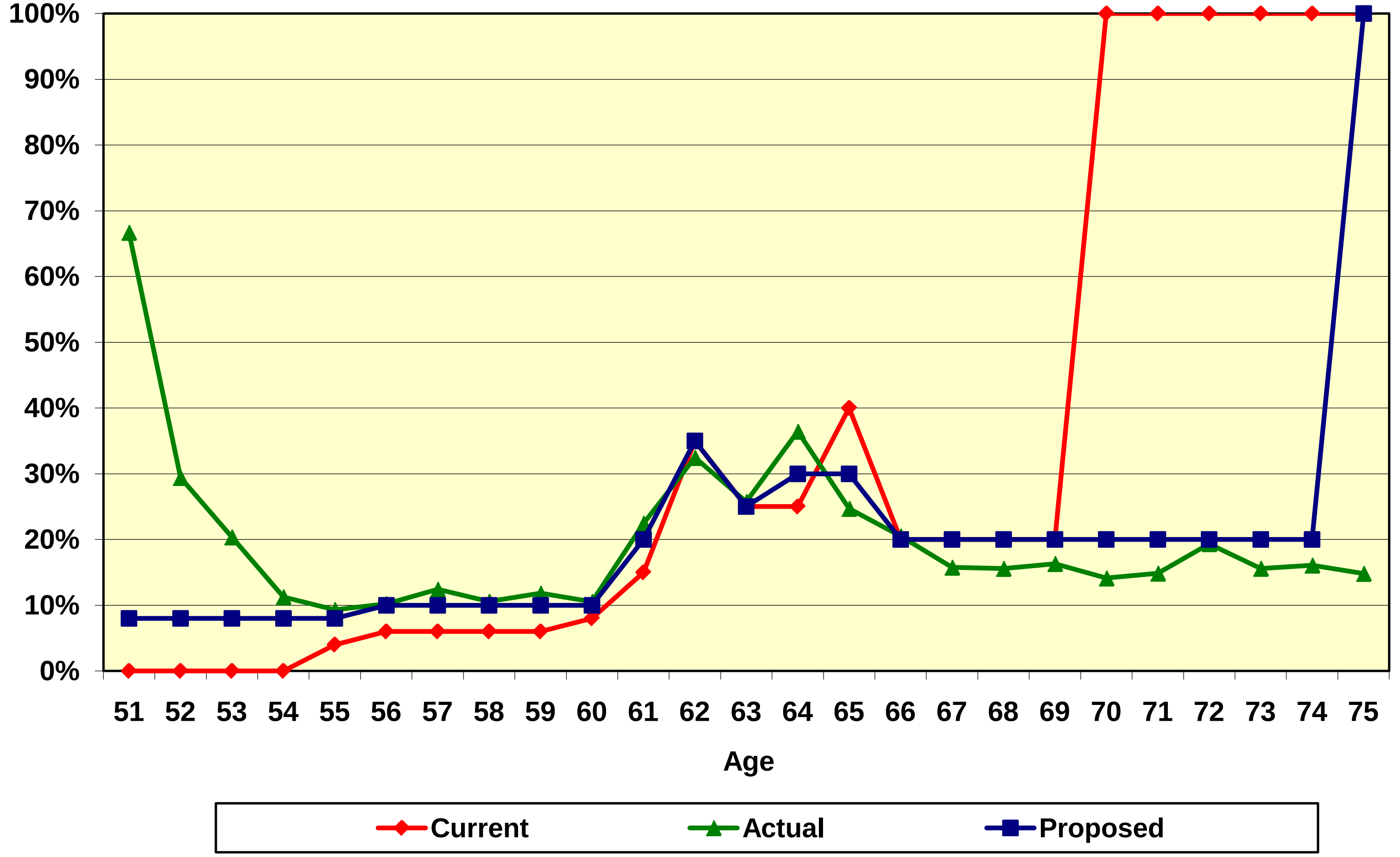
Since the value of the survivor's benefit is dependent on the survivor's age and sex, we must also have assumptions for the age and sex of the survivor. Based on the experience during the five year period and studies done for other retirement systems, we believe that it is reasonable to assume a three year age difference for the survivor's age as compared to the member's age. This is a change from the current assumptions of a four year age difference for Main and five years for all other PERS members. For Highway Patrol there is no change being proposed since the current assumption is a three year age difference.

Since the majority of survivors are expected to be of the opposite sex, we will continue to assume that the survivor's sex is the opposite of the member.

The recommended assumption for the age of the survivor is shown below. These assumptions will continue to be monitored in future experience studies.

| | **Survivor's Age as Compared to Member's Age** |
|---|---|
| **Beneficiary Sex** | **Recommended Assumption** |
| Male | 3 years older |
| Female | 3 years younger |

## Chart 1
## Retirement Rates - Main
## (Eligible for Unreduced Retirement)



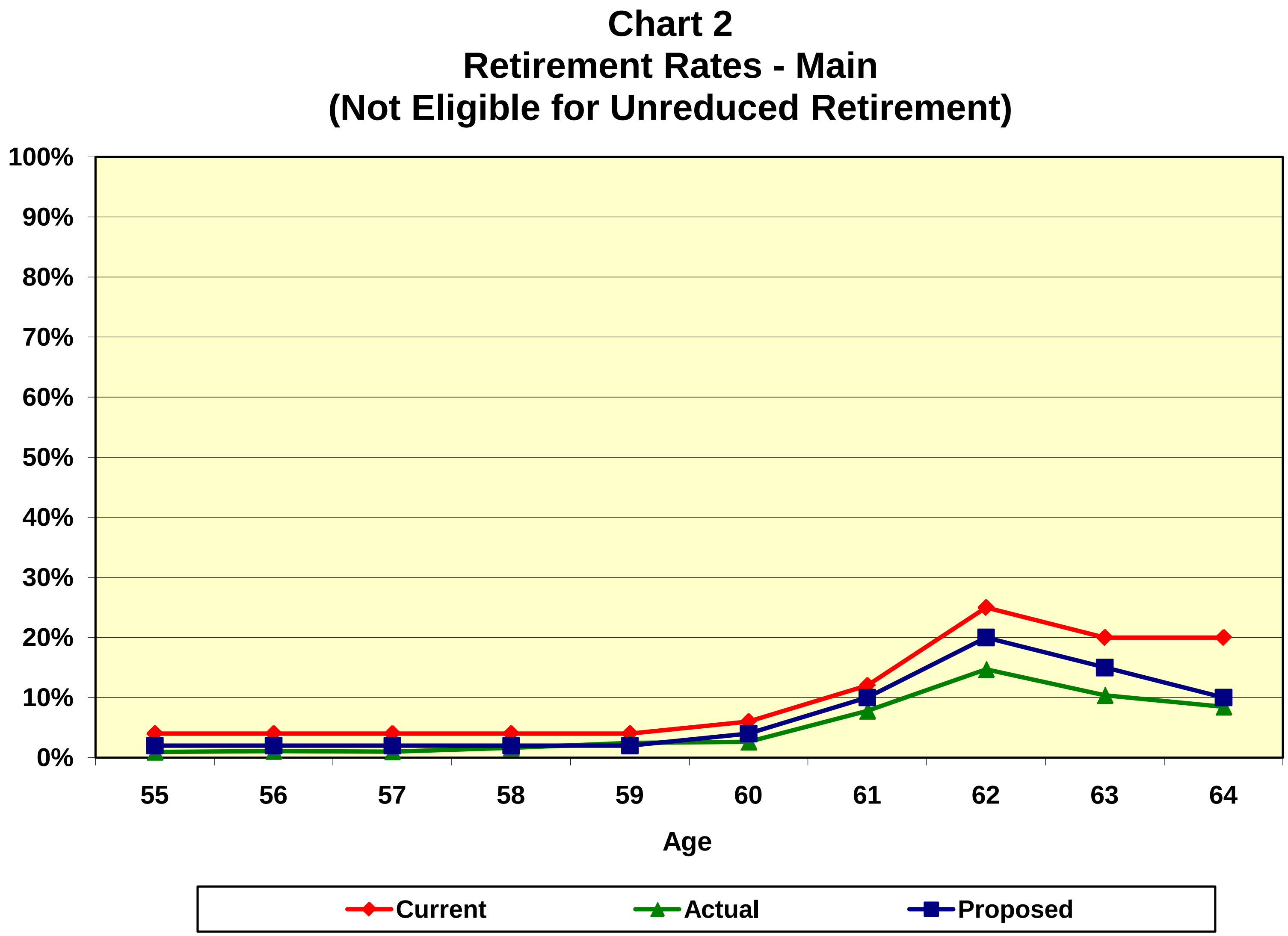
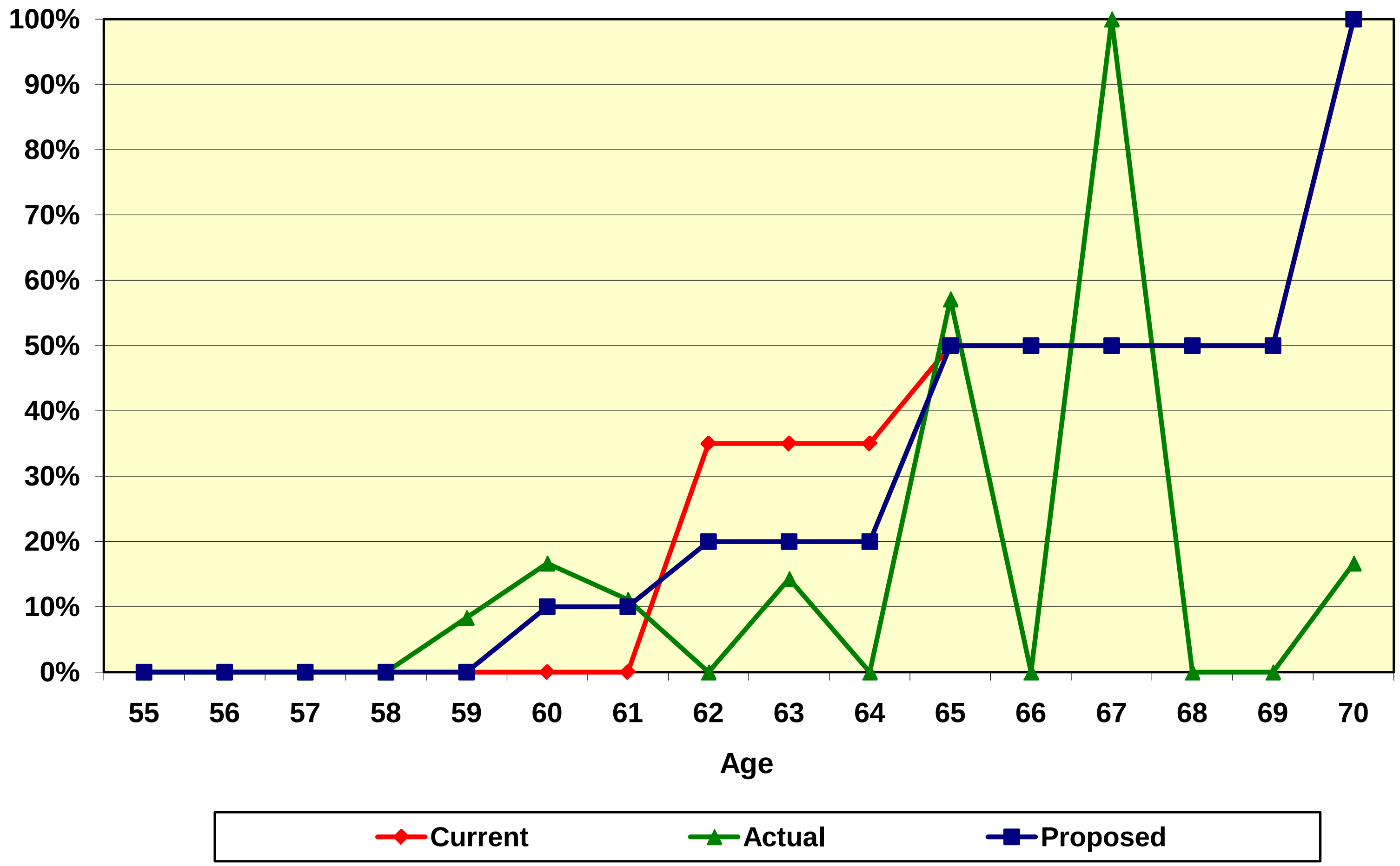


Chart 2
Retirement Rates - Main
(Not Eligible for Unreduced Retirement)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
55
56
57
58
59
60
61
62
63
64
Age
Current
Actual
Proposed



SEGAL

**Chart 3**
**Retirement Rates - Judges**



## Chart 4
## Retirement Rates - National Guard and Law Enforcement

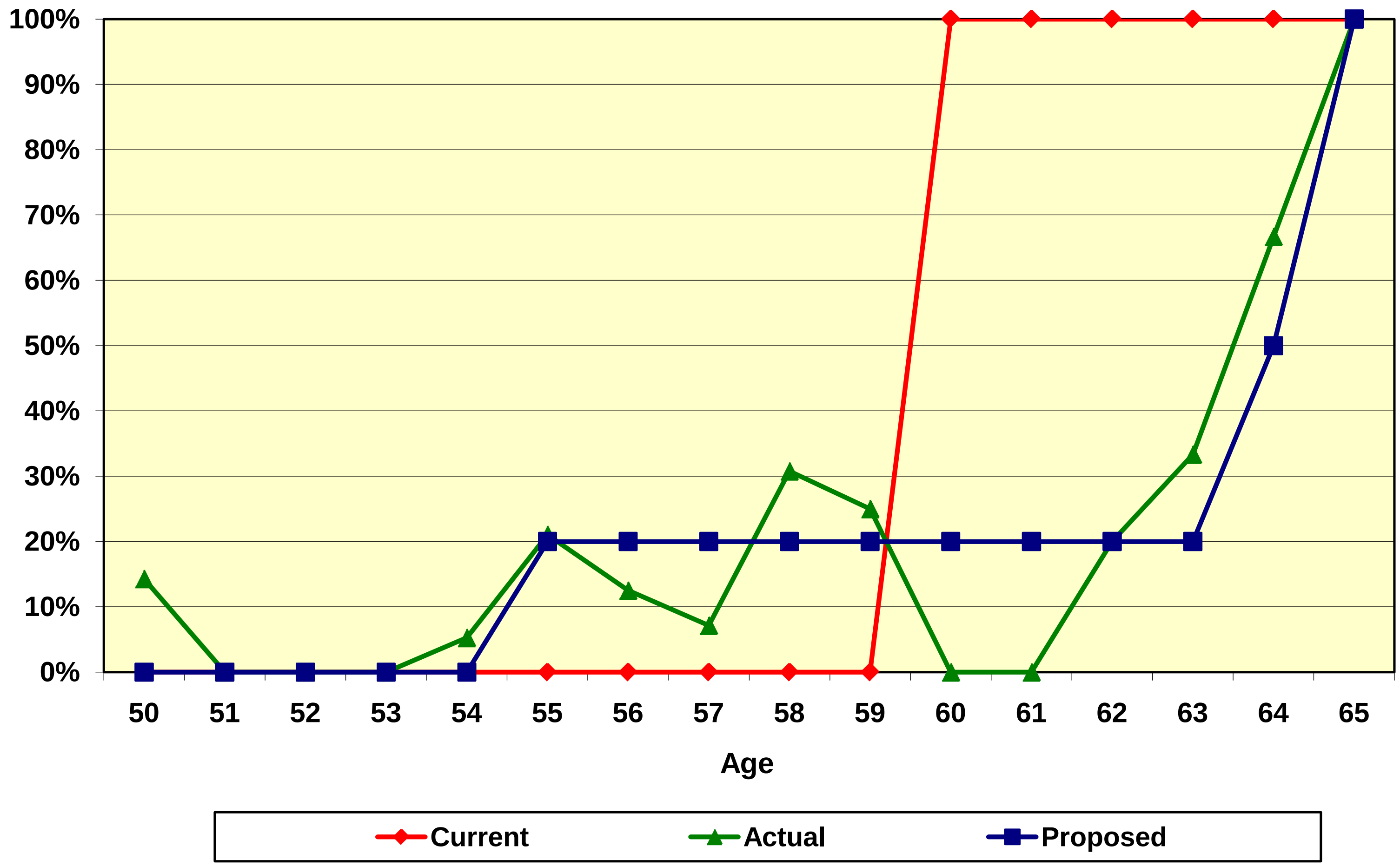
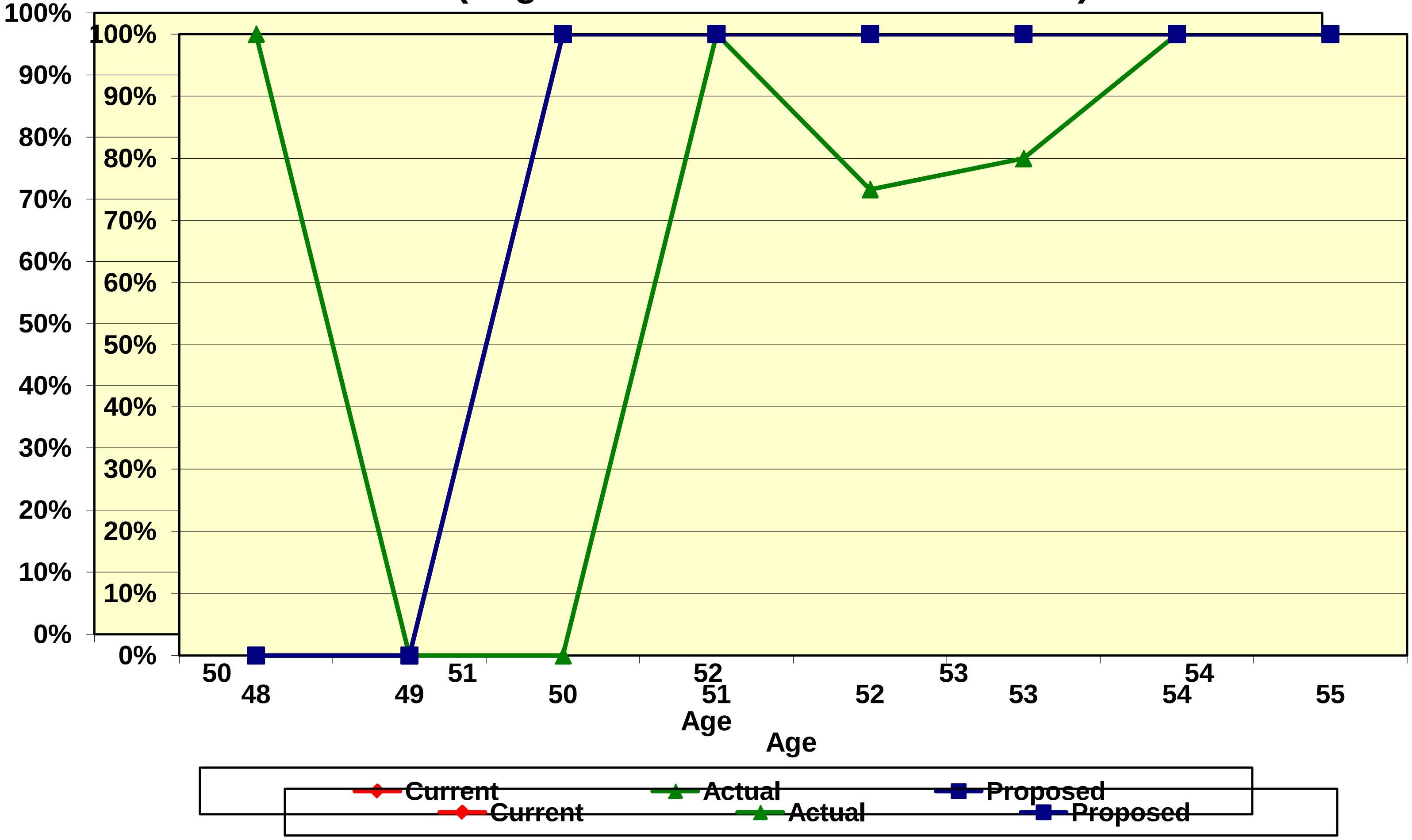


**Chart 6**
**Retirement Rates - Highway Patrol**
**(Not Eligible for Unreduced Retirement)**

**Chart 5**
**Retirement Rates - Highway Patrol**
**(Eligible for Unreduced Retirement)**



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## B. MORTALITY RATES - HEALTHY

The "healthy" mortality rates project what proportion of members will die before retirement as well as the life expectancy of a member who retires from service (i.e., who did not retire on a disability pension). The table currently being used for post-service retirement mortality rates is the 1983 Group Annuity Mortality Table (separate tables for males and females), with ages set back one year for males.

<u>Pre-Retirement Mortality</u>

The number of deaths among active and deferred vested members is not large enough to provide a statistically credible basis for a specific pre-retirement mortality analysis. Therefore, we continue to propose that pre-retirement mortality follow the same tables used for post-retirement mortality.

<u>Post-Retirement Mortality (Service Retirements)</u>

Among service retired Main members, the actual deaths compared to the expected deaths under the current and proposed assumptions for the last five years are as follows:

| | Main – Healthy | | |
|---|---|---|---|
| **Year Ended June 30** | **Current Expected Deaths** | **Actual Deaths** | **Proposed Expected Deaths** |
| Total | 914 | 793 | 716 |
| Actual / Expected | 87% | | 111% |

Chart 7 compares actual to expected deaths for Main members under the current and proposed assumptions over the last five years. Experience shows that there were fewer deaths than predicted by the current table.

For Main service retirees the ratio of actual to expected deaths was 87%. We recommend updating the current table to the RP-2000 Combined Table (separate tables for males and females) with ages set back three years. This will bring the actual to expected ratio to 111%. This is consistent with standard actuarial practice to include some margin in the rates to anticipate expected future improvement in life expectancy. Generally, preferable practice is to have a margin of around 10%; that is, the actual deaths among current retirees are around 10% greater than the expected deaths during the study period.

Even though the proposed mortality tables result in an actual to expected ratio of 111% in total, this is not the case for males and females separately. The actual deaths during the five years for females are about the same as those expected under the proposed assumption, while for males the actual deaths are more than 111% of the assumed deaths under the proposed assumption. This experience is not consistent with the experience from the previous experience study, nor is it consistent with the adjustments applied to the current mortality tables. Therefore, we recommend applying the same three year set back to both the male and female mortality tables. We will closely monitor this in future studies.

Because there is considerably less mortality experience available for Judges, National Guard, Law Enforcement and Highway Patrol, we recommend applying the same mortality assumption to all non-disabled PERS and Highway Patrol members.

Chart 8 shows the life expectancies (i.e., expected future lifetime) under the current and the proposed tables for PERS and Highway Patrol members.

Note that if these assumptions are adopted by the Board, the actuarial factors used for optional forms of payment will need to be updated to be on a basis consisted with the mortality (and possibly other) assumptions proposed in this report. We will follow-up with a letter that contains those factors and the assumptions used after the assumptions in this study have been adopted.

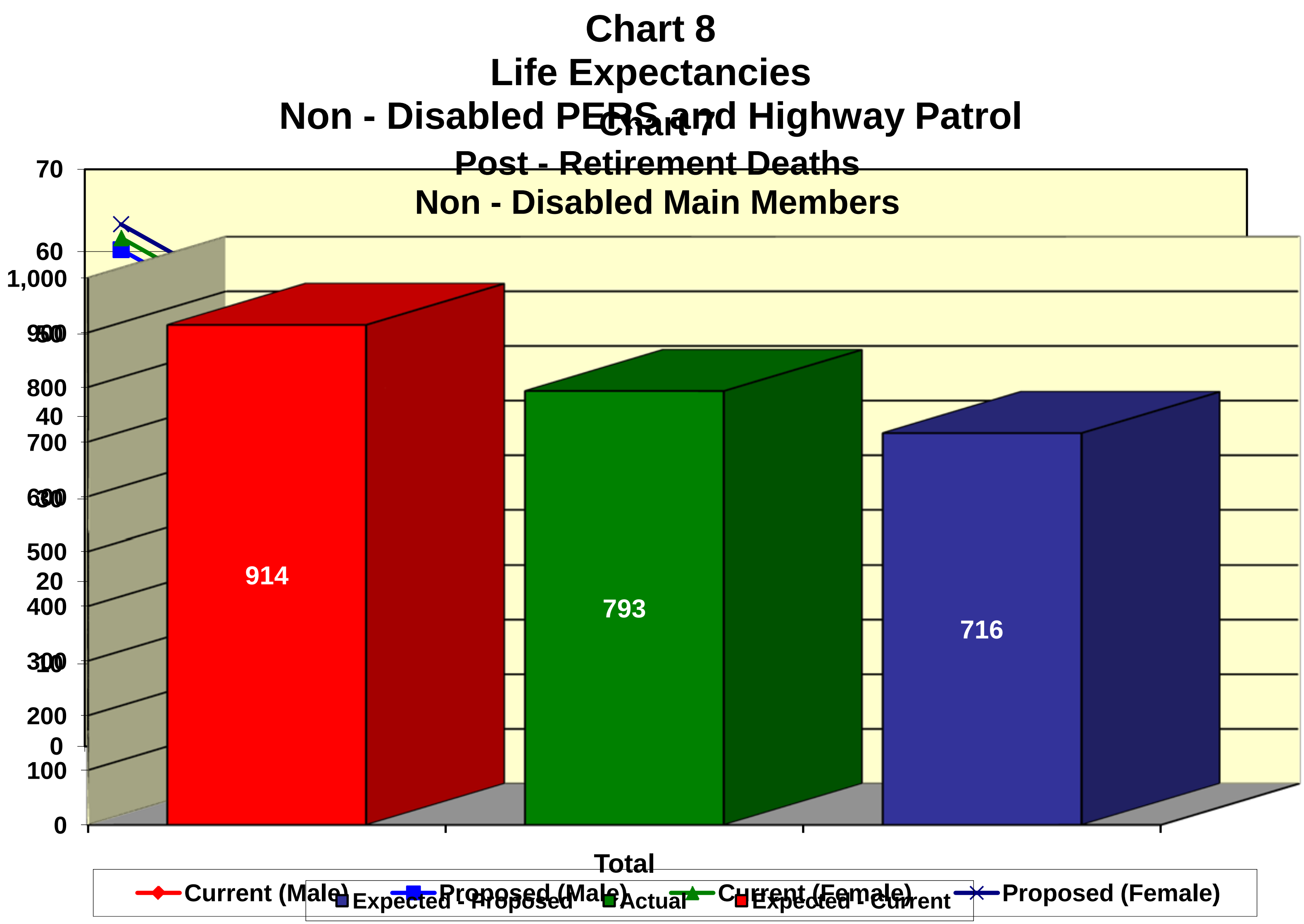


Chart 8
Life Expectancies
Non - Disabled PERS and Highway Patrol
Chart 7
Post - Retirement Deaths
Non - Disabled Main Members
70
60
50
40
30
20
10
0
1,000
900
800
700
600
500
400
300
200
100
0
914
793
716
Total
Current (Male)
Proposed (Male)
Current (Female)
Proposed (Female)
Expected - Proposed
Actual
Expected - Current

## C. MORTALITY RATES - DISABLED

Since death rates for disabled members can vary from those of healthy members, a different mortality assumption is often used. The table currently being used for disabled Main members is the PBGC Disabled Life Mortality Table for Individuals receiving Social Security Disability Benefits (separate tables for males and females).

The number of actual deaths compared to the number expected over the last five years has been as follows:

| | Main – Disabled | | |
|---|---|---|---|
| | Current Expected Deaths | Actual Deaths | Proposed Expected Deaths |
| Total | 87 | 70 | 64 |
| Actual / Expected | 80% | | 109% |

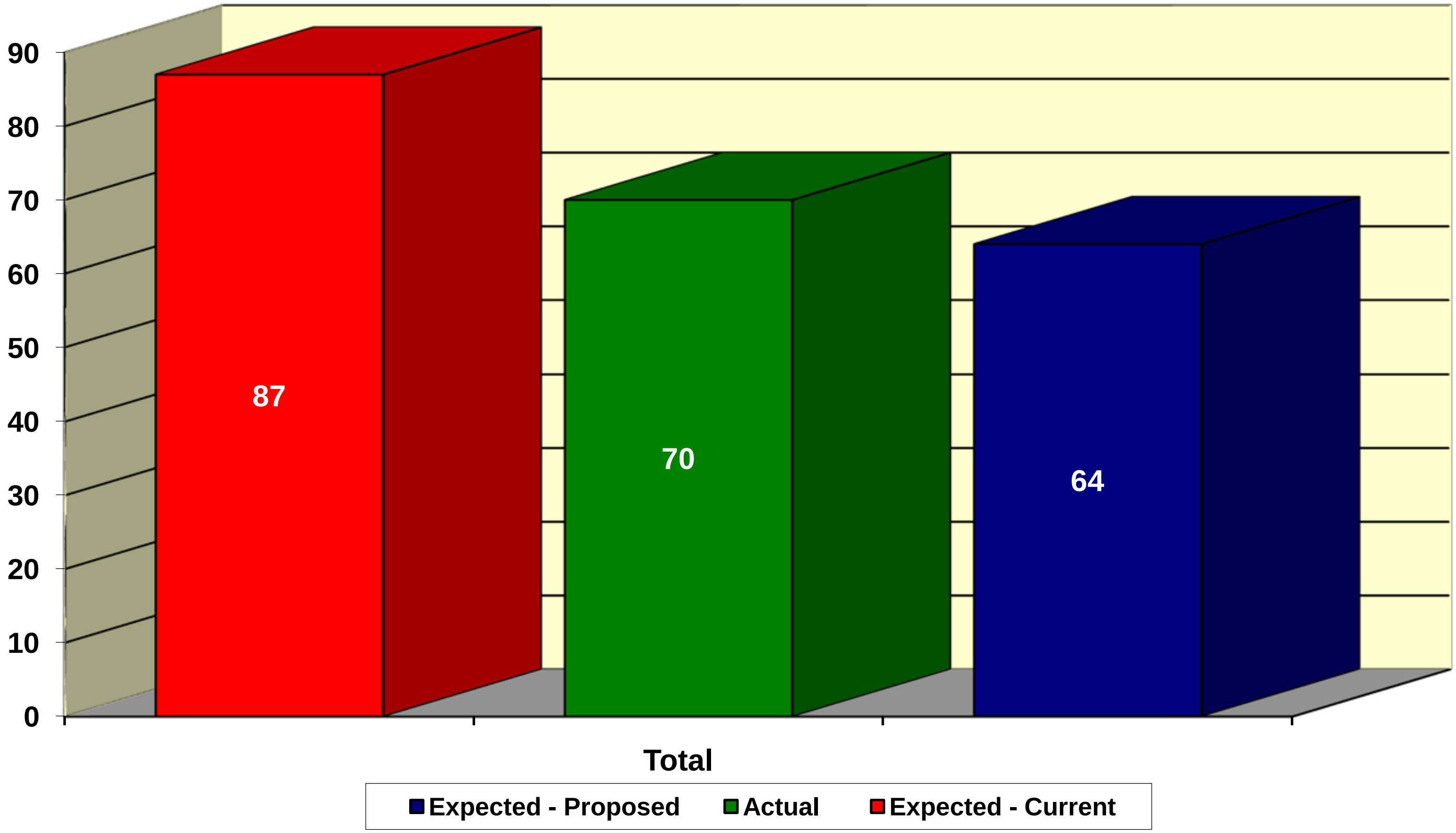
Based on this experience, we recommend that the mortality table for disabled Main members be updated to the RP-2000 Disabled Mortality Table (separate tables for males and females) with ages set back one year for males.

Chart 9 compares actual to expected deaths under both the current and proposed assumptions for disabled Main members over the last five years. Experience shows that there were less deaths than predicted by the current table. Similar to our recommendation for healthy mortality, we have incorporated a margin for future mortality improvement.

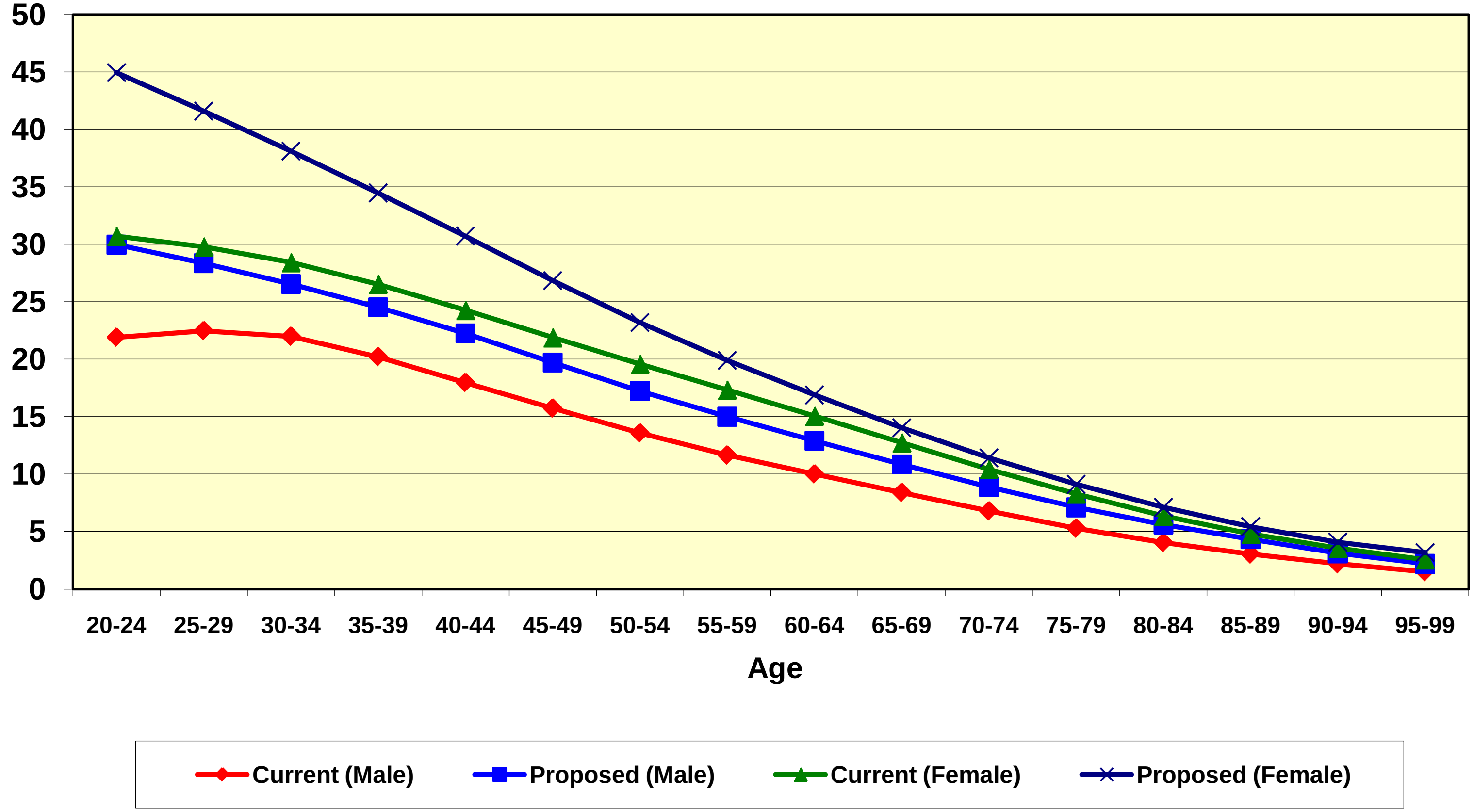
We recommend applying this mortality assumption to all disabled PERS and Highway Patrol members.

Chart 10 shows the life expectancies under both the current and proposed tables for disabled PERS and Highway Patrol members.

## Chart 9
## Post - Retirement Deaths
## Disabled Main Members



## Chart 10
## Life Expectancies
## Disabled PERS and Highway Patrol Members



## D. TERMINATION RATES

Termination rates include all terminations for reasons other than death, disability, or retirement. Under the current assumptions there is an overall incidence of termination assumed, combined with an assumption concerning whether vested members will elect a refund of contributions or a deferred vested benefit. The assumptions for terminating vested members electing a refund of contributions is discussed later in this report. Currently there are sex distinct termination assumptions for members with five or more years of service. However, there are relatively minor differences in the current assumptions for males and females. Also, the experience during the five year period showed similar termination experience for males and females. Therefore, we recommend using unisex termination assumptions. The termination experience over the last five years for Main members, separated between those employees with under five years of service (shown separately by years of service) and those with five or more years of service, is as follows:

**Rates of Termination (Main)**
**(Zero Years of Service)**

| Age | Current Rate | Observed Rate | Proposed Rate |
|---|---|---|---|
| 20-24 | 18.00% | 36.34% | 22.00% |
| 25-29 | 18.00 | 35.18 | 22.00 |
| 30-34 | 12.00 | 24.60 | 16.00 |
| 35-39 | 12.00 | 25.43 | 16.00 |
| 40-44 | 10.00 | 23.99 | 12.00 |
| 45-49 | 10.00 | 23.03 | 12.00 |
| 50-54 | 10.00 | 15.73 | 12.00 |

**Rates of Termination (Main)**
**(One Year of Service)**

| Age | Current Rate | Observed Rate | Proposed Rate |
|---|---|---|---|
| 20-24 | 15.00% | 28.82% | 18.00% |
| 25-29 | 15.00 | 24.46 | 18.00 |
| 30-34 | 12.00 | 19.52 | 14.00 |
| 35-39 | 12.00 | 18.05 | 14.00 |
| 40-44 | 10.00 | 14.59 | 10.00 |
| 45-49 | 10.00 | 13.83 | 10.00 |
| 50-54 | 10.00 | 13.20 | 10.00 |

**Rates of Termination (Main)**
**(Two Years of Service)**

| Age | Current Rate | Observed Rate | Proposed Rate |
|---|---|---|---|
| 20-24 | 12.00% | 22.35% | 16.00% |
| 25-29 | 12.00 | 18.05 | 16.00 |
| 30-34 | 11.00 | 18.79 | 12.00 |
| 35-39 | 11.00 | 11.92 | 12.00 |
| 40-44 | 8.00 | 12.95 | 10.00 |
| 45-49 | 8.00 | 11.93 | 10.00 |
| 50-54 | 8.00 | 11.88 | 10.00 |

**Rates of Termination (Main)**
**(Three Years of Service)**

| Age | Current Rate | Observed Rate | Proposed Rate |
|---|---|---|---|
| 20-24 | 10.00% | 14.53% | 14.00% |
| 25-29 | 10.00 | 15.30 | 14.00 |
| 30-34 | 10.00 | 14.64 | 12.00 |
| 35-39 | 10.00 | 13.44 | 12.00 |
| 40-44 | 7.00 | 10.02 | 8.00 |
| 45-49 | 7.00 | 9.00 | 8.00 |
| 50-54 | 7.00 | 8.82 | 8.00 |

**Rates of Termination (Main)**
**(Four Years of Service)**

| Age | Current Rate | Observed Rate | Proposed Rate |
|---|---|---|---|
| 20 – 24 | 15.00% | 14.55% | 14.00% |
| 25 – 29 | 15.00 | 12.39 | 14.00 |
| 30 – 34 | 11.00 | 11.38 | 11.00 |
| 35 – 39 | 11.00 | 10.78 | 11.00 |
| 40 – 44 | 6.00 | 6.54 | 7.00 |
| 45 – 49 | 6.00 | 8.43 | 7.00 |
| 50 – 54 | 6.00 | 6.65 | 7.00 |

**Rates of Termination (Main)**
**(Five or More Years of Service)**

| Age | Current Rate | Observed Rate | Proposed Rate |
|---|---|---|---|
| 20 – 24 | 10.00% | 11.11% | 8.75% |
| 25 – 29 | 9.07 | 7.27 | 7.30 |
| 30 – 34 | 6.70 | 6.11 | 5.24 |
| 35 – 39 | 4.35 | 4.71 | 4.64 |
| 40 – 44 | 3.62 | 3.81 | 3.89 |
| 45 – 49 | 3.14 | 3.48 | 3.68 |
| 50 – 54 | 2.62 | 3.17 | 3.18 |

Chart 11 compares actual to expected terminations over the past five years for both the current and proposed assumptions for Main members.

Chart 12 shows the current, along with the proposed termination rates for Main members with less than five years of service.

Chart 13 shows the current, along with the proposed termination rates for Main members with five or more years of service.

Based upon the recent experience, the termination rates for Main members have been increased.

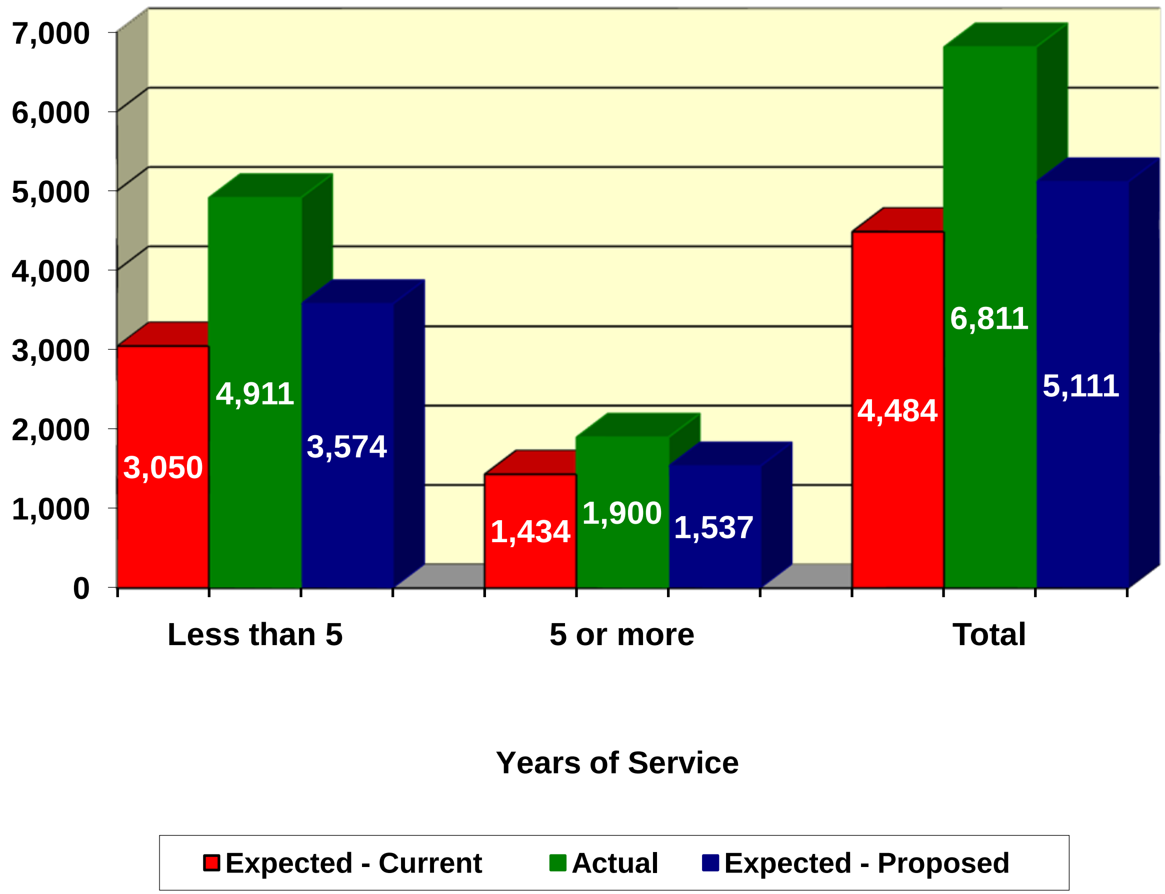
For National Guard and Law Enforcement, the experience over the five year period showed a greater than expected amount of terminations for members with less than five years of service. We propose increases to those rates. For members with five or more years of service, we recommend applying the proposed rates for Main. This is consistent with current practice.

For Judges, the current termination assumptions apply no matter how many years of service the member has attained. We recommend continuing this structure. The current termination rates for Judges are equal to 50% of the Main termination rates for those with five or more years of service. During the five year period there were no terminations from employment for Judges. We propose decreasing the termination rates for Judges to be 25% of the proposed termination rates for Main for those with five or more years of service.

For Highway Patrol, termination rates of 5% per year are currently assumed for the first five years of service. For members with five or more years of service, termination rates of 2% per year are currently assumed for those under age 35 and 1% per year for those 35 and older. During the five year period there were more terminations than expected. We propose increasing the termination rate for Highway Patrol members in their first year of service from 5% to 10%. We also propose increasing the termination rate for Highway Patrol members that are under age 35 with five or more years of service from 2% per year to 2.5% per year.

We will also continue to assume that termination rates are zero at any age where members are assumed to retire. In other words, at those ages, members will either retire (and commence receiving a benefit) or continue working.

## Chart 11
## Actual Number of Terminations Compared to Expected - Main Members



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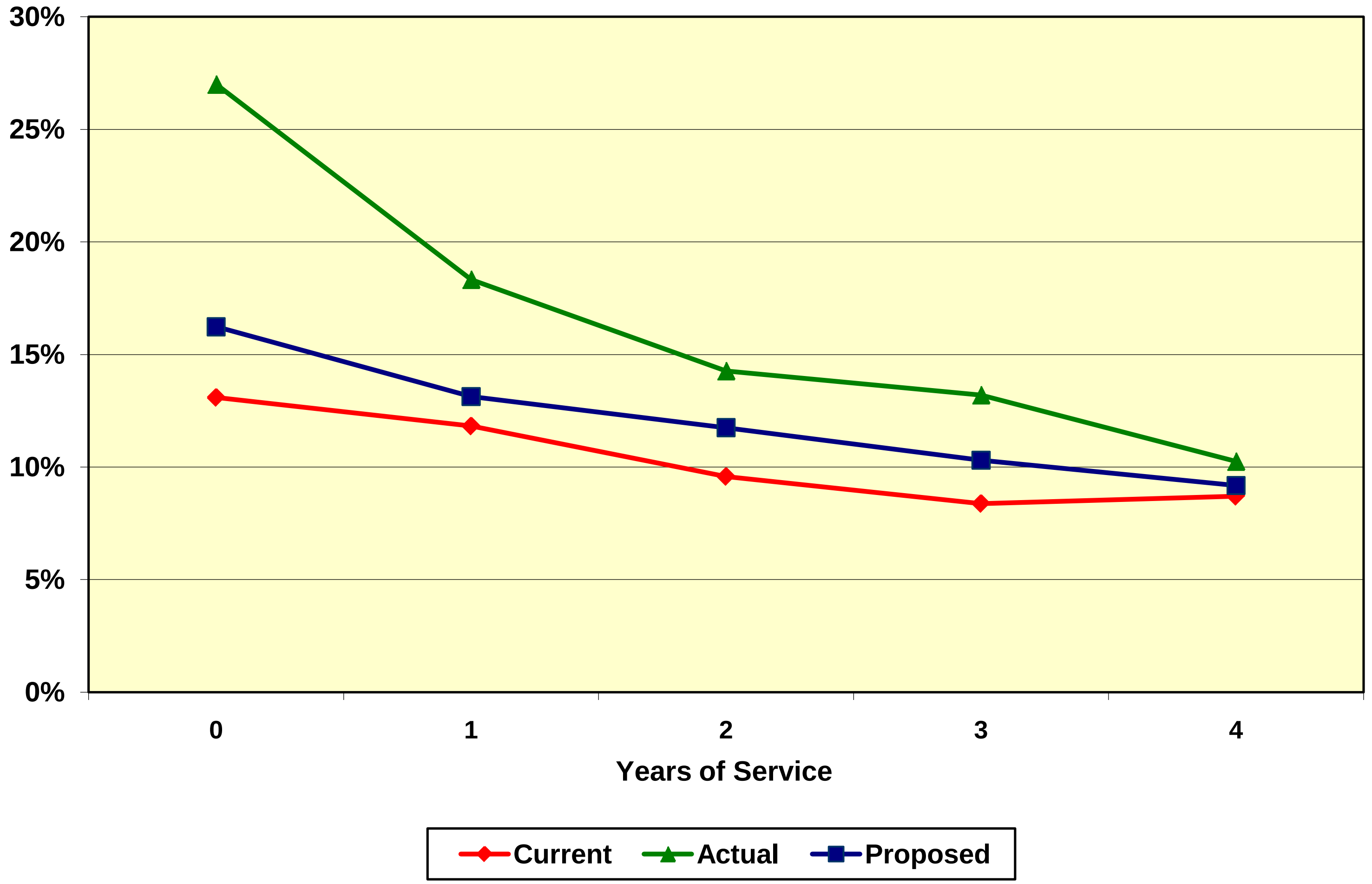
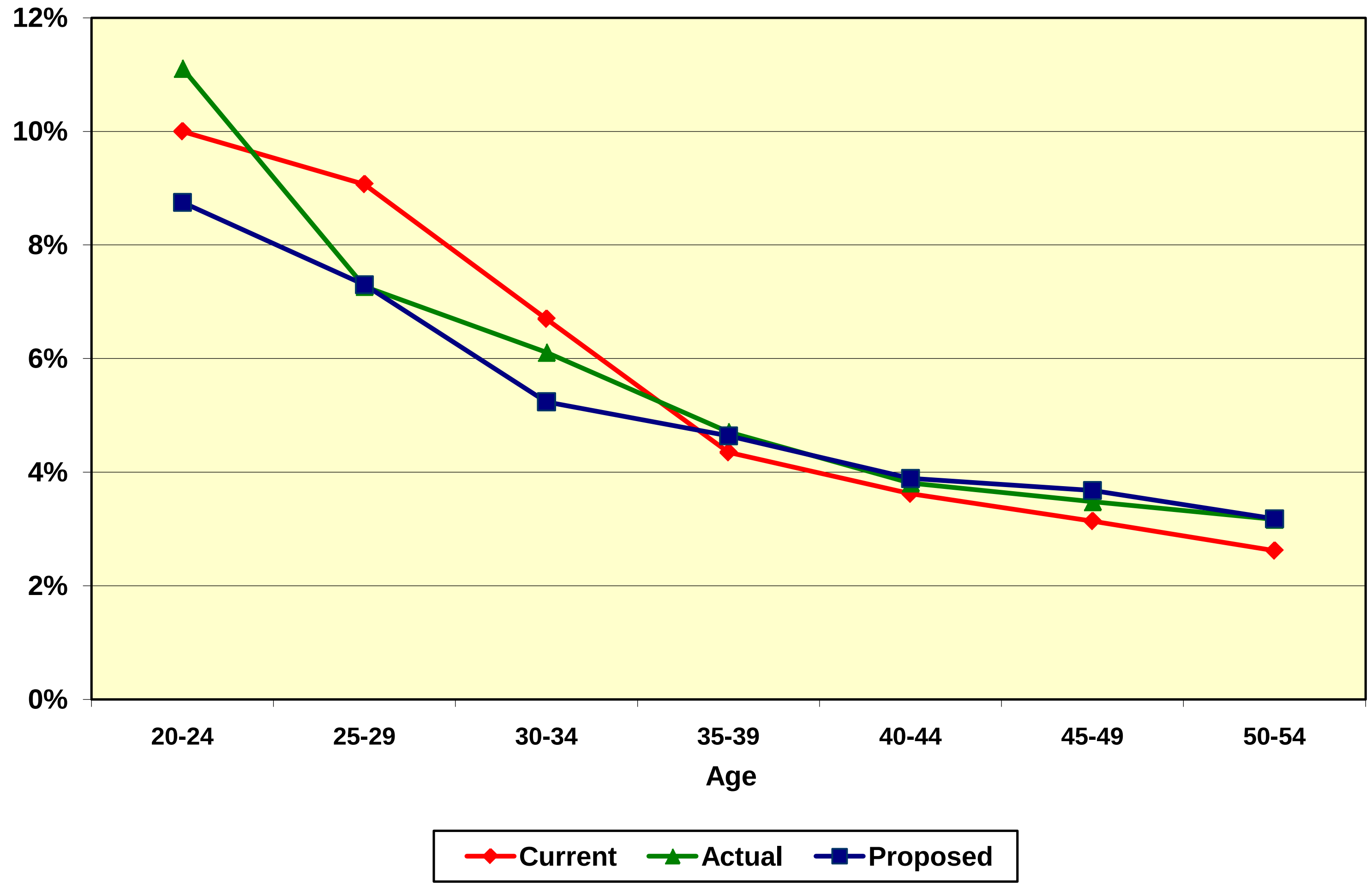
## Chart 12
## Termination Rates - Main Members
## (Less than 5 Years of Service)



## Chart 13
## Termination Rates - Main Members
## (Five or More Years of Service)



## E. DISABILITY INCIDENCE RATES

When a member becomes disabled, he or she may be entitled to a disability pension that is independent of years of service. The following summarizes the actual incidence of disabilities over the past five years compared to the current and proposed assumptions for disability incidence:

**Main**

| Rates of Disability Incidence (Males) | | | |
|---|---|---|---|
| **Age** | **Current Rate** | **Observed Rate** | **Proposed Rate** |
| 20 – 24 | 0.03% | 0.00% | 0.02% |
| 25 – 29 | 0.04 | 0.00 | 0.03 |
| 30 – 34 | 0.05 | 0.00 | 0.04 |
| 35 – 39 | 0.07 | 0.09 | 0.06 |
| 40 – 44 | 0.11 | 0.10 | 0.09 |
| 45 – 49 | 0.19 | 0.04 | 0.15 |
| 50 – 54 | 0.31 | 0.15 | 0.25 |
| 55 – 59 | 0.52 | 0.25 | 0.40 |
| 60 – 64 | 0.82 | 0.42 | 0.64 |
| 65 – 69 | 0.25 | 0.10 | 0.25 |

**Main**

| Rates of Disability Incidence (Females) | | | |
|---|---|---|---|
| **Age** | **Current Rate** | **Observed Rate** | **Proposed Rate** |
| 20 – 24 | 0.02% | 0.00% | 0.01% |
| 25 – 29 | 0.03 | 0.03 | 0.02 |
| 30 – 34 | 0.04 | 0.02 | 0.02 |
| 35 – 39 | 0.05 | 0.04 | 0.03 |
| 40 – 44 | 0.08 | 0.04 | 0.05 |
| 45 – 49 | 0.13 | 0.09 | 0.09 |
| 50 – 54 | 0.22 | 0.08 | 0.15 |
| 55 – 59 | 0.37 | 0.18 | 0.25 |
| 60 – 64 | 0.58 | 0.22 | 0.39 |
| 65-69 | 0.35 | 0.00 | 0.25 |

| Highway Patrol | | | |
|---|---|---|---|
| **Rates of Disability Incidence (All)** | | | |
| **Age** | **Current Rate** | **Observed Rate** | **Proposed Rate** |
| 20 – 24 | 0.03% | 0.00% | 0.03% |
| 25 – 29 | 0.08 | 0.00 | 0.08 |
| 30 – 34 | 0.15 | 0.00 | 0.15 |
| 35 – 39 | 0.23 | 0.00 | 0.23 |
| 40 – 44 | 0.35 | 2.11 | 0.35 |
| 45 – 49 | 0.37 | 0.00 | 0.37 |
| 50 – 54 | 0.41 | 0.00 | 0.41 |
| 55 – 59 | 0.00 | 0.00 | 0.00 |

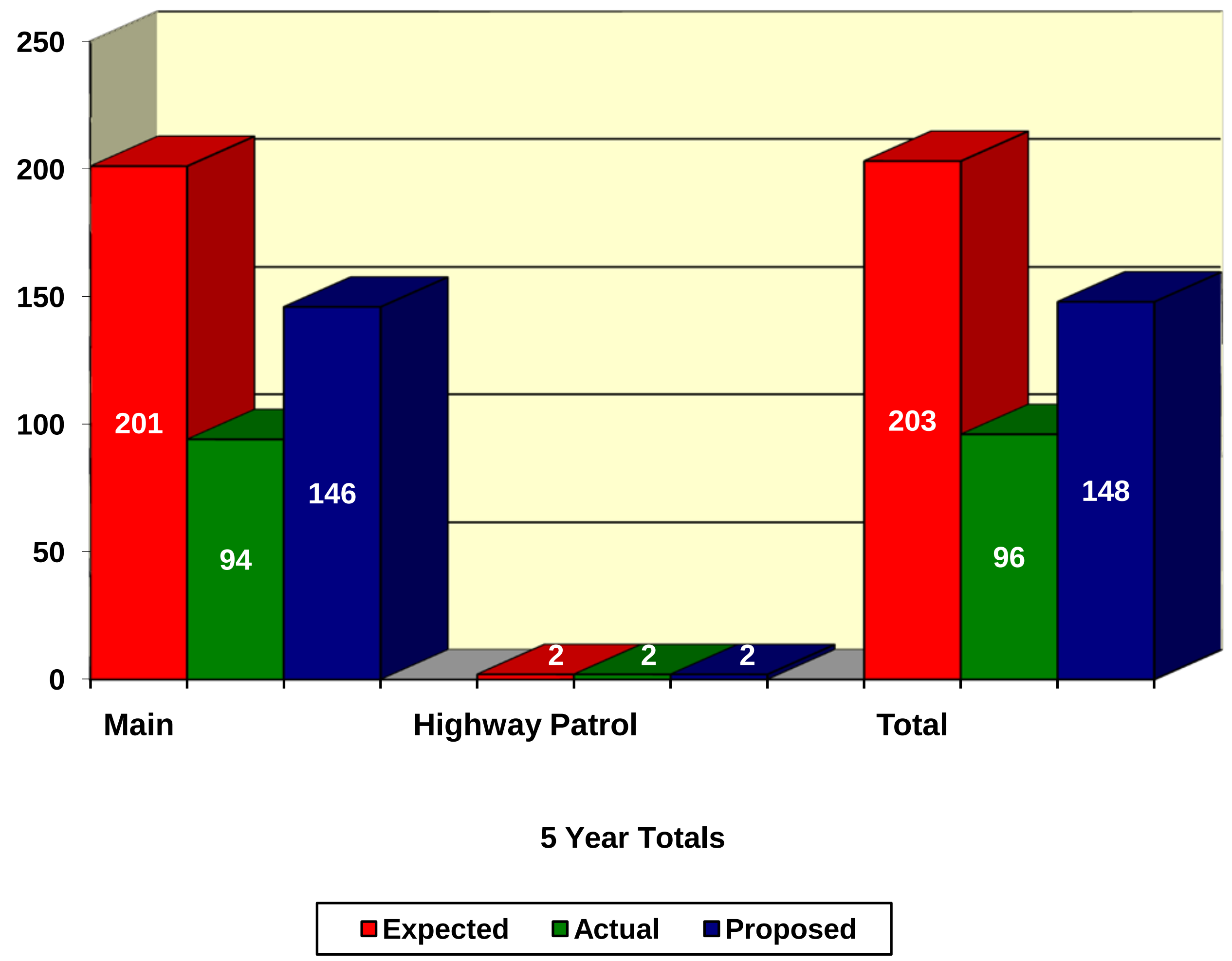
Chart 14 compares the actual number of disabilities over the past five years to that expected under both the current and proposed assumptions. The proposed disability rates were adjusted to reflect the past years experience. There are decreases in the rates proposed for Main and no changes for Highway Patrol. The lower than expected disabilities for the Main members are consistent with the experience from the previous study.

We propose applying the Main disability incidence rates to all PERS members based on limited experience available for Judges, National Guard and Law Enforcement.

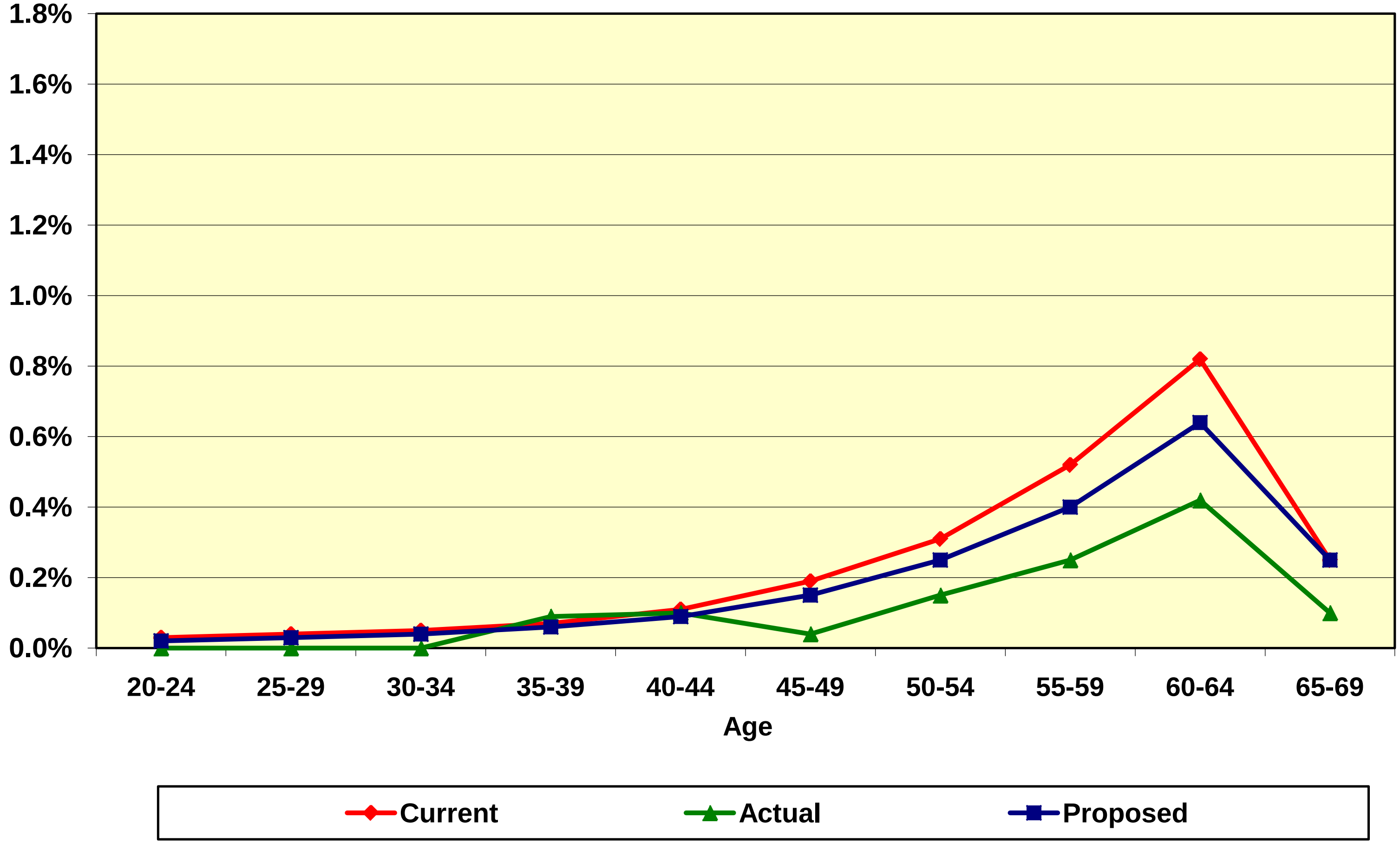
Charts 15 and 16 show actual disability incidence rates, compared to the assumed and proposed rates for PERS members (separately for males and females).

Chart 17 graphs the same information as Charts 15 and 16, but for Highway Patrol members.

**Chart 14**
**Actual Number of Disabilities Compared to Expected**



## Chart 15
## Disability Incidence Rates for PERS Members (Male)



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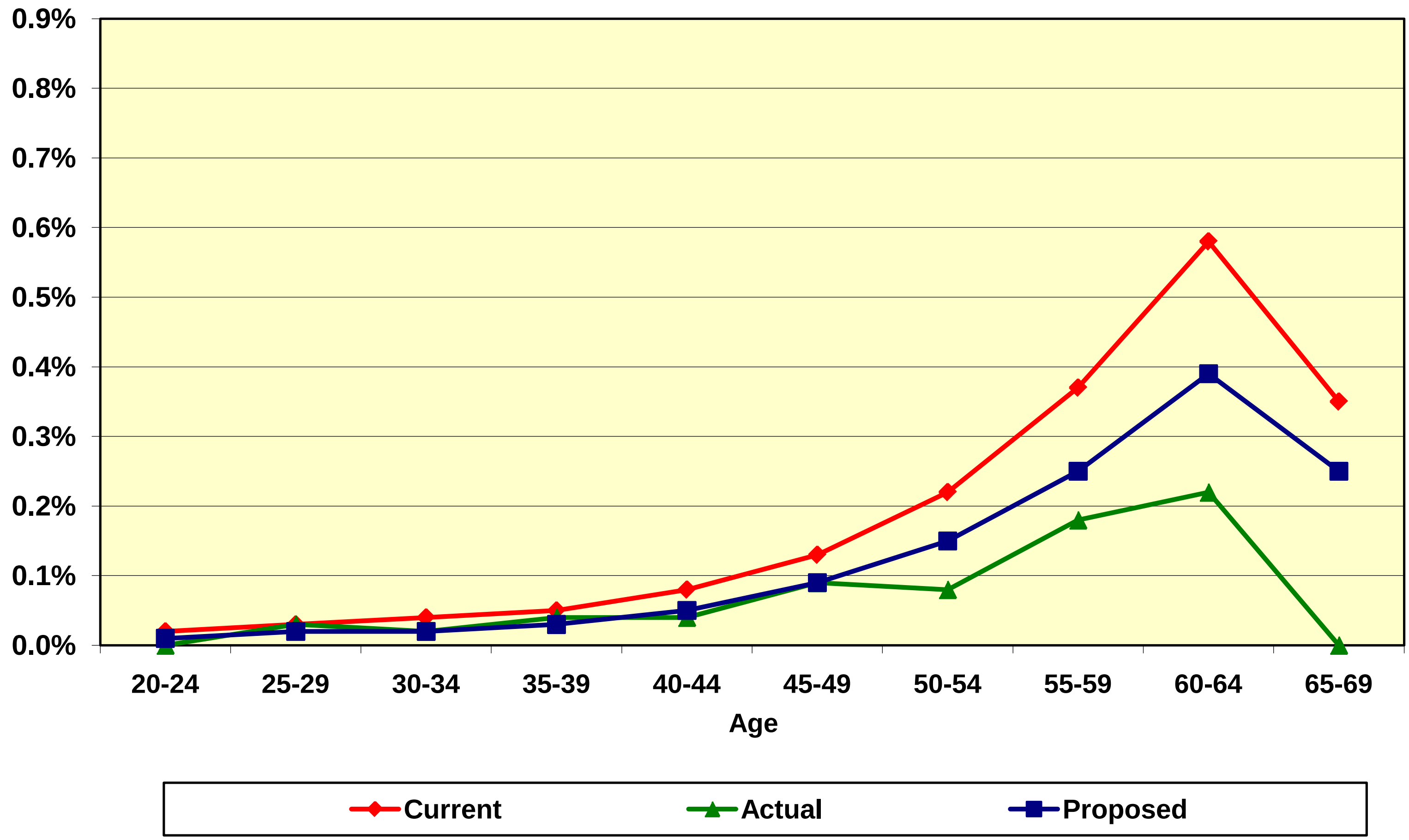
## Chart 16
## Disability Incidence Rates for PERS Members (Females)



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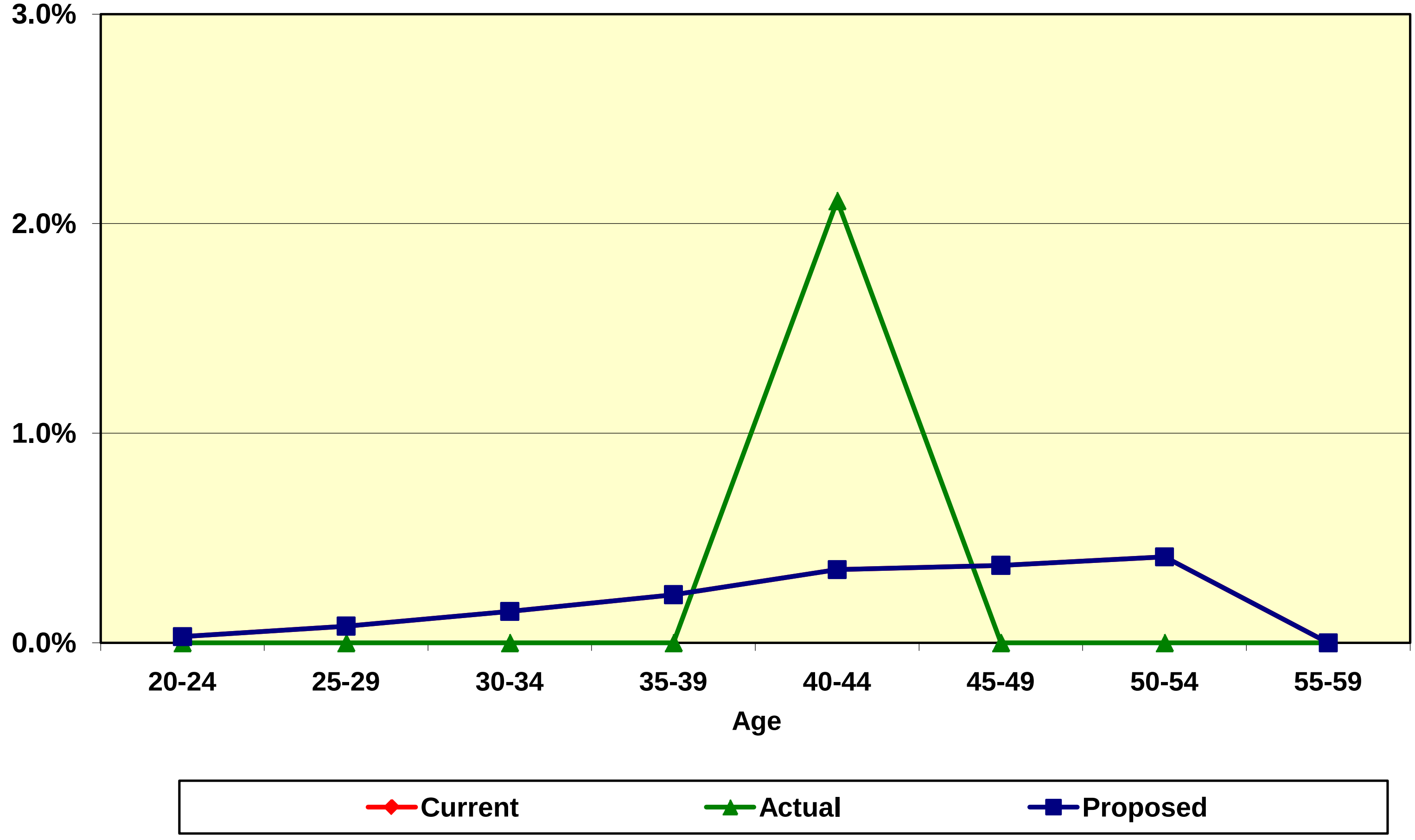
## Chart 17
## Disability Incidence Rates for Highway Patrol Members (All)



## F. PROMOTIONAL AND MERIT SALARY INCREASES

The System's retirement benefits are determined in large part by a member's compensation just prior to retirement. For that reason, it is important to anticipate salary increases that employees will receive over their careers. These salary increases are made up of three components:

- Inflationary increases;
- Real "across the board" increases; and
- Promotional and merit increases.

The inflationary increases are assumed to follow the general annual price inflation assumption discussed in the economic assumptions section of this report where we recommend maintaining the assumption at 3.50%. We also discussed our recommendation to maintain the assumption for annual "across the board" real pay increases at 1.00% (0.50 for Judges). Therefore, the total assumed inflation and real "across the board" pay increase (i.e., wage inflation) assumption is 4.50% (4.00% for Judges). This is the assumed annual rate of payroll growth at which payments to amortize the Unfunded Actuarial Accrued Liability (UAAL) are assumed to increase.

The annual promotional and merit increases are determined by measuring the actual increases received by members over the experience period, net of the inflationary and real "across the board" pay increases. Increases are measured separately for Main members and Judges. This is accomplished by:

- Measuring each member's actual salary increase over each year of the experience period;
- Categorizing these increases according to member demographics;
- Removing the wage inflation component from these increases (equal to the increase in the members' average salary during the year);
- Averaging these annual increases over the experience period; and
- Modifying current assumptions to reflect some portion of these measured increases reflective of their "credibility."

Note that, to be consistent with your experience, these merit and promotional assumptions should be used in combination with the 4.50% (4.00% for Judges) assumed inflation and real "across the board" increases.

The current assumption structure for PERS and Highway Patrol members (excluding Judges) for promotional and merit salary increases consists of a select period where the increases are based on years of service followed by an ultimate period where the increases are based on age. For Judges, a flat assumption is used for all years of service and ages.

The following tables show the Main members' actual average promotional and merit increases by years of service for those members with less than five years of service and by age for those members with five or more years of service over the five year period from July 1, 2004 through June 30, 2009. The actual increases were reduced by 4.3%, the actual average inflation plus "across the board" increase (i.e., wage inflation) over the five year experience period.

**Main**
**(Less than Five Years of Service)**

| Years of Service | Current Assumptions | July 1, 2004 Through June 30, 2009 Average Main Promotional and Merit Increases | Proposed Assumptions |
|---|---|---|---|
| Less than 1 | 2.50% | 5.13% | 3.75% |
| 1 | 2.50 | 2.73 | 2.75 |
| 2 | 2.50 | 2.12 | 2.25 |
| 3 | 2.50 | 2.01 | 2.00 |
| 4 | 2.50 | 1.73 | 1.75 |

**Main**
**(Five or More Years of Service)**

| Age | Current Assumptions | July 1, 2005 Through June 30, 2009 Average Main Promotional and Merit Increases | Proposed Assumptions |
|---|---|---|---|
| 25-29 | 1.28% | 2.33% | 1.75% |
| 30-34 | 0.98 | 1.94 | 1.22 |
| 35-39 | 0.72 | 1.83 | 0.88 |
| 40-44 | 0.52 | 1.22 | 0.67 |
| 45-49 | 0.36 | 0.83 | 0.57 |
| 50-54 | 0.26 | 0.68 | 0.48 |
| 55-59 | 0.20 | 0.49 | 0.41 |
| 60-64 | 0.20 | 0.37 | 0.24 |
| 65-69 | 0.20 | 0.24 | 0.20 |

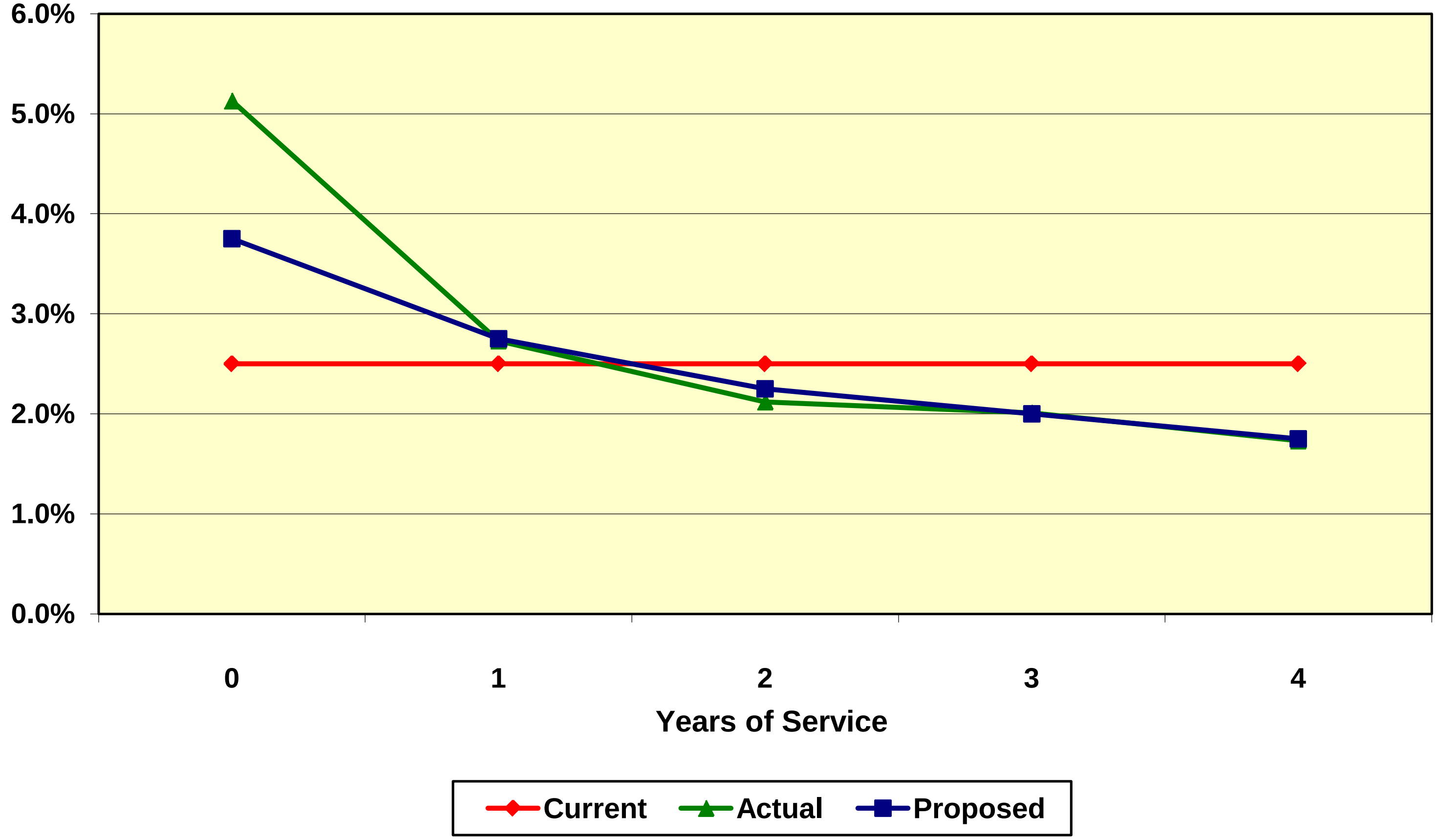
The proposed promotional and merit salary increase assumptions for Main members with less than two or five or more years of service are an increase compared to the current assumptions. Decreases are proposed for Main members with at least two but less than five years of service.

Charts 18 and 19 provide a graphical comparison of the actual promotional and merit increases, compared to the proposed assumptions. Chart 18 shows this information for Main members with less than five years of service and Chart 19 is for Main members with five years or more of service.

Because there is considerably less experience available for National Guard, Law Enforcement and Highway Patrol, we recommend using the same promotional and merit salary scale assumptions for those members. This is consistent with the current assumptions.

For Judges, the current promotional merit salary scale assumption is a flat 1.50% that is independent of years of service and age. The actual salary increases for Judges during the five year period from July 1, 2004 through June 30, 2009 appear to consist solely of inflation and real “across the board” increases. Therefore, we propose reducing the promotional and merit salary increase assumption for Judges from 1.50% to 1.00%.

## Chart 18
## Promotional and Merit Salary Increase Rates - Main Members (Less than 5 Years of Service)



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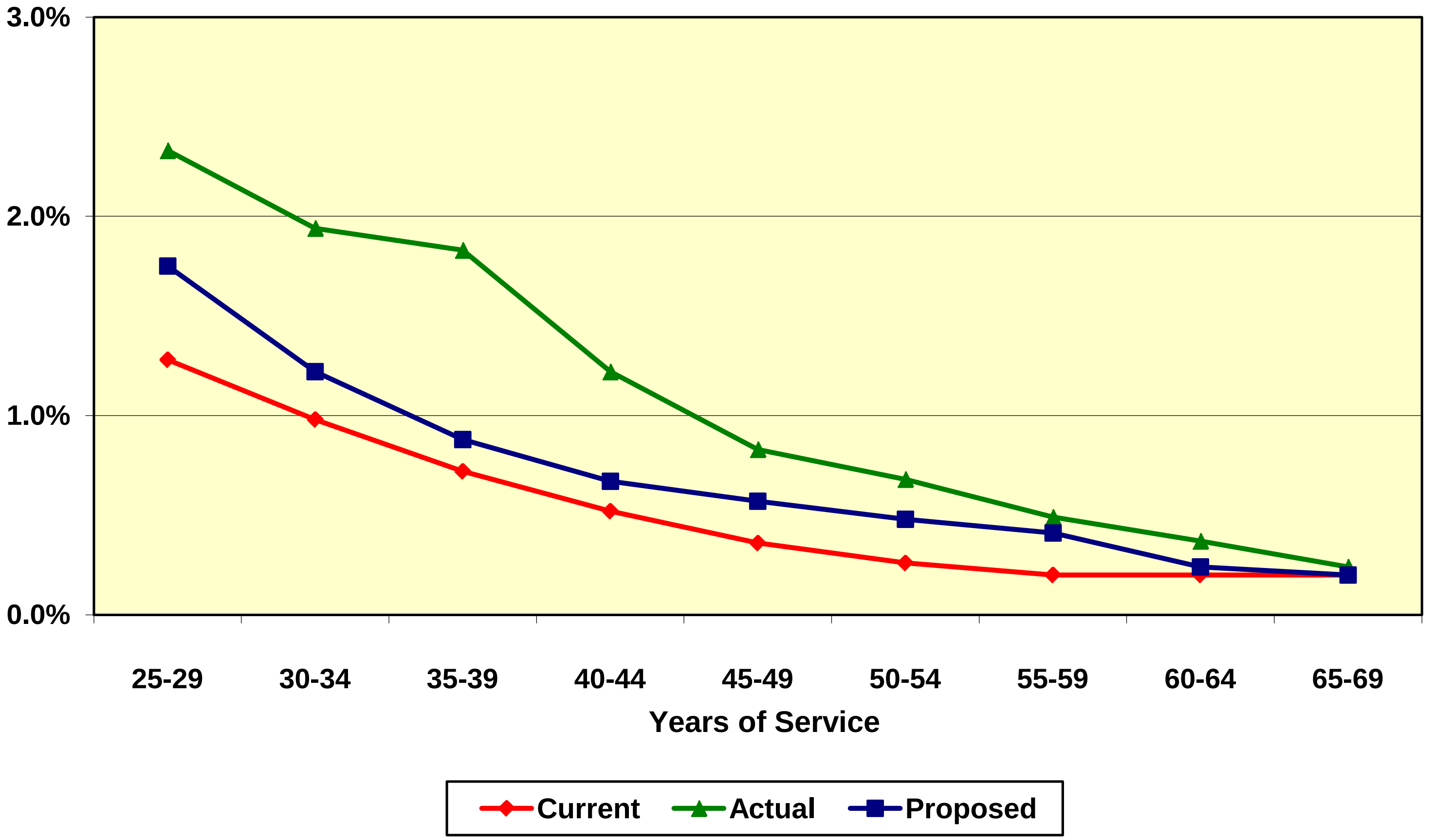
## Chart 19
## Promotional and Merit Salary Increase Rates - Main Members (Five or More Years of Service)



## G. REFUND OF EMPLOYEE CONTRIBUTIONS

Upon termination of employment, vested members may withdraw their member contributions (as well as vested employer contributions if any) with interest in lieu of receiving a monthly benefit from PERS. The current assumption is that 50% of inactive vested Main System and Judges and 100% of inactive vested National Guard and Law Enforcement are assumed to elect a refund of employee contributions in lieu of a pension benefit regardless of their age or service. Based on the data available to us, we estimate that approximately 54% of Main members who terminated in the prior five-year period have or will receive a refund of contributions.

Although the number is close to the assumption, we believe a better method would be to assume that vested members terminating from employment will elect a refund of contributions only when the member account balance has a higher value than the annuity they will forfeit by taking a refund. This is consistent with the assumption used for HPRS.

The current assumption for HPRS is that vested members terminating from employment will withdraw their contributions when it is more valuable than the annuity they would otherwise be entitled to. We propose no change in this assumption.

This assumption will be applied to both current and future inactive vested members.

## H. ACCOUNT BALANCE DUE TO VESTED EMPLOYER CONTRIBUTION (PEP)

Members of the Main System contribute 4% of their salary to the pension fund and their employer contributes 4.12%. The members' contributions are vested and earn interest within the fund. Upon termination the member may withdraw their contributions with interest in lieu of receiving a monthly benefit from PERS. The Portability Enhancement Provision (PEP) allows up to 4% of the employer contribution to become vested in addition to the member's contributions. These contributions only become vested if the member contributes to an approved deferred compensation program. An assumption is made as to whether or not a member will contribute to a deferred compensation program.

The current assumption is that 100% of those who have a vested employer contribution balance will continue to contribute to a deferred compensation program. For those that have not contributed, 50% will begin contributing immediately and do so until termination of employment.

Our data indicates that over the last five years only about 2 to 3 percent of continuing active employees have begun to contribute to a deferred compensation plan each year. It is unknown whether they will continue to do so until termination of employment. Overall, roughly 35% of the active members of the Main System at July 1, 2009 have contributed to a deferred compensation plan. We propose that the current assumption for those who have contributed to a deferred compensation program remain that 100% will continue to do so, but those that have not contributed will be assumed to not contribute in the future.

In addition, we propose that the valuation assumption be that everyone maintains their current election in future years after the valuation date. Those currently contributing will continue to do so, and those not currently contributing will continue not to. If this recommendation is adopted

by the Board, we will work with your staff so that this data can be made available to us as part of the valuation process.

## I. RETIREE HEALTH INSURANCE CREDIT FUND PARTICIPATION RATES

The members of the Main System, the Judges, the National Guard, and the Highway Patrolmen's Retirement System are members in the Retiree Health Insurance Credit Fund (RHICF). This Fund provides a monthly stipend (based on years of service) toward the premium for retired members who elect coverage under the retiree NDPERS Group Health Plan.

For purposes of determining the cost of the RHICF, an assumption is made regarding the percentage of members who will retire from active service and elect retiree medical coverage provided by PERS. The table below shows the current assumption, actual experience and proposed assumption for these participation rates for Main members during the five year period.

**Main**

| Years of Service at Retirement | Current Participation Rate | Actual Participation Rate | Proposed Participation Rate |
|---|---|---|---|
| 3 – 4 | 25.00% | 35.29% | 30.00% |
| 5 – 9 | 50.00 | 48.83 | 50.00 |
| 10 – 14 | 70.00 | 59.47 | 65.00 |
| 15 – 19 | 80.00 | 72.40 | 80.00 |
| 20 – 24 | 95.00 | 74.93 | 85.00 |
| 25+ | 100.00 | 79.05 | 95.00 |

These rates reflect participation by (i) members who retire from active service, (ii) members who have terminated with a deferred vested benefit, and (iii) members who previously retired and did not elect NDPERS retiree health coverage and ultimately elect participation in the RHICF.

Based on the above experience we are proposing increases in the participation rates for those Main members with three to four years of service and some decreases for those Main members with larger years of service at retirement.

For other members of PERS and Highway Patrol, it is currently assumed that they have the same participation rates as Main, with the exception that for Judges and Highway Patrol, no participation is assumed before five years of service. Based on the limited experience during the five-year period we propose using the same participation rates for other members of PERS and Highway Patrol as are proposed for Main, with the exception that Judges and Highway Patrol continue the assumption that no participation occurs before five years of service. The proposed assumptions along with the current assumptions) for Judges and Highway Patrol are shown below:

**Judges and Highway Patrol**

| Years of Service at Retirement | Current Participation Rate | Proposed Participation Rate |
|---|---|---|
| 3 – 4 | 0.00% | 0.00% |
| 5 – 9 | 50.00 | 50.00 |
| 10 – 14 | 70.00 | 65.00 |
| 15 – 19 | 80.00 | 80.00 |
| 20 – 24 | 95.00 | 85.00 |
| 25+ | 100.00 | 95.00 |

## J. RETIREE HEALTH INSURANCE CREDIT FUND JOINT AND SURVIVOR OPTION ELECTION RATES

The cost of the RHICF depends on the annuity option the retiree elects as his/her form of payment in the Retirement System. If the retiree elects a form of payment in the Retirement System that provides a lifetime benefit to his/her spouse, the benefit from the RHICF will continue to the spouse for his/her lifetime. On the other hand, if the retiree elects a form of payment in the Retirement System that ends upon the retiree's death, the benefit from the RHICF will end upon the retiree's death (unless the retiree elects an actuarial equivalent optional form of payment in the RHICF that continues for the lifetime of the spouse).

The actuarial valuation of the RHICF includes an assumption regarding the percentage of members who will elect a form of payment from the Retirement System that provides a lifetime benefit to his/her spouse upon the death of the member. These assumptions are as follows:

| | **% Electing Continuation** | |
|---|---|---|
| | Males | Females |
| Main, Judges, National Guard and Law Enforcement | 65% | 20% |
| Highway Patrol | 90% | 90% |

The experience for Main members indicates that approximately 54% of males and 28% of females that retired during the five year period are currently receiving a payment form from the Retirement System that provides spousal continuation. Based on this experience we propose an assumption of 60% for males and 25% for females. This assumption would also be applied to National Guard and Law Enforcement members.

For Judges, based on our earlier assumption that all Judges are married at retirement and the fact that there is no reduction for the Joint and Survivor option for Judges, we propose an assumption that 100% of Judges will elect an option with spousal continuation upon retirement.

For Highway Patrol, the actual experience indicates that 84% of members that retired during the five year period are currently receiving a payment form from the Retirement System that provides spousal continuation. Therefore, we recommend maintaining the assumption that 90% of Highway Patrol members will elect an option with spousal upon retirement.

A table containing the proposed assumptions is as follows:

| | % Electing Continuation | |
|---|---|---|
| | Males | Females |
| Main, National Guard and Law Enforcement | 60% | 25% |
| Judges | 100% | 100% |
| Highway Patrol | 90% | 90% |

## K. ADMINISTRATIVE EXPENSES

Like benefit payments made to members, expenses incurred in connection with the plan's operation are paid from system assets. These expenses include fees for administrative, legal, accounting, and actuarial services, as well as routine costs for printing, mailings, computer-related activities, and other functions carried out by the retirement system. They generally do not include investment-related expenses. In order to reflect future administrative expenses in the plan's funding costs, an explicit load is added to the normal cost as part of the current funding policy.

**PERS ADMINISTRATIVE EXPENSES**
(Dollars in Thousands)

| Year Ending June 30 | Main | Judges | National Guard | Law Enforcement with Prior Main Service | Law Enforcement w/o Prior Main Service |
|---|---|---|---|---|---|
| 2009 | $1,231.9 | $10.2 | $3.2 | $4.0 | $11.6 |
| 2008 | 1,087.8 | 10.6 | 4.3 | 3.3 | 12.2 |
| 2007 | 1,091.2 | 7.5 | 2.4 | 2.0 | 6.2 |
| 2006 | 1,024.2 | 4.8 | 2.5 | 1.3 | 4.7 |
| 2005 | 1,062.3 | 4.5 | 1.3 | 1.2 | 3.0 |
| Average | 1,099.5 | 7.5 | 2.7 | 2.4 | 7.5 |
| Expected | 710.0 | 5.0 | 5.0 for NG and Law Enf. Combined | | |
| Proposed | 1,300.0 | 11.0 | 4.0 | 4.0 | 10.0 |

**HPRS AND RHICF ADMINISTRATIVE EXPENSES**
(Dollars in Thousands)

| Year Ending June 30 | HPRS | RHICF |
|---|---|---|
| 2009 | $19.1 | $115.2 |
| 2008 | 18.4 | 89.9 |
| 2007 | 19.4 | 105.0 |
| 2006 | 17.5 | 88.6 |
| 2005 | 16.1 | 85.3 |
| Average | 18.1 | 96.8 |
| Expected | 16.0 | 65.0 |
| Proposed | 20.0 | 110.0 |

The experience shows that actual administrative expenses have exceeded the assumption over the study period. Based on experience and future expectations, we are recommending increases to this assumption for all systems.

## L. INDEXING FOR BENEFITS OF INACTIVE VESTED HIGHWAY PATROL MEMBERS

For terminated vested Highway Patrol members who have not yet commenced a retirement benefit, their vested benefits are indexed at a rate set by the Retirement Board. This increase is applied to the final average salary calculated upon termination until the benefit commencement date. The historical increases that the Board has approved are as follows:

| Year Beginning | Annual Increase |
|---|---|
| 7/1/1994 | 3.00% |
| 7/1/1995 | 2.00 |
| 7/1/1996 | 2.00 |
| 7/1/1997 | 3.00 |
| 7/1/1998 | 1.80 |
| 7/1/1999 | 1.26 |
| 7/1/2000 | 2.00 |
| 7/1/2001 | 1.81 |
| 7/1/2002 | 1.73 |
| 7/1/2003 | 0.00 |
| 7/1/2004 | 0.00 |
| 7/1/2005 | 4.00 |
| 7/1/2006 | 4.00 |
| 7/1/2007 | 4.00 |
| 7/1/2008 | 4.00 |
| 7/1/2009 | 5.00 |
| 5-year Average | 4.20 |
| 10-year Average | 2.65 |

The current assumption is that the Board will grant increases of 5% per annum. Based on the experience as well as the fact that the current and proposed payroll growth assumption for active members is 4.5%, we recommend lowering the assumption to 4.5% per annum.

## M. ACTUARIAL COST METHOD

The actuarial cost method is the procedure used to allocate the cost of the plan among different plan years. A portion of the value of benefits is attributable to past service (actuarial accrued liability) and the remainder (the present value of future normal costs) is attributable to future service. Actuarial valuations for the Systems (excluding the RHICF) have been based on the actuarial cost method known as the Entry Age Normal Actuarial Cost Method. This method produces costs that remain relatively level as a percentage of covered payroll. Under the Entry Age Normal Cost Method, the total contribution requirement has two components - an annual normal cost, and a payment with respect to the unfunded actuarial accrued liability. The annual normal cost is calculated for each active employee as the level percentage of pay required over the employee's period of assumed employment to pay the total expected benefits. If actuarial assumptions are met, the total normal cost rate will remain level as a percentage of payroll.

The actuarial valuation for the RHICF is based on the Projected Unit Credit Cost Method. This cost method is used by some employers in the accounting of their retiree health plans. Under this cost method, to the extent the average age of the membership increases over time, then the annual normal cost will generally increase over time.

However, since the benefits payable from the RHICF are not related to payroll, the annual normal cost expressed as a percent of payroll will vary depending on the average age of the membership and the total payroll. If a change was made to use the Entry Age Normal Cost Method, then the annual normal cost would remain level (in dollars) if all assumptions are met. However, since the total payroll would be increasing over time, the normal cost would decrease as a percent of payroll over time.

In the public fund survey published in 2009 by the National Association of State Retirement Administrators, the Entry Age Normal Cost Method was used by approximately 75% of the large public retirement funds in their 2008 valuations. We do not recommend a change to the current actuarial cost methods at this time.

## N. ACTUARIAL VALUE OF ASSETS

The purpose of an actuarial asset valuation method is to smooth the normal volatility of the economic markets and dampen the effect this volatility has on determining the System's statutory rates. The current asset valuation method used in the actuarial valuations for PERS, HPRS and RHICF is the adjusted market value that immediately recognized interest and dividends. The procedure recognizes 20% of each year's total appreciation (depreciation) beginning with the year of occurrence. After five years, the appreciation (depreciation) is fully recognized. There is no corridor that limits how far the actuarial value of assets can deviate from the market value of assets.

A characteristic of this asset valuation method is that, over time, it is more likely to produce an actuarial value of assets that is less than the market value of assets.

We are not recommending any changes in the asset valuation method at this time. If the Board would like more information on possible alternative asset valuation methods, smoothing periods and corridors then we would be available to prepare and present additional information on this topic.

## O. AMORTIZATION METHOD FOR UNFUNDED ACTUARIAL ACCRUED LIABILITY

One component of the annual cost for each System is the amortization of the unfunded actuarial accrued liability (UAAL). For PERS and HPRS the Board has adopted a schedule of amortizing the UAAL over an open period of 20 years. The annual payments are determined as a level percent of payroll, with payroll expected to increase 4.5% per year (4.0% for Judges).

The Board should be aware that the first amortization payment under this method is less than the interest charged on the UAAL during that year. Therefore, the outstanding balance of the UAAL is expected to increase during that first year even if all assumptions and the actuarial contribution requirement are met. This is sometimes referred to as "negative amortization." Combining this with the open (non-declining) amortization period results in the UAAL never being amortized, let alone ever reduced below its initial balance if all assumptions and actuarial contribution requirements are met. While this is an acceptable method of amortizing the UAAL under applicable accounting standards, the Board should verify that the method fits with its funding policy goals.

The Board could consider using separate 20 year amortization layers for each source of UAAL instead of a single 20 year amortization layer. Each layer would have the advantage of tracking separately each new portion of UAAL and identifying a date certain by which each will be funded.

The schedule adopted by the Board for amortizing the UAAL for the RHICF is a closed (fixed) period that ends on June 30, 2030. This method has the advantage of using a closed period, however, over time this will lead to a very short amortization period and high volatility in the actuarially determined contribution rate. The Board could consider using separate layers for each source of UAAL.

We are available to follow-up with further information on possible alternatives for the UAAL amortization method.

## V. COST IMPACT OF ASSUMPTION CHANGES

The tables below show the changes in the employer actuarial contribution requirements as a percent of payroll due to the recommended assumption changes as if they were applied in the July 1, 2009 actuarial valuation. If all of the proposed assumption changes were implemented, the Main System's employer rate would have increased by 1.68% of payroll. The UAAL for PERS would have increased by $122 million, and the UAAL for HPRS would have increased by $1.7 million.

| | Main | | |
|---|---|---|---|
| | Current Assumptions | Proposed Assumptions | Change |
| Normal Cost | 4.85% | 5.31% | 0.46% |
| UAAL | 2.89% | 4.11% | 1.22% |
| Total | 7.74% | 9.42% | 1.68% |

| | Judges | | |
|---|---|---|---|
| | Current Assumptions | Proposed Assumptions | Change |
| Normal Cost | 14.31% | 14.62% | 0.31% |
| UAAL | (3.83%) | (2.74%) | 1.09% |
| Total | 10.48% | 11.88% | 1.40% |

| | National Guard | | |
|---|---|---|---|
| | Current Assumptions | Proposed Assumptions | Change |
| Normal Cost | 4.89% | 5.70% | 0.81% |
| UAAL | (1.18%) | (0.34%) | 0.84% |
| Total | 3.71% | 5.36% | 1.65% |

| | Law Enforcement w/ Prior Main Service | | |
|---|---|---|---|
| | Current Assumptions | Proposed Assumptions | Change |
| Normal Cost | 4.80% | 5.79% | 0.99% |
| UAAL | 4.31% | 5.27% | 0.96% |
| Total | 9.11% | 11.06% | 1.95% |

| | Law Enforcement w/o Prior Main Service | | |
|---|---|---|---|
| | Current Assumptions | Proposed Assumptions | Change |
| Normal Cost | 5.60% | 7.06% | 1.46% |
| UAAL | 1.23% | 1.50% | 0.27% |
| Total | 6.83% | 8.56% | 1.73% |

| | Highway Patrol | | |
|---|---|---|---|
| | Current Assumptions | Proposed Assumptions | Change |
| Normal Cost | 11.40% | 11.07% | (0.33%) |
| UAAL | 7.33% | 9.05% | 1.72% |
| Total | 18.73% | 20.12% | 1.39% |

| | Retiree Health Insurance Credit Fund | | |
|---|---|---|---|
| | Current Assumptions | Proposed Assumptions | Change |
| Normal Cost | 0.46% | 0.44% | (0.02%) |
| UAAL | 0.54% | 0.50% | (0.04%) |
| Total | 1.00% | 0.94% | (0.06%) |

## APPENDIX A

## CURRENT ACTUARIAL ASSUMPTIONS

**Mortality Rates:**

**Healthy:** 1983 Group Annuity Mortality Table, set back one year for males (not set back for females).

**Disabled:** Pension Benefit Guaranty Corporation Disabled Life Mortality Table for Individuals Receiving Social Security Disability Benefits.

Sample healthy rates are as follows:

| | Rate (%) | |
|---|---|---|
| **Age** | **Male** | **Female** |
| 25 | 0.04 | 0.03 |
| 30 | 0.06 | 0.03 |
| 35 | 0.08 | 0.05 |
| 40 | 0.11 | 0.07 |
| 45 | 0.19 | 0.10 |
| 50 | 0.35 | 0.16 |
| 55 | 0.57 | 0.25 |
| 60 | 0.84 | 0.42 |
| 65 | 1.39 | 0.71 |

**Annual Withdrawal Rates:**

*Main System:*

First five years of service:

| | Years of Service | | | | |
|---|---|---|---|---|---|
| Age | 0 | 1 | 2 | 3 | 4 |
| 29 & Under | 18% | 15% | 12% | 10% | 15% |
| 30 - 39 | 12 | 12 | 11 | 10 | 11 |
| 40 & Over | 10 | 10 | 8 | 7 | 6 |

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Ultimate withdrawal rates after five years service:

| Age | Male | Female |
|---|---|---|
| 20 - 24 | 12.0% | 12.0% |
| 25 - 29 | 8.0 | 10.0 |
| 30 - 34 | 5.0 | 8.0 |
| 35 - 39 | 3.5 | 5.0 |
| 40 - 44 | 3.0 | 4.0 |
| 45 - 49 | 2.5 | 3.5 |
| 50 & Over | 2.0 | 3.0 |

*National Guard and Law Enforcement:*

First five years of service:

| | Years of Service | | | | |
|---|---|---|---|---|---|
| Age | 0 | 1 | 2 | 3 | 4 |
| 29 & Under | 23% | 20% | 17% | 16% | 15% |
| 30 - 39 | 17 | 15 | 13 | 12 | 11 |
| 40 & Over | 15 | 12 | 10 | 8 | 6 |

Ultimate withdrawal rates after five years service:

| Age | Male | Female |
|---|---|---|
| 20 - 24 | 12% | 12% |
| 25 - 29 | 8 | 10 |
| 30 - 34 | 5 | 8 |
| 35 - 39 | 4 | 6 |
| 40 - 44 | 3 | 5 |
| 45 - 49 | 3 | 4 |
| 50 & Over | 2 | 3 |

*Judges:*

| Age | Male | Female |
|---|---|---|
| 20 – 24 | 6.0% | 6.0% |
| 25 – 29 | 4.0 | 5.0 |
| 30 – 34 | 2.5 | 4.0 |
| 35 – 39 | 2.0 | 3.0 |
| 40 – 44 | 1.5 | 2.5 |
| 45 – 49 | 1.5 | 2.0 |
| 50 & Over | 1.0 | 1.5 |

*Highway Patrol:*

First five years of service: 5% per year.

After five years of service:

Under age 35: 2% at each age.

Age 35 and older: 1% at each age.

Withdrawal rates end upon eligibility for early retirement. Early retirement eligibility is as follows:

*Main System:*

Earlier of (i) age 55 and 3 years of service, and (ii) eligibility for Rule of 85.

*Judges:*

Earlier of (i) age 55 and 5 years of service, and (ii) eligibility for Rule of 85.

*National Guard and Law Enforcement:*

Age 50 and 3 years of service.

*Highway Patrol:*

Age 50 and 5 years of service.

**Disability Incidence Rates:**

*Main System, Judges, National Guard and Law Enforcement:*

| | | |
|---|---|---|
| Before age 65: | Males | 42% of OASDI disability incidence rates. |
| | Females | 30% of OASDI disability incidence rates. |
| Age 65 and later: | Males | 0.25% per year. |
| | Females | 0.35% per year. |

Sample rates are as follows:

| Age | Male | Female |
|---|---|---|
| 20 | 0.03% | 0.02% |
| 30 | 0.05 | 0.03 |
| 40 | 0.09 | 0.07 |
| 50 | 0.25 | 0.18 |
| 60 | 0.68 | 0.49 |

*Highway Patrol:*

Age based rates. Sample rates:

| Age | Rate |
|---|---|
| 25 | 0.05% |
| 30 | 0.12 |
| 35 | 0.20 |
| 40 | 0.30 |
| 45 | 0.37 |
| 50 | 0.38 |
| 55 | 0.55 |

**Refund of Employee Contributions:**

*Main System, Judges, National Guard and Law Enforcement:*

Fifty percent of inactive vested Main System and Judges and 100% of inactive vested National Guard and Law Enforcement are assumed to elect a refund of employee contributions in lieu of a pension benefit.

*Highway Patrol:*

The employee is assumed to receive the greater of the employees' contribution balance or a deferred retirement benefit.

**Retirement Rates for Active Members:**

*Main System:*

| Age | Rule of 85 Eligible Rate | All Other Retirements |
|---|---|---|
| 55 | 4% | 4% |
| 56 | 6 | 4 |
| 57 | 6 | 4 |
| 58 | 6 | 4 |
| 59 | 6 | 4 |
| 60 | 8 | 6 |
| 61 | 15 | 12 |
| 62 | 35 | 25 |
| 63 | 25 | 20 |
| 64 | 25 | 20 |
| 65 | 40 | 30 |
| 66 | 20 | 20 |
| 67 | 20 | 20 |
| 68 | 20 | 20 |
| 69 | 20 | 20 |
| 70 | 100 | 100 |

Age 64 or older and 20 years of service: 100% (retiree health only)

*Judges:*

| Age | Rate |
|---|---|
| 62 | 35% |
| 63 | 35 |
| 64 | 35 |
| 65 | 50 |
| 66 | 50 |
| 67 | 50 |
| 68 | 50 |
| 69 | 50 |
| 70 | 100 |

*National Guard and Law Enforcement:*

| Age | Rate |
|---|---|
| 60 | 100% |

*Highway Patrol:*

| Age | Eligible for Rule of 80 | Not Eligible for Rule of 80 |
|---|---|---|
| 50 – 54 | 100% | 50%* |
| 55+ | 100 | 100 |

* Those retiring with a reduced benefit are assumed to delay commencement until they satisfy the Rule of 80 if that is more valuable.

**Retirement Age for Inactive Vested Members:**

*Main System and Judges:*

The earlier of:

- Age 65.
- Unreduced retirement date for each individual.

*National Guard and Highway Patrol:*

Age 55.

*Law Enforcement:*

The earlier of:

- Age 55.
- Unreduced retirement date for each individual.

**Net Investment Return:** 8.00% per annum net of investment expenses.

**Annual Administrative Expenses:**

| | |
|---|---|
| *Main System:* | $ 710,000 |
| *Judges:* | 5,000 |
| *National Guard and Law Enforcement combined:* | 5,000 |
| *Highway Patrol:* | 16,000 |
| *Retiree Health:* | 65,000 |

**Salary Scale:**

*Main System, National Guard, Law Enforcement and Highway Patrol:*

Less than five years of service: 7.00% per annum.

Five or more years of service (sample rates are as follows):

| Age | Percentage Increase | Age | Percentage Increase |
|---|---|---|---|
| 25 | 5.90% | 45 | 4.90% |
| 30 | 5.60 | 50 | 4.80 |
| 35 | 5.30 | 55 | 4.70 |
| 40 | 5.10 | 60 | 4.70 |

*Judges:*

5.50% per annum for all years of service.

**Payroll Growth:**

| | |
|---|---|
| *Main System, National Guard, Law Enforcement and Highway Patrol:* | 4.50% per annum. |
| *Judges:* | 4.00% per annum. |
| *Retiree Health:* | 4.50% per annum |

**Percent Married and Age of Spouse:**

*Main System, Judges, National Guard and Law Enforcement:*

At death, 75% of male members and 60% of female members are assumed to have spouses. The same assumption applies at retirement, except for Judges, for whom 100% are assumed to have spouses. For the Main system, males are assumed to be four years older than their female spouses. For all other systems, males are assumed to be five years older than their female spouses.

*Highway Patrol:*

At retirement or death, 90% of non-retired members are assumed to have spouses. Males are assumed to be three years older than their female spouses.

**Workers' Compensation:**

None assumed for Judges' disability benefit offset.

**Indexing for Benefits of Inactive Vested Members:**

*Highway Patrol:* 5.00% per annum.

**Transfers to Main System:**

*Highway Patrol:*

Annual withdrawal, disability incidence and retirement rate assumptions for members who have transferred to the Main System follow those specified in the Main System, and are applied to the benefits held in the HPRS.

**Part-Time Employees:**

*Main System, National Guard, Judges and Law Enforcement:*

One full year of service is credited for each future year of service.

**Split Service:**

Liabilities are held in both plans based on service in each plan and are based on the actuarial assumptions of the plan in which they are currently active.

**Actuarial Cost Method:**

*PERS and Highway Patrol:*

Entry Age Normal Actuarial Cost Method. The unfunded actuarial accrued liability is amortized in installments increasing by the payroll growth assumption each year over an open 20-year period.

*Retiree Health:*

Projected Unit Credit Actuarial Cost Method. Unfunded actuarial accrued liability amortized in installments increasing by the payroll growth assumption each year over a fixed period that ends on June 30, 2030.

**Actuarial Value of Assets:**

Adjusted market value that immediately recognizes interest and dividends. The procedure recognizes 20% of each year's total appreciation (depreciation) beginning with the year of occurrence. After five years, the appreciation (depreciation) is fully recognized. A characteristic of this asset valuation method is that, over time, it is more likely to produce an actuarial value of assets that is less than the market value of assets.

**Social Security Disability (for Judges' disability benefit offset):**

| | |
|---|---|
| Eligibility: | 50% |
| Consumer Price Index Increases: | 3.5% per annum |
| Wage Base Increases: | 5.0% per annum |

**Account Balance Due to Vested Employer Contribution (PEP):**

*Main System, Judges, National Guard and Law Enforcement:*

Participation

| | | |
|---|---|---|
| Under Chapter 54-52.2: | If not elected: | 50% of active members of the Main System, National Guard and Law Enforcement. |
| | If elected: | 100% of active members of the Main System, National Guard and Law Enforcement. |

Contribution: Maximum allowed based on service at the beginning of the Plan year.

**Retiree Health Participation Rates:**

The percentage of eligible members electing coverage under the health insurance program and receiving the stipend varies with years of service. Rates are as follows:

| Main System, National Guard and Law Enforcement | | Judges and Highway Patrol | |
|---|---|---|---|
| Years of Service | Participation Rate | Years of Service | Participation Rate |
| 3 - 4 | 25% | 5 - 9 | 50% |
| 5 - 9 | 50% | 10 - 14 | 70% |
| 10 - 14 | 70% | 15 - 19 | 80% |
| 15 - 19 | 80% | 20 - 24 | 95% |
| 20 - 24 | 95% | 25 or more | 100% |
| 25 or more | 100% | | |

**Joint and Survivor Option Election Rates (for retiree health):**

Main System, Judges, National Guard and Law Enforcement:

65% of male retirees and 20% of female retirees will elect a joint and survivor form of pension from the retirement system in which they participated.

Highway Patrol:

90% of retirees will elect a joint and survivor form of pension from the retirement system.

## APPENDIX B

## PROPOSED ACTUARIAL ASSUMPTIONS

### Mortality Rates:

**Healthy:** The RP-2000 Combined Healthy Mortality Table set back three years.

**Disabled:** The RP-2000 Disabled Retiree Mortality Table set back one year for males (not set back for females).

Sample healthy rates are as follows:

| | Rate (%) | |
|---|---|---|
| **Age** | **Male** | **Female** |
| 25 | 0.04 | 0.02 |
| 30 | 0.04 | 0.02 |
| 35 | 0.06 | 0.04 |
| 40 | 0.09 | 0.06 |
| 45 | 0.12 | 0.09 |
| 50 | 0.17 | 0.13 |
| 55 | 0.27 | 0.20 |
| 60 | 0.47 | 0.35 |
| 65 | 0.88 | 0.67 |

### Annual Withdrawal Rates:

*Main System:*

First five years of service:

| | Years of Service | | | | |
|---|---|---|---|---|---|
| Age | 0 | 1 | 2 | 3 | 4 |
| 29 & Under | 22% | 18% | 16% | 14% | 14% |
| 30 - 39 | 16 | 14 | 12 | 12 | 11 |
| 40 & Over | 12 | 10 | 10 | 8 | 7 |

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Ultimate withdrawal rates after five years service:

| Age | |
|---|---|
| 20 - 24 | 8.8% |
| 25 - 29 | 8.8 |
| 30 - 34 | 5.5 |
| 35 - 39 | 4.7 |
| 40 - 44 | 3.9 |
| 45 - 49 | 3.7 |
| 50 - 54 | 3.4 |
| 55 - 59 | 0.1 |
| 60 & Over | 0.2 |

*National Guard and Law Enforcement:*

First five years of service:

| | Years of Service | | | | |
|---|---|---|---|---|---|
| Age | 0 | 1 | 2 | 3 | 4 |
| 29 & Under | 25% | 23% | 20% | 17% | 15% |
| 30 - 39 | 20 | 17 | 15 | 13 | 11 |
| 40 & Over | 17 | 15 | 12 | 10 | 7 |

Ultimate withdrawal rates after five years service:

| Age | |
|---|---|
| 20 - 24 | 8.8% |
| 25 - 29 | 8.8 |
| 30 - 34 | 5.5 |
| 35 - 39 | 4.7 |
| 40 - 44 | 3.9 |
| 45 - 49 | 3.7 |
| 50 - 54 | 3.4 |
| 55 - 59 | 0.1 |
| 60 & Over | 0.2 |

*Judges:*

| Age | |
|---|---|
| 20 - 24 | 2.2% |
| 25 - 29 | 2.2 |
| 30 - 34 | 1.4 |
| 35 - 39 | 1.2 |
| 40 - 44 | 1.0 |
| 45 - 49 | 0.9 |
| 50 - 54 | 0.8 |
| 55 - 59 | 0.0 |
| 60 & Over | 0.1 |

*Highway Patrol:*

First year of service: 10% per year.

Second through fifth years of service: 5% per year.

After five years of service:

Under age 35: 2.5% at each age.

Age 35 and older: 1% at each age.

Withdrawal rates end upon eligibility for early retirement. Early retirement eligibility is as follows:

*Main System:*

Earlier of (i) age 55 and 3 years of service, and (ii) eligibility for Rule of 85.

*Judges:*

Earlier of (i) age 55 and 5 years of service, and (ii) eligibility for Rule of 85.

*National Guard and Law Enforcement:*

Age 50 and 3 years of service.

*Highway Patrol:*

Age 50 and 5 years of service.

**Disability Incidence Rates:**

*Main System, Judges, National Guard and Law Enforcement:*

| | | |
|---|---|---|
| Before age 65: | Males | 33% of OASDI disability incidence rates. |
| | Females | 20% of OASDI disability incidence rates. |
| Age 65 and later: | 0.25% per year. | |

Sample rates are as follows:

| Age | Male | Female |
|---|---|---|
| 20 | 0.02% | 0.01% |
| 30 | 0.04 | 0.02 |
| 40 | 0.07 | 0.04 |
| 50 | 0.20 | 0.12 |
| 60 | 0.54 | 0.33 |

*Highway Patrol:*

Age based rates. Sample rates:

| Age | Rate |
|---|---|
| 25 | 0.05% |
| 30 | 0.12 |
| 35 | 0.20 |
| 40 | 0.30 |
| 45 | 0.37 |
| 50 | 0.38 |
| 55 | 0.55 |

**Refund of Employee Contributions:**

Inactive vested members are assumed to elect a refund of employee contributions in lieu of a deferred pension benefit when it is more valuable than the deferred annuity.

**Retirement Rates for Active Members:**

*Main System:*

| Age | Early Retirement | Unreduced Retirements* |
|---|---|---|
| 51 | | 8% |
| 52 | | 8 |
| 53 | | 8 |
| 54 | | 8 |
| 55 | 2% | 8 |
| 56 | 2 | 10 |
| 57 | 2 | 10 |
| 58 | 2 | 10 |
| 59 | 2 | 10 |
| 60 | 4 | 10 |
| 61 | 10 | 20 |
| 62 | 20 | 35 |
| 63 | 15 | 25 |
| 64 | 10 | 30 |
| 65 | | 30 |
| 66 | | 20 |
| 67 | | 20 |
| 68 | | 20 |
| 69 | | 20 |
| 70 | | 20 |
| 71 | | 20 |
| 72 | | 20 |
| 73 | | 20 |
| 74 | | 20 |
| 75 | | 100 |

** Age 65 or Rule of 85*

*Judges:*

| Age | Rate | Age | Rate |
|---|---|---|---|
| 60 | 10% | 65 | 50% |
| 61 | 10 | 66 | 50 |
| 62 | 20 | 67 | 50 |
| 63 | 20 | 68 | 50 |
| 64 | 20 | 69 | 50 |
| | | 70 | 100 |

*National Guard and Law Enforcement:*

| Age | Rate |
|---|---|
| 55 | 20% |
| 56 | 20% |
| 57 | 20% |
| 58 | 20% |
| 59 | 20% |
| 60 | 20% |
| 61 | 20% |
| 62 | 20% |
| 63 | 20% |
| 64 | 50% |
| 65 | 100% |

*Highway Patrol:*

| Age | Early Retirement | Unreduced Retirement* |
|---|---|---|
| 50 – 54 | 0% | 100% |
| 55+ | 0 | 100 |

** Age 55 or Rule of 80*

**Retirement Age for Inactive Vested Members:**

*Main System and Judges:*

The earlier of:

- Age 64.
- Unreduced retirement date for each individual.

*National Guard and Highway Patrol:*

Age 55.

*Law Enforcement:*

The earlier of:

- Age 55.
- Unreduced retirement date for each individual.

**Net Investment Return:** 8.00% per annum net of investment expenses.

**Annual Administrative Expenses:**

| | |
|---|---|
| *Main System:* | $1,300,000 |
| *Judges:* | 11,000 |
| *National Guard:* | 4,000 |
| *Law Enforcement With Prior Main Service:* | 4,000 |
| *Law Enforcement Without Prior Main Service:* | 10,000 |
| *Highway Patrol:* | 20,000 |
| *Retiree Health:* | 110,000 |

**Salary Scale:**

*Main System, National Guard, Law Enforcement and Highway Patrol:*

Less than five years of service:

| Service | Percentage Increase |
|---|---|
| 0 | 8.25% |
| 1 | 7.25 |
| 2 | 6.75 |
| 3 | 6.50 |
| 4 | 6.25 |

Five or more years of service (sample rates are as follows):

| Age | Percentage Increase | Age | Percentage Increase |
|---|---|---|---|
| 25 | 6.25% | 45 | 5.11% |
| 30 | 5.93 | 50 | 5.02 |
| 35 | 5.50 | 55 | 4.93 |
| 40 | 5.23 | 60 | 4.86 |

*Judges:*

5.00% per annum for all years of service.

**Payroll Growth:**

| | |
|---|---|
| *Main System, National Guard, Law Enforcement and Highway Patrol:* | 4.50% per annum. |
| *Judges:* | 4.00% per annum. |
| *Retiree Health:* | 4.50% per annum |

**Percent Married and Age of Spouse:**

*Main System, National Guard and Law Enforcement:*

At retirement or death, 80% of male members and 65% of female members are assumed to have spouses. Males are assumed to be three years older than their female spouses.

*Judges*

At retirement or death, 100% of members are assumed to have spouses. Males are assumed to be three years older than their female spouses.

*Highway Patrol:*

At retirement or death, 90% of members are assumed to have spouses. Males are assumed to be three years older than their female spouses.

**Workers' Compensation:**

None assumed for Judges' disability benefit offset.

**Indexing for Benefits of Inactive Vested Members:**

*Highway Patrol:* 4.50% per annum.

**Transfers to Main System:**

*Highway Patrol:*

Annual withdrawal, disability incidence and retirement rate assumptions for members who have transferred to the Main System follow those specified in the Main System, and are applied to the benefits held in the HPRS.

**Part-Time Employees:**

*Main System, National Guard, Judges and Law Enforcement:*

One full year of service is credited for each future year of service.

**Split Service:**

Liabilities are held in both plans based on service in each plan and are based on the actuarial assumptions of the plan in which they are currently active.

**Actuarial Cost Method:**

*PERS and Highway Patrol:*

Entry Age Normal Actuarial Cost Method. The unfunded actuarial accrued liability is amortized in installments increasing by the payroll growth assumption each year over an open 20-year period.

*Retiree Health:*

Projected Unit Credit Actuarial Cost Method. Unfunded actuarial accrued liability amortized in installments increasing by the payroll growth assumption each year over a fixed period that ends on June 30, 2030.

**Actuarial Value of Assets:**

Adjusted market value that immediately recognizes interest and dividends. The procedure recognizes 20% of each year's total appreciation (depreciation) beginning with the year of occurrence. After five years, the appreciation (depreciation) is fully recognized. A characteristic of this asset valuation method is that, over time, it is more likely to produce an actuarial value of assets that is less than the market value of assets.

**Social Security Disability (for Judges' disability benefit offset):**

| | |
|---|---|
| Eligibility: | 50% |
| Consumer Price Index Increases: | 3.5% per annum |
| Wage Base Increases: | 5.0% per annum |

**Account Balance Additions Due to Vested Employer Contribution (PEP):**

*Main System, Judges, National Guard and Law Enforcement:*

| | | |
|---|---|---|
| Participation Under Chapter 54-52.2: | If not elected: | None |
| | If elected: | 100% of active members of the Main System, National Guard and Law Enforcement. |

Contribution: Maximum allowed based on service at the beginning of the Plan year.

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**Retiree Health Participation Rates:**

The percentage of eligible members electing coverage under the health insurance program and receiving the stipend varies with years of service. Rates are as follows:

| Main System, National Guard and Law Enforcement | | Judges and Highway Patrol | |
|---|---|---|---|
| Years of Service | Participation Rate | Years of Service | Participation Rate |
| 3 - 4 | 30% | 5 - 9 | 50% |
| 5 - 9 | 50% | 10 - 14 | 65% |
| 10 - 14 | 65% | 15 - 19 | 80% |
| 15 - 19 | 80% | 20 - 24 | 85% |
| 20 - 24 | 85% | 25 or more | 90% |
| 25 or more | 95% | | |

**Joint and Survivor Option Election Rates (for retiree health):**

Main System, National Guard and Law Enforcement:

60% of male retirees and 25% of female retirees will elect a joint and survivor form of pension from the retirement system in which they participated.

Judges:

100% of retirees will elect a joint and survivor form of pension from the retirement system.

Highway Patrol:

90% of retirees will elect a joint and survivor form of pension from the retirement system.

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March 17, 2010

Mr. Sparb Collins
Executive Director
North Dakota Public Employees Retirement System
P.O. Box 1657
Bismarck, ND 58502

**Re: North Dakota Public Employees Retirement System**
**Amortization Policy Review**

Dear Sparb:

In this letter, we have summarized the amortization policy of North Dakota PERS. We have also included a discussion of several alternative policies that may be considered by the Board for future actuarial valuations. Numerical examples are provided at the end of the letter and refer to the Main System unless noted.

The amortization policy determines the length of time and the structure of the payments for the contributions required to systemically pay off the Plan's Unfunded Actuarial Accrued Liability (UAAL). For governmental or public defined benefit plans, like NDPERS, there are no specific external funding or funding policy requirements such as those established for single employer (corporate) and multiemployer (Taft-Hartley) defined benefit pension plans under the Employee Retirement Income Security Act (ERISA) and the Internal Revenue Code (IRC). The accounting standards promulgated by the Governmental Accounting Standards Board (GASB) define an Annual Required Contribution (ARC) that, despite its name, is actually the amount of expense that the employer must recognize each year. Also, the GASB accounting standards provide considerable policy latitude when determining the ARC.

Even though this leaves governmental or public plans relatively free to set funding policy, it is worth noting that all long term funding policy structures – corporate, multiemployer and GASB – take the same form, at least for underfunded plans (plans with a UAAL):

1. Contribute the Normal Cost for the year, and

2. Contribute an additional amount that will fully fund ("amortize") any UAAL over a period of years.

Implicit in this form of policy is *a funding target of 100 percent*, since at the end of the amortization period the plan will be fully funded provided contributions are made equal to the actuarially required contribution rate. This is in contrast to "corridor" methods that allow contributions equal to only the Normal Cost as long as the plan is within, for example, 5 percent of being fully funded. The funding policy discussed here is based on the UAAL amortization method because it is well established for all types of pension plans as it targets 100 percent funding of the AAL.

Note that, for the UAAL, longer amortization periods result in lower current contributions and a longer period before the contribution reverts to the Normal Cost. Longer periods also produce lower contribution volatility. Shorter amortization periods get to full funding more rapidly but at the price of higher current contributions and higher contribution volatility.

## AMORTIZATION POLICY

### *Amortization Policy: Selection of Amortization Structure and Methods*

Setting an amortization policy involves a few choices in addition to selecting the amortization periods. Here is a brief description of the alternatives, followed by the current NDPERS policy and some possible modifications that may be considered by the Board.

- Single amortization layer for the entire UAAL or surplus, or separate amortization layers for each source of UAAL or surplus.
- Closed (fixed) period amortization or open (rolling) period amortization.
- Level dollar or level percent of pay amortization payments.

The current NDPERS policy uses a single, 20-year, open amortization period for the total UAAL.

### *Level Dollar vs. Level Percent of Pay Amortization*

The amortization payments may be patterned in one of two ways: as a level dollar amount or as a level percentage of pay. The ERISA/IRC rules for corporate and multiemployer plans require level dollar amortization, similar to a typical home mortgage. However, the overwhelming majority of public plans use level percent of pay amortization where the payments increase each year in proportion to the assumed payroll growth. That means they start lower than the corresponding level dollar payments, but then increase until they are higher.

The level dollar method is more conservative in that it funds the UAAL faster in the early years. For the same reason it also incurs less interest cost over the amortization period.

The current NDPERS policy uses level percentage of pay amortization. Using level percent of pay payments for amortization is consistent with the Normal Cost (which for pay related plans is always determined as a percentage of pay) and provides a total cost that remains level as a percentage of pay. In contrast, level dollar amortization of UAAL will produce a total cost that decreases as a percentage of pay over the amortization period.

***Negative Amortization***

Unlike a level dollar amortization, under level percent of pay amortization the UAAL may increase during the early years of the amortization period even though contributions are being made to amortize the UAAL. This happens because with level percent of pay amortization, the lower early payments can actually be less than the annual interest on the outstanding balance, so that the outstanding balance increases instead of decreases. For typical public plan assumptions (including NDPERS), this happens whenever the amortization period is longer than about 17 years. This means that the outstanding balance of the UAAL does not decrease until there are 17 or fewer years left in the amortization period. It also means that the outstanding balance will not fall below the original amount until some years after that time.

Attachment 2 shows this effect for a sample UAAL layer of $404 million under various level percent of pay amortization periods. While there is nothing inherently wrong with negative amortization, the Board should be aware of its consequences, especially for amortization periods substantially longer than 17 years.

***Selection of Amortization Periods***

The UAAL amortization periods for public plans typically range from 15 to 30 years, with 30 years being the maximum allowable period under the GASB accounting standards. The length of the amortization period should not be set so short that it creates too much volatility in the contributions yet it should not be so long that it contributes a shift of cost to future funding sources.

In the past some plans used an amortization period of 30 years; however, recent actuarial practice has evolved to use a shorter period. Some of the arguments for using a period less than 30 years include:

- Matching the amortization period to the average future working lifetime of the active members
- Matching the amortization period to the average life expectancy of the retired members
- Considering any special circumstances that may apply to a specific benefit improvement

The first two considerations would usually lead to at most a 15- to 20-year amortization period.

Improvements covered by the last consideration would include things like an early retirement window. The cost of the enhanced retirement benefit is offset by savings in salary. The salary savings are realized over a short period of time, that is, the time until the member would have retired without the window, so it stands to reason that the cost should be amortized an equally short period of time. That could be as short as five years.

Plans that amortize the UAAL in layers by source sometimes use different amortization periods for different sources of UAAL. Generally such plans amortize actuarial gains or losses over shorter periods (15 to 20 years or less) and UAAL changes due to assumption or method changes and plan amendments over longer periods (often the 30-year GASB limit).

NDPERS currently uses a 20 year amortization period regardless of the source of the change in UAAL.

***Open Versus Closed Amortization Periods***

Using an open amortization period assists in managing contribution rate volatility by spreading the amortization payment of the UAAL over a non-decreasing amortization period. While GASB permits amortization periods up to 30 years, any open amortization period longer than about 17 years will result in permanent negative amortization. If the contributions were equal to the actuarially determined contribution rate, and if all actuarial assumptions were met, the UAAL would increase each year rather than be amortized. Therefore, it can be concluded that the use of the current 20-year open amortization period does not result in any amortization at all.

Using a closed amortization period usually solves the problem of long-term negative amortization. However, note that under a 30-year amortization period, since the UAAL does not start to decrease until there are 17 years left in the amortization period, the UAAL actually increases for the first 13 years. Even though it starts to decrease after 13 years, it does not decrease below the initial UAAL balance until 23 years have elapsed. The UAAL is then actually amortized in the final 7 years of the 30-year amortization period. Ultimately, the practical problem with using a closed amortization period is that this method produces increasingly more volatile rates as the remaining amortization period becomes very short.

A common alternative to these two methods is to use multiple amortization layers. One can think of multiple amortization layers as a hybrid between open and closed single layers. The method starts with one initial layer amortized over a closed period, but each year actuarial gains/losses, plan changes, or assumption changes create a new layer. Since each layer is closed, negative amortization is only temporary. Since new gains and losses are always amortized over the initial period for each layer, contribution rate volatility is managed. This method has the advantage of tracking separately each new portion of underfunding and identifying a date certain by which each will be funded. This is the structure required by the ERISA/IRC rules for corporate and multiemployer plans, and is increasingly common for public pension plans. No matter what amortization period the Board decides to adopt, we recommend that the layered approach be used.

***Cost Impact***

It is not possible to quantify in advance the full future cost impact associated with adopting an alternative amortization method simply because the System's future changes in UAAL are not yet identified. However, we can measure the effect that a change in the amortization period would have for the $404 million in UAAL that the Main System would have had as of July 1, 2009 after reflecting proposed assumptions.

For example, a change from the 20-year to the 30-year amortization period for the UAAL as of July 1, 2009 using the assumptions proposed by Segal in the experience study presented to the Board in February 2010 would have reduced the 4.11% payroll cost required to amortize the Main System's $404 million UAAL to 3.16% of payroll. However, the 30-year amortization cost would be paid for 10 additional years beyond that of the 20-year amortization. The charts in Attachments #1 and #2 compare the annual UAAL payments and the outstanding balance of the UAAL for a sample UAAL of $404 million under different amortization periods.

Please note that with the above alternatives, we are continuing to recommend that the Board maintain its current level percent of pay amortization.

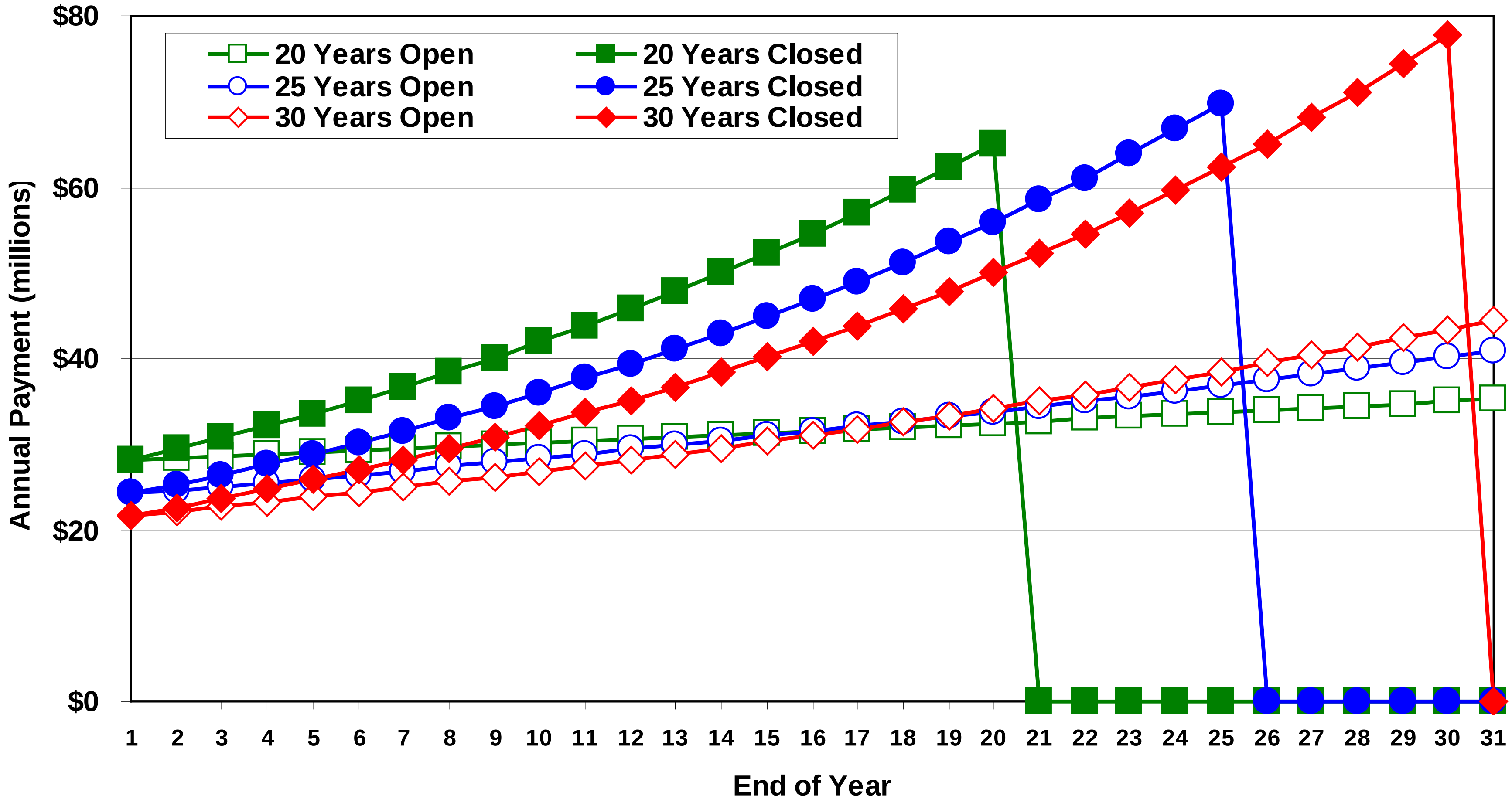
We look forward to discussing this with you and your Board.

Sincerely,

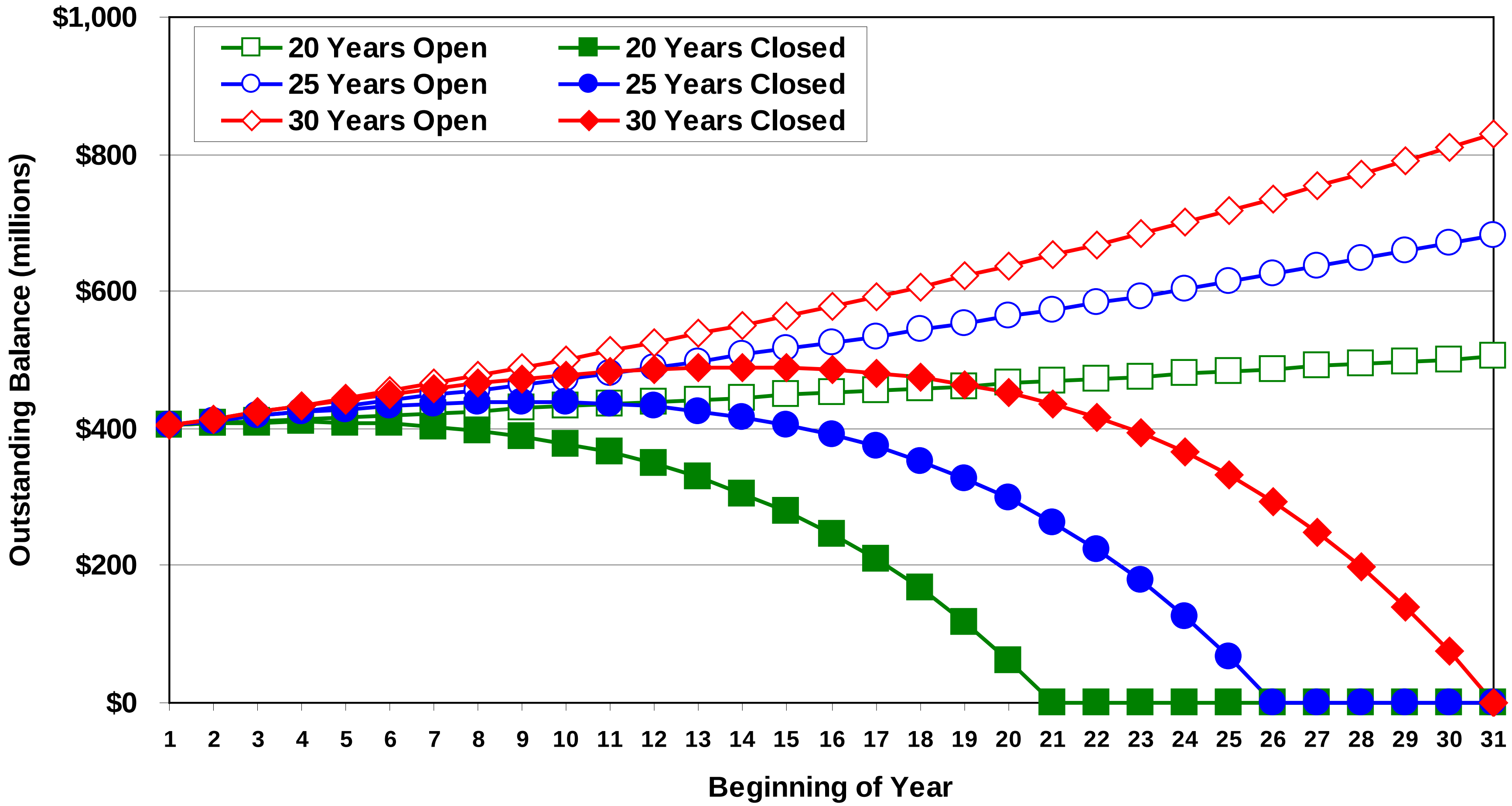
Brad Ramirez, FSA, MAAA, EA
Consulting Actuary

KS/
Enclosures

Attachment #1 - Illustration of Payments Under Different Amortization Periods
(On $404 million UAAL as a Level Percent of Payroll)



**Attachment #2 - Illustration of Outstanding UAAL Balance Under Different Amortization Periods**
**(On $404 million UAAL as a Level Percent of Payroll)**



**North Dakota**
**Public Employees Retirement System**
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Bismarck, North Dakota 58502-1657

**Sparb Collins**
Executive Director
(701) 328-3900
1-800-803-7377

FAX: (701) 328-3920 ● EMAIL: NDPERS-info@nd.gov ● www.nd.gov/ndpers

# Memorandum

**TO:** PERS Board

**FROM:** Sparb and Deb

**DATE:** April 21, 2010

**SUBJECT:** Judges Plan

Attachment #1 is the first draft of the plan documents for implementing the Judges health care savings plan. This last session HB 1173 was passed authorizing PERS to implement this plan if 75% of the judges vote for establishing it. Attachment 2 is a copy of the bill. The judges will be voting on the plan at their meeting in June. If approved, the plan would be effective July 1 for salary paid in August. The savings vehicle initially is going to be set up in accounts at the Bank of North Dakota. At this time we are still working with the bank on the final details of getting this set up.

The plan documents are being presented to you for your review and comment. We are also providing them to the judges and to Aaron for review. In May we plan to bring back to you a final draft of the attached for final approval.

# STATE OF NORTH DAKOTA JUDGES

# HEALTH CARE SAVINGS PLAN

**EFFECTIVE __________**

**North Dakota Public Employees Retirement System**
400 East Broadway, Suite 505
P.O. Box 1657
Bismarck, North Dakota 58502-1657
#_______________
www.nd.gov/ndpers

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**JUDGES HEALTH CARE SAVINGS PLAN - INTRODUCTION**

Effective ______, the State of North Dakota Judges Health Care Savings Plan is hereby established in accordance with North Dakota Century Code §54-52-04. The Plan is intended to be a post-employment medical reimbursement plan under Code sections 105 and 106. The Plan is an employer-sponsored program administered by the Public Employees Retirement System (PERS) Board. Contributions are made by the State of North Dakota to a trust on behalf of supreme court and district court judges. Amounts credited to a judge's individual account can be used to reimburse eligible medical care expenses after termination of employment.

It is intended that assets in the Plan accumulate tax-free, and are paid out to participants on a tax-free basis for reimbursement of eligible medical care expenses in accordance with IRS Publication 502 and Code section 213(d).

| | |
|---|---|
| Plan Administrator: | Public Employees Retirement System Board<br>400 East Broadway, Suite 505<br>P.O. Box 1657<br>Bismarck, North Dakota 58502-1657<br>#________________ |
| Plan Name: | State of North Dakota Judges Health Care Savings Plan |
| Plan Custodian/<br>Recordkeeper: | Bank of ____________ |

## GLOSSARY OF TERMS

**Administrator:** Administrator means the Board or person(s) designated by the Board with the powers and duties described on page 6 to administer the Plan for the benefit of Participants.

**Board:** Board means the Public Employees Retirement System Board.

**Code:** Code means the Internal Revenue Code of 1986, as amended or replaced from time to time.

**Dependent:** Dependent means any person (including a spouse) who can be legally claimed as a dependent by the Participant for federal tax purposes. For such purpose, dependent is defined in Code section 152, determined without regard to subsections (b)(1), (b)(2), and (d)(1)(B).

**Employer:** Employer means the State of North Dakota.

**Participant:** Participant means any current or former supreme court or district court judge for whom an individual account is maintained under the Plan.

**Plan:** Plan means the State of North Dakota Judges Health Care Savings Plan as set forth herein, and any modification, amendment or restatement thereof.

**Plan Year:** Plan Year means a calendar year. The initial Plan Year shall commence July 1, 20__ and end December 31, 20__.

**Trustee:** Trustee means the person(s) designated by the Board to act as trustee of the Trust Fund, or any successor Trustee, in accordance with the Trust Fund document.

**Trust Fund:** The assets of the Plan held in trust under the State of North Dakota Judges Health Care Savings Plan Trust from contributions made by the Employer and from which benefit payments under the Plan are made.

The Trust Fund shall be established under Code section 115 and shall be an irrevocable trust under applicable law of the State of North Dakota. The Trust Fund established under this Plan and the assets held thereunder shall not be used for, or diverted to, purposes other than the exclusive benefit of Participants.

## PARTICIPATION

All supreme court and district court judges employed by the State of North Dakota shall participate in the Plan as of their date of hire, or the effective date of this Plan, if later.

## CONTRIBUTIONS

The Employer shall contribute a specified dollar amount or a percentage of the judges' salary into individual accounts established for each participant in the Trust Fund. The current contribution level is _______, effective ________. No other types or amounts of contributions shall be permitted under the Plan.

The Employer shall remit contributions to the Trust Fund within a period that is not longer than is reasonable for proper administration of the Plan. Contributions made on behalf of a participant shall be separately accounted for within the Trust Fund. A participant's individual account balance will be carried forward each plan year until the account balance is exhausted.

## VESTING

A Participant's individual account shall be immediately 100% vested to the extent of contributions made to the Trust Fund on behalf of such Participant.

## INVESTMENT OF INDIVIDUAL ACCOUNTS

Effective __________, the Board shall direct investment of the Trust Fund. The assets of the Trust Fund are currently invested with the ___________ Money Market Account with the Bank of _____, the Plan's custodian. A money market account is *[Note: description to be completed by custodial bank]*. Interest shall accrue to an individual account.

The Board has the authority to permit participants to direct the investment of their individual accounts from among investment options selected by the Board.

## ELIGIBILITY FOR BENEFITS

Participants are eligible to request payment of benefits from their individual account upon termination of employment from the Employer. Once a Participant terminates employment, he/she may request receipt of benefits at any time thereafter.

## PAYMENT OF BENEFITS

Benefits under the Plan are limited to reimbursement of medical care expenses (as defined in Code section 213(d)) incurred by a Participant or the Participant's spouse or Dependent upon attaining eligibility for benefits up to the amount in the Participant's individual account.

Medical care expenses include health insurance premiums, COBRA premiums, Medigap and Medicare premiums. Medical care expenses also include, but are not limited to diagnosis, cure, mitigation, treatment or prevention of disease, and for treatments affecting any part or function of the body, whether intended to alleviate or prevent a physical or mental defect or illness.

The Plan Administrator shall require evidence that medical care expenses have been incurred by a Participant, spouse or Dependent before a reimbursement is made under the Plan. All claims for reimbursement are verified in accordance with applicable IRS rules, including IRS Publication 502 to ensure compliance with Code section 213(d).

Medical care expenses can only be reimbursed under this Plan to the extent not reimbursed through insurance or any other accident or health plan. If medical care expenses of a Participant are covered by both this Plan and a health care flexible spending account, then this Plan is not available for reimbursement of such medical care expenses until after amounts for reimbursement under the health care flexible spending account have been exhausted.

## DIRECT DEPOSIT

All payments for reimbursement under the Plan will be directly deposited into a personal account designated by the Participant. The Board shall establish procedures necessary to process reimbursements under the Plan.

## DEATH BENEFITS

If a Participant dies with a balance in his/her individual account, the Participant's surviving spouse and any Dependents shall be eligible to request reimbursements for medical care expenses from the Participant's individual account until the account balance is exhausted. At which time there is no surviving spouse or Dependents, then the remaining individual account balance of the Participant is forfeited. Forfeited amounts shall be used to offset administrative expenses under the Plan.

## PLAN ADMINISTRATION

The Board shall be the Plan Administrator. However, the Board shall have the authority to appoint any other person(s) or entity as Administrator for any or all duties of the Administrator. The Board shall have the authority to remove Plan Administrator authority from any person or entity so appointed and name a successor administrator for such duties.

The Administrator's primary duty is to administer the Plan for the exclusive benefit of Participants, in accordance with the terms of the Plan.  The Administrator shall have all discretionary authority to accomplish duties under the Plan, including the authority to determine all questions arising in connection with administration, interpretation and application of the Plan, and full and exclusive discretionary authority to determine eligibility for contributions and/or benefits under the Plan.  The Plan Administrator will review and determine all appeals relating to benefits under the Plan.

The Administrator may appoint counsel, advisors, consultants, a custodian and the Trustee as the Administrator deems necessary or desirable to administer the Plan.  The Administrator may rely on information provided by the Employer and shall have no duty to verify such information.  The Administrator may rely on information provided by Participants and has the right to maintain an action to recover any amounts improperly paid to any person.

**PLAN RECORDKEEPING**

The Plan Administrator shall appoint a recordkeeper to be responsible for the administration of investments held in the Plan.  The Plan's recordkeeping duties include receiving contributions under the terms of the Plan and Trust Fund, paying reimbursements from individual accounts within the Trust Fund as directed by the Plan Administrator, and maintaining accurate records of the Trust Fund assets, which must be made available to the Plan Administrator.  The Plan's recordkeeper shall also provide benefit statements to Participants of their individual accounts on a quarterly basis, which shall include the total balance of the individual account, contributions made to the account, investment income or losses, and reimbursements and expenses paid from the account.

**ADMINISTRATIVE FEES AND EXPENSES**

The Employer shall pay the costs of establishing and setting up the Plan.  All on-going administrative and investment fees or expenses shall be paid from the individual accounts of Participants on a prorated basis.

## OTHER PLAN RULES

**Compliance with Federal Laws.** Benefits under this Plan shall be provided in compliance with the Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA), the Health Insurance Portability and Accountability Act of 1996 (HIPAA), the Family and Medical Leave Act of 1993 (FMLA), the Uniformed Services Employment and Reemployment Rights Act of 1994 (USERRA) and other federal laws applicable to group health plans as such are amended and to the extent required by such laws.

**Protected Health Information.** The Plan will used and disclose "Protected Health Information" (PHI), including electronic PHI, as defined in HIPAA regulations to the extent of and in accordance with the uses and disclosures permitted by the privacy and security regulations under HIPAA. Specifically, the Plan will use and disclose PHI only for purposes related to payment for health care and health care operations as defined in the Plan's HIPAA privacy notice.

For purposes of HIPAA compliance, the Employer is the Plan sponsor. The Plan sponsor shall maintain adequate separation from the Plan's PHI. The Plan Sponsor will not use or disclose PHI other than as permitted or required under HIPAA privacy regulations. The Plan sponsor will appoint a privacy official to carry out duties of such person(s) defined in HIPAA privacy regulations. The Plan sponsor will also implement adminstrative, physical and technical safeguards that reasonably and appropriately protect the confidentiality, integrity and availability of electronic PHI that it creates, receives, maintains or transmits on behalf of the Plan.

In addition to HIPAA privacy and security regulations, the Plan and Plan sponsor shall comply with the laws of the State of North Dakota with respect to the protection, disclosure and accounting of personal data, to the extent applicable.

**Amendment and Termination.** The Employer has the right to discontinue contributions to the Plan and Trust fund at any time. The Board has the authority to amend or terminate the Plan at any time, in whole or in part. Participants shall be notified of any material changes to the Plan. Upon termination of the Plan, the Administrator shall take steps as necessary or desirable to comply with applicable laws. In the event of Plan termination, any assets remaining in the Trust Fund after individual accounts are paid to Participants or not otherwise used to pay reasonable fees or expenses of the Trust Fund may revert to the Employer.

**Nonassignability.** No assets of the Plan or Trust Fund are assignable in law or in equity or subject to estate tax or execution levy, attachment, garnishment or other legal processes, except as required under applicable State and/or federal law.

**No Employment Contract.** This Plan is not in any way deemed to be a contract between the Employer and any Participant, spouse or Dependent, and it in no way affects the employment relationship between the Employer and Participant. Participation in the Plan shall not give Participants the right or claim to any post-retirement health insurance or any other benefits other than as specifically provided for in this Plan.

**Agreement and Declaration of Trust**
**Establishing the**

# STATE OF NORTH DAKOTA JUDGES HEALTH CARE SAVINGS PLAN TRUST FUND

**EFFECTIVE __________**

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## ARTICLE I

## ESTABLISHMENT AND PURPOSE OF TRUST FUND

**1.01** **Establishment of Trust Fund.** Effective **__________**, the State of North Dakota Public Employees Retirement System (PERS) Board hereby establishes this Judges Health Care Savings Plan Trust Fund in accordance with North Dakota Century Code §54-52-04 to accept, invest and dispose of the assets of the North Dakota Judges Health Care Savings Plan (the "Plan"). This Trust Fund is intended to be a tax-exempt governmental trust established under Code section 115 and an irrevocable trust under applicable law of the State of North Dakota.

The Trust Fund shall consist of such sums of money and such other property acceptable to the Trustee as shall from time to time be paid or delivered to the Trustee pursuant to this Plan and the earnings thereon. All such money and property, all investments made therewith and proceeds thereof and all earnings and profits thereon, less any payments made by the Trustee, pursuant to the terms of the Plan, shall constitute the Trust Fund.

The assets of the Trust Fund shall be irrevocable, and shall be preserved, invested and expended solely for the purposes of the Plan, including to make payments for benefits and pay the costs of administering the Plan. All assets of the Trust Fund shall be protected against the claims of creditors of the Employer, Administrator and participants of the Plan.

**1.02** **Purpose.** The assets of the State of North Dakota Judges Health Care Savings Plan shall be held in a trust established under Code section 115 and shall be an irrevocable trust under applicable law of the State of North Dakota.

**1.03** **Eligibility to Participate.** All supreme court and district court judges employed by the State of North Dakota shall participate in the Plan, as determined by the terms of the Plan. This Agreement and Declaration of Trust, does not give any participant of the Plan or any other person any legal or equitable right against the State of North Dakota, the PERS Board, the Trustee or the corpus or income of the Trust Fund unless the right is specifically provided for hereunder or in the Plan, nor does it give any participant in the Plan the right to be retained in service of the Employer.

## ARTICLE II

## DEFINITIONS

The following words and phrases shall, when used herein with initial capitalization, have the following meanings unless the context clearly indicates otherwise. Some of the words and phrases used in this Trust Fund are defined, for convenience, as they are introduced into the text, rather than in this Article II.

**2.01** **Administrator.** The Board or person(s) designated by the Board with the powers and duties described in the Plan to administer the Plan for the benefit of participants.

**2.02** **Board.** The Public Employees Retirement System Board.

**2.03** **Code.** The Internal Revenue Code of 1986, as amended or replaced from time to time.

**2.04** **Employer.** The State of North Dakota.

**2.05** **Plan.** The State of North Dakota Judges Health Care Savings Plan, and any modification, amendment or restatement thereof.

**2.06** **Plan Year.** The calendar year. The initial Plan Year shall commence July 1, 20__ and end December 31, 20__.

**2.07** **Trustee.** The person(s) designated by the Board to act as trustee of the Trust Fund, or any successor Trustee, in accordance with Article IV.

**2.08** **Trust Fund.** The assets of the Plan held in trust, established hereunder from contributions made by the Employer and from which any benefit payments under the Plan are made.

## ARTICLE III

## FUNDING AND INVESTMENT OF TRUST FUND

**3.01** **Contributions.** The Trust Fund shall be funded from contributions of the Employer, made in accordance with the terms of the Plan. All contributions of the Employer shall be paid to the Trustee for deposit into the Trust Fund. Such contributions shall be invested in accordance with Section 3.03 so as to produce the best returns possible consistent with prudent investment policies and legal requirements. The Trustee is under no duty to inquire into the correctness of contributed amounts paid to the Trustee or to enforce payment of contributions by the Employer.

**3.02** **Refund of Contributions.** No contribution made to the Trust Fund may be refunded to the Employer unless a contribution was made because of a mistake of fact, and any such refund must be made within one year from the date the contribution was made, subject to the provisions of Section 6.04.

**3.03** **Investment of the Trust Fund.**

a. The Administrator shall direct the Trustee to invest and reinvest the Trust Fund without distinction between principal and income and in such securities or property, real or personal, as the Administrator shall deem advisable.

b. The Administrator may from time to time, direct the Trustee to transfer all or such part of the Trust Fund as the Administrator may deem advisable to, and engage in any transaction with a common or collective trust fund or pooled investment fund which is authorized and permitted to receive investments from the Trust Fund. The Administrator may, from time to time, direct the Trustee to withdraw from such common or collective trust fund or pooled investment fund all or such part of the Trust Fund as the Administrator may deem advisable.

c. The Administrator shall have additional powers to direct the Trustee with respect to investment of the Trust Fund, including, but not limited, to the following:

   1. To purchase, or subscribe for, any securities or other property and to retain the same.

   2. To sell, exchange, convey, transfer, grant options to purchase, or otherwise dispose of any securities or other property held by the Trust Fund.

3. To vote upon any stocks, bonds, or other securities and generally to exercise any of the powers of an owner with respect to stocks, bonds, securities, or other property.

4. To cause any securities or other property to be registered in the Trustee's own name or the name of its designee, and to hold any investments in bearer form, but the books and records of the Trustee shall at all times show that all such investments are part of the Trust Fund.

d. The Administrator may appoint one or more Investment Managers to manage all or any of the assets of the Trust Fund. For this purpose, "Investment Manager" is defined as an entity that has the power to manage, acquire, or dispose of Trust Fund assets and acknowledges fiduciary responsibility to the Plan and Trust Fund in writing. Such entity must be a person, firm, or corporation registered as an investment adviser under the Investment Advisers Act of 1940; a bank; or an insurance company, which is qualified to manage, acquire or dispose of Trust Fund assets. Any Investment Manager appointed hereunder may be removed by the Administrator at any time.

**3.04** **<u>Forfeitures</u>.** Amounts forfeited in accordance with the terms of the Plan shall be used to offset administrative expenses of the Plan and Trust Fund.

## ARTICLE IV

## TRUSTEE

**4.01** **Appointment and Removal of Trustee.** The Board shall appoint a Trustee and may remove the Trustee and appoint a successor from time to time as it deems necessary for proper administration of the Trust Fund.

**4.02** **Powers and Duties of the Trustee.** The Trustee is authorized to exercise all powers conferred upon trustees by law which it may deem necessary or proper for management and protection of the Trust Fund. To the extent that the Trustee exercises authority over the management and investment of Trust Fund assets, it shall have all powers and duties now or hereafter conferred or permitted by law, including, but not limited, to the following:

a. To hold, invest and reinvest Trust Fund assets, together with the income, in accordance with directions of the Administrator and guidelines established under the Plan, including any written investment policy, subject to the provisions of Section 3.03 d.

b. To retain in cash or other property unproductive of income, without liability for interest, so much of the Trust Fund assets as may be determined; to deposit cash in any bank and select any bank as custodian; and cause securities or other property to be registered and/or held in its individual name, or in the name of its designee.

c. To establish an individual account for each participant unless an individual account has already been so established. The Trustee shall allocate to each individual account contributions, net income or losses, expenses and payments or distributions, as directed by the Administrator.

d. To pay benefits to participants of the Plan, as directed by the Administrator.

e. To pay expenses of administration of the Trust Fund or expenses of administration of the Plan, as directed by the Administrator.

f. To select and appoint a designee to carry out specified duties of the Trustee as the Trustee may deem appropriate, including contracting with such designee to perform such services.

g. To maintain records of receipts and disbursements and furnish to the Administrator periodic reports, as directed by the Administrator.

h. To make, execute, acknowledge and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers and duties granted herein.

i. To do all such acts and exercise all such powers, although not mentioned specifically herein, as the Trustee may deem necessary to carry out the purpose of the Trust Fund.

**4.03** **Records of Trustee.** The records of the Trustee pertaining to the Plan and Trust Fund must be open to inspection of the Plan Administrator and the Employer at all reasonable times and may be audited from time to time by any persons as the Employer or Plan Administrator may specify in writing. The Trustee must furnish the Plan Administrator any information relating to the Trust Fund as the Plan Administrator deems necessary.

**4.04** **Payment of Expenses.** All expenses of administration of the Plan and Trust Fund shall be paid out of the Trust Fund. Such expenses shall include, but shall not be limited to, fees of the Trustee, accountants, counsel and other specialists and their agents. The expenses shall constitute a liability of the Trust Fund until paid.

## ARTICLE V

## GENERAL PROVISIONS

**5.01** **Nonassignability.** No assets of the Trust Fund are assignable in law or in equity or subject to estate tax or execution levy, attachment, garnishment or other legal processes, except as required under applicable state and/or federal law.

**5.02** **Exclusive Benefit.** Except as provided herein and otherwise specifically permitted by law, it shall be impossible by operation of the Trust Fund, by termination, amendment, or by the happening of any contingency for any part of the corpus or income of the Trust Fund or any funds contributed thereto to be used for, or diverted to, purposes other than the payment of benefits to or on behalf of participants and defraying reasonable expenses of administering the Plan for the exclusive benefit of participants of the Plan.

**5.03** **Severability.** If any provision or provisions of the Trust Fund shall be for any reason invalid or unenforceable, this will not affect any other provision of the Trust Fund. In the event of any such holding, the Board will immediately amend the provisions to remedy the defect to the extent possible.

**5.04** **Applicable Laws.** This Trust Fund shall be governed in all respects by applicable laws of the State of North Dakota, unless superseded by federal law. This Trust Fund is intended to comply with the requirements of Code section 115 and all regulations thereunder, and is to be interpreted and applied consistent with that intent.

## ARTICLE VI

## AMENDMENT AND TERMINATION

**6.01** **Discontinuance of Contributions.** It is the intention of the Employer that this Trust Fund shall be maintained indefinitely. However, the Employer reserves the right at any time or times to discontinue contributions to the Trust Fund to any extent in their sole judgment. The Employer's failure to contribute to the Trust Fund in any Plan Year will not discontinue the Trust Fund.

**6.02** **Amendment.** It is the intention of the Board that this Trust Fund shall be maintained indefinitely. However, the Board reserves the right at any time or times to amend the Trust Fund, in accordance with the provisions of this Article VI. Any such amendment shall be by written instrument delivered to the Administrator and the Trustee.

All Plan participants and any persons claiming any interest in the Trust Fund will be bound by such amendment, provided that no amendment causes any of the Trust Fund assets to be diverted to purposes other than the exclusive benefit of participants of the Plan.

**6.03** **Termination.** The Board specifically reserves the right to terminate this Trust Fund in whole or in part. Upon a termination of the Trust Fund, the Trustee shall take such steps as determined to be necessary or desirable to comply with applicable laws.

**6.04** **Assets in Excess of Liabilities.** If after satisfaction of all liabilities under the Plan, including payment of individual account balances to participants and payment of reasonable fees or expenses of the Trust Fund, there is any remaining assets in the Trust Fund, such assets shall revert to the Employer if not otherwise prohibited by law.

Sixty-first
Legislative Assembly
of North Dakota

# HOUSE BILL NO. 1173

Introduced by

Representatives Klemin, Kretschmar, Griffin

Senators Triplett, Hogue, Fiebiger

A BILL for an Act to create and enact a new subsection to section 54-52-04 of the North Dakota Century Code, relating to the authority of the public employees retirement system board to create a trust health care savings plan for all supreme and district court judges participating in the public employees retirement system.

**BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:**

**SECTION 1.** A new subsection to section 54-52-04 of the North Dakota Century Code is created and enacted as follows:

The board may create and implement an Internal Revenue Code section 115 trust health care savings plan for all supreme and district court judges participating in the public employees retirement system if seventy-five percent of the total active participating supreme and district court judges vote to approve the program. If approved, the contribution level specified in the vote applies to all current and future participating supreme and district court judges and must be paid pursuant to the plan document developed by the board. The contribution level may only be changed by a vote of seventy-five percent of the total active participating supreme and district court judges at that time.

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Executive Director
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# Memorandum

**TO:** **NDPERS Board**

**FROM:** **Kathy**

**DATE:** **April 21, 2010**

**SUBJECT:** **Provider Training Compliance Update**

At its March meeting, the Board was informed that Chase and Symetra were out of compliance with our training requirements and had not responded to our initial request to remedy this situation. As directed by the Board, both companies were sent another letter on March 8, 2010 notifying them that the Board has reviewed the issue. They were further informed that since they were already on a "loss of active provider status" the other option available to the Board was to impose a "loss of provider status". We requested they respond as to what specific implications this action would have on their existing participants and provide any other information they felt the Board should consider in making its determination. The deadline for response was March 31, 2010.

Chase did respond to our request and has taken the appropriate action to bring them into compliance with the contract provisions regarding agent training. To date we have had no response from Symetra.

As previously stated, because Symetra is already on a "loss of active provider status" the other suspension option available pursuant to NDAC 71-04-04-09 is a "loss of provider status which would prohibit them from enrolling any new participants and from accepting any further contributions from existing members. As of March 31, 2010, Symetra had 31 participants with assets totaling $659,693.88. Of the participants, 11 are currently contributing a total $2,035 per month. Based on this information, staff recommends the Board approve a "loss of provider status" as provided in the above referenced section of the administrative code and authorize staff to notify the 11 active participants that they must make arrangements to suspend their contributions effective with the July payroll paid August 1, 2010.

**Board Action Required**

# MEMORANDUM

**TO:** NDPERS Board

**FROM:** Jim Smrcka

**DATE:** April 19, 2010

**SUBJECT:** **Consultant Fees**

Attached is a report showing the consulting, investment and administrative fees paid during the quarter ended March 31, 2010 Please let me know if you have any questions on the report.

Attachment

# North Dakota Public Employees Retirement System
## Consulting/Investment/Administrative Fees
## For the Quarter ended March 31, 2010

| | Program/Project | Fee Type | Jan-10 | Feb-10 | Mar-10 | Fees Paid During The Quarter | Fees Paid Year-To-Date |
|---|---|---|---|---|---|---|---|
| **Actuary/Consulting Fees:** | | | | | | | |
| Gallagher Benefit Services, Inc | Insurance | Fixed Fee | | | | - | 0 |
| Gallagher Benefit Services, Inc | Ongoing consulting | Time charges | | | 1,774 | 1,774 | 1,774 |
| Gallagher Benefit Services, Inc | Travel Expenses | Actual | | | | - | 0 |
| Gabriel Roeder Smith & Company | Vision RFP | | | | 2,660 | 2,660 | |
| Cem Benchmarking Inc | Cost effectiveness ranking charts | | | | | - | 0 |
| LR Wechsler, LTD | IT Project | Fixed Fee | 40,777 | 12,361 | 11,102 | 64,240 | 64,240 |
| LR Wechsler, LTD | Travel Expenses | Actual | 4,744 | 3,185 | 2,819 | 10,749 | 10,749 |
| Sagitec Solutions LLC | PERSLINK Project | | 249,704 | | | 249,704 | 249,704 |
| Sagitec Solutions LLC | Back file conversion | Actual | | | | - | 0 |
| Sagitec Solutions LLC | Enhancements | Actual | | | | - | 0 |
| ICON INTEGRATION & DESIGN | PERSLINK Project | | | | | - | 0 |
| UND | Diabetes management | consulting | | 1,846 | | 1,846 | 1,846 |
| Vanlwaarden | | | | | | | |
| Vanlwaarden | Travel Expenses | Actual | | | | | |
| Mid Dakota Clinic | Retirement Disability | Time charges | 100 | 300 | 1,200 | 1,600 | 1,600 |
| The Segal Company | Retirement (DB) | Fixed Fee | 13,388 | | | 13,388 | 13,388 |
| The Segal Company | Ret Health Credit | Fixed Fee | 2,475 | | | 2,475 | 2,475 |
| The Segal Company | FlexComp | Fixed Fee | 2,700 | | | 2,700 | 2,700 |
| The Segal Company | Job Service | Fixed Fee | 3,600 | | | 3,600 | 3,600 |
| The Segal Company | QDRO/Compliance | Time charges | | | | - | 0 |
| The Segal Company | Legislation | Time charges | | | | - | 0 |
| The Segal Company | Retirement (DC) | Time charges | 12,500 | | | 12,500 | 12,500 |
| The Segal Company | Deferred Comp | Time charges | | | | - | 0 |
| The Segal Company | RFP preparation investment consultin | Time charges | | | 15,000 | 15,000 | |
| The Segal Company | Travel Expenses | Actual | - | - | - | - | 0 |
| | | | $ 329,987 | $ 17,693 | $ 34,555 | $ 382,235 | $364,575 |
| **Audit Fees:** | | | | | | | |
| Brady Martz | Annual audit & CAFR | Fixed Fee | 4,350 | - | - | $ 4,350 | $4,350 |
| Brady Martz | Other items | | $ 925 | | | $ 925 | $925 |
| **Legal Fees:** | | | | | | | |
| ICEMILLER LLP | IT Project | Time charges | - | - | - | $ - | $0 |
| ND Attorney General | Administrative | Time charges | | | | $ - | $0 |
| Calhoun Law Group | Administrative | Time charges | - | - | - | $ - | $0 |
| **Investment Fees:** | | | | | | | |
| SIB - Investment Fees | Retirement (DB) | % Allocation | 5,579 | 389,040 | 871,228 | 1,265,847 | 1,265,847 |
| SIB - Investment Fees | Ret Health Credit | % Allocation | 494 | 428 | 370 | 1,292 | 1,292 |
| SIB - Investment Fees | Insurance | % Allocation | 147 | 40 | 43 | 230 | 230 |
| SIB - Administrative Fees | Retirement (DB) | % Allocation | 18,843 | 16,498 | 18,097 | 53,438 | 53,438 |
| | | | | | | $ 1,320,807 | $1,320,807 |
| **Administrative Fee:** | | | | | | | |
| Blue Cross Blue Shield | Health Plan | Fixed fee | 925,886 | 927,791 | * | $ 1,853,677 | $1,853,677 |

*** fees not yet available**

**North Dakota**
**Public Employees Retirement System**
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# Memorandum

**TO:** PERS Board

**FROM:** Jon Strinden

**DATE:** April 21, 2010

**SUBJECT:** Executive Director Review

It is time for us to do our annual review of the Executive Director. I am asking for several Board members (2 to 3) to coordinate the review and prepare a recommendation for the Board's consideration on salary by the June meeting. This will mean that all of us will need to complete our review and have them back to the committee by June 1.

**Board Action Requested**

To appoint a committee of 2 to 3 Board members to coordinate the annual review of the Executive Director and to prepare a salary adjustment recommendation.