NDPERS BOARD MEETING

Agenda

Bismarck Location:
ND Association of Counties
1661 Capitol Way
Fargo Location:
Sanford Health Plan
1749 38th Street South

April 27, 2017 **Time: 8:30 AM**

I. **MINUTES**
   A. March 16, 2017
   B. March 30, 2017

II. **PRESENTATIONS**
   A. ADP – Kathy (Information)
   B. Sanford: Quarterly Report

III. **GROUP INSURANCE**
   A. Health Plan:
      1. Rx
      2. Rare and Complex Disease Management
      3. DAW
      4. Glucometer
   B. Vision RFP – Bryan (Information)
   C. Heart of America Renewal – Kathy (Board Action)
   D. EAP Update – Bryan (Information)
   E. Plan Design & Rates 2017-2019 – Sparb & Bryan (Board Action)

IV. **RETIREMENT**
   A. Economic Assumptions – Sparb (Board Action)
   B. Retirement Contribution Policy – Sharon (Board Action)
   C. GASB 68 Audit Report – Derrick (Information)

V. **FLEX COMP**
   A. Plan Document – Kathy (Information)
      1. Medical Spending Limits Policy
      2. Pre-taxing HSA contributions
      3. Enrollment Period

VI. **DEFERED COMPENSATION**
   A. Hardship Withdrawal Application Form – Kathy (Information)

VII. **MISCELLANEOUS**
   A. Legislative update – Sparb (Information)
   B. Quarterly Consultant Fee – Derrick (Information)
   C. Board Election update – Kathy (Information)
   D. Executive Director Annual Review – Sparb (Board Action)

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.

North Dakota
Public Employees Retirement System
400 East Broadway, Suite 505 ● Box 1657
Bismarck, North Dakota 58502-1657

Sparb Collins
Executive Director
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Memorandum

TO: **NDPERS Board**

FROM: **Kathy**

DATE: **April 18, 2017**

SUBJECT: **ADP Executive Summary**

Representatives of ADP will be at the meeting to present its Executive summary. They will be discussing the communication and education campaign and timeline as well as various enrollment and performance metrics as they apply to our plan.

ADP Executive Summary Attachment

ADP Executive Summary- Consumer Health and Spending Accounts

Client Name:
State of North Dakota

Date:
April 27, 2017

Summary

NDPERS became a valued client with ADP effective 2013. Over the course of the past few years, ADP and NDPERS continued to see a decline in Participation. NDPERS participants expressed concerns about theFlexComp Plan so over the past several months we have been working closely with the NDPERS Team to put together an Education Campaign spread out over the next year. The Education Campaign will provide detailed information to the participants in regards to the FlexComp Plan. This will include debit card substantiation, claims filing options, grace period, benefits of participation and many others.

NDPERS provided a Survey to ADP team back in October which we have reviewed and are providing our research results throughout this document. These results are instrumental in defining the approach we at ADP need to take to support the NDPERS participants through increasing enrollment into the FlexComp plan.

ADP Service team will continue to work closely with the PERS team to ensure the email communications are approved by NDPERS and sent out in a timely fashion. To date, we have sent out 3 email communications. On page 5, you will see the dates the communications were sent along with the dates the additional communications will be sent out. If NDPERS feels that additional emails are warranted throughout the year, we will be happy to assist with the communications. Kim has started a participant log to track trends of participant issues. The log will be reviewed on the biweekly ADP/NDPERS status call. Issues will not be closed until the NDPERS agrees they are resolved.

NDPERS has seen a decrease in the FlexComp Program. Participants will enroll in a Health Care Account for a year knowing they are going to have a medical expense that will cost them a large dollar amount. For example for Health Care, a participant could elect a Health Care Account with a $2500.00 election to pay for orthodontic treatment or lasik eye surgery, then decide not to reenroll for the following plan year. For Dependent Care, the participant's dependents may reach the age of 13 and are no longer eligible for the expenses. From 2016 to 2017, 191 new participants enrolled in the Health and/or Dependent Care Accounts. During the 2016 Plan Year, there were 119 participants who terminated prior to the end of the Plan Year (12/31). There were 21 new participants who enrolled in the Health Care Account and 170 for the Dependent Care Account.

ADP technical teams were asked to review the top 10 Merchant Partner denials and it was determined that 4 out of the 10 Merchant Partners would be added to our list which will assist with card substantiation. ADP has made Sanford a Merchant Partner so now the card transactions will automatically be validated and substantiation documentation will not be requested from the participant. The IRS requires all non-healthcare businesses (including retail, discount, groceries, and online stores) have an Inventory Information Approval System (IIAS) to accept spending account cards. This system allows the store to identify each item in your overall purchase and note which items are "eligible" for payment from your spending account and which items are not eligible. Any eligible healthcare item purchased at a merchant with an IIAS will automatically be validated. We are seeing an increase of participants using the debit card as a source of payment. There has been an increase of 2,164 card swipes from 2014 to 2016 Plan Year. The top 10 card transaction and merchant denials are located on page 8 for your review.

ADP knows that you are dedicated to satisfying your customer's desires and needs. We are dedicated to satisfying yours. ADP wants to build and continue our relationship, assist with increasing the FlexComp Plan participation and provide excellent Customer Service. We are focused on providing excellent customer service and enhancing your programs to the benefit of your employees and NDPERS.

In November 2016, ADP transitioned services to WageWorks. Their commitment to provide Stellar service is evidenced by adding an additional 40 Customer Service Representatives with an additional 25 in training in February. We have seen a substantial improvement and are on track to meet all of our standards by Q2.

NPDERS Top 5 Survey Results

Survey Responses	# of Responses
Substantiation- Help participants understand what ADP does to assist in substantiating claims and why additional information may be needed	**43**
Online Claim Submission/Mobile App- Increase awareness of availability of the online claim submission/mobile app	**12**
Website/System- New website was launched in September 2016	**12**
Customer Service- Additional Training of the Customer Service Representative. Since November 28, 2016, additional 45 Customer Service Representatives have been hired	**11**
Auto Reimbursement- Help the participants understand the process of auto reimbursement	**4**

Action Items/Next Steps

Communication and Education Campaign

- ADP will assisting in sending out email notification to particpants on a quarterly basis.
- All communications will be provided to NDPERS for review/changes
- Will provide quarterly email communicaitons/articles to NDPERS to include in member newsletter

Spending Account Overview

- Enrollment Trends
- Spending Account Elections
- Processing Audit
- Participant Contact Center

Decision Support Tool

- Explains how FSAs work
- How employees save money
- Features an interactive modeling tool that shows employees how much they will save according to their profile
- Includes profiles of typical FSA participants and shows how they use FSAs to save money
- Lets employees quickly search for FSA eligible expense

Communication and Education Campaign

1st Quarter- Standard /Customized Communications

- Annual Grace Period Reminder
- Balance/Deadline Reminders - Mid February. This is standard communication that is sent out to participants with a remaining balance.
- NDPERS Newsletter- Balance Deadline Reminder

2nd Quarter- Customized Communications

- Debit Card/Substantiation (May/June). *Helpful Hints For Validating your FlexComp Card Purchases*
- Online Claim Submission/Mobile App
- Auto Reimbursement
- NDPERS Newsletter- Debit Card Substantiation

3rd Quarter - Customized Communications

- Open Enrollment- 2 separate audiences:
  - Existing participant population – ADP will send out the customized communication
  - Benefit Eligible- participants who are not currently enrolled in the FlexComp Plan
  - NDPERS Newsletter- Open Enrollment

4th Quarter- Customized Communications

- Claims Filing Option:
  - Auto Reimbursement
  - Debit Card
  - Manual Claims
  - Online Claim Submission

Communication Matrix/Timeline

Type of Communication	Date	Date sent
Annual Grace Period	2/22/2017	**2/21/2017**
Balance/ Deadline Email Reminder	3/13/2017	**3/13/2017**
NDPERS March Newsletter Balance Reminder	Due to NDPERS 3/1/2017	
Balance Email Reminder ONLY	First of April, 2017	**4/3/2017**
Debit Card/Substantiation Email	May, 2017	
Online Claim Submission/Mobile App	June, 2017	
NDPERS June Newsletter Important Information About Your Spending Account Card	June, 2017	
Open Enrollment Email Communication to benefit eligible population	July, 2017	
Open Enrollment Email Communication to existing Population	July, 2017	
NDPERS August Newsletter	August, 2017	
Claims Filing Option Email Reminder- Auto Reimbursement, online claim submission, manual claims, etc.	Q4, 2017	

Spending Account Plan Review

Enrollment Trends – Total Account Enrollment by Plan Type

Plan Type	2014	2015	2016	2017
HCFSA	2,763	2,650	2,588	2,475
DCFSA	451	438	451	428

2016/2017 Comparisons

- 191 New Enrollees for the 2017 Plan Year compared to 2016
- Health Care- 103 participants termed the plan prior to the end of the Plan Year. For 2017, there were 21 new participants.
- Dependent Care- 16 Participants termed the plan prior to the end of the Plan Year. For 2017, there were 170 new participants.

2015/2016 Comparisons

- 81 New Enrollees for the 2016 Plan Year compared to 2015
- Health Care- 145 participants termed the plan prior to the end of the Plan Year. For 2016, there were 71 new participants.
- Dependent Care- 15 Participants termed the plan prior to the end of the Plan Year. For 2016, there were 10 new participants.

Annual Election Amounts

Plan Type	2014	2015	2016	2017
HCFSA	$4,048,211.62	$3,967,279.18	$3,947,114.04	$3,799,910.58
DCFSA	$1,690,213.62	$1,739,737,.57	$1,814,525.20	$1,795,439.67
Total	$5,738,425.24	$5,707,016.75	$5,761,639.24	$5,595,350.25

Claims Processing Quality

Plan Year	Claims Received	Percentage of Claims Processed Correctly
2016	43,688	99%
2015	42,636	99%
2014	43,435	99%

Top Ten Claim Denials

1. Account Exhausted
2. Duplicate Claims
3. Itemized bill or receipt
4. No documentation submitted
5. Funds applied to overpayment
6. Receipt not legible
7. Need signed claim form
8. Need dates of service
9. Submitted past closeout date
10. Balance due bills not eligible

Claim Source

Plan Year	Card Transaction	Manual Claims	Online Claims	Auto Reimbursement
2016	22,996	6,714	13,355	623
2015	21,477	8,464	12,015	680
2014	20,822	10,406	11,170	1,037

Claims denied for lack of substantiation

Health Care	Total Swipes	Ineligible Substantiation submitted by Participants	Total Swipes Substantiated	% of claims denied for lack of substantiation	% of claims processed correctly
2016	22,996	259	17,692	23%	77%
2015	21,477	71	17,785	17%	83%
2014	20,822	53	18,883	9%	91%

- More participants are using the debit card as referenced above. Card swipes have increased by 2,174 swipes from 2014 to 2016. Currently 60.35% of NDPERS debit cards are activated. There are currently 1,644 activated cards and 1080 cards that have not been activated by participants.
- NOTE: ADP has now made Sanford a Merchant Partner so the card swipes will automatically be validated.

Top Ten Card Denials (at the point of sale)

1. Authorization Response
2. Over the Limit
3. Account Closed
4. NON-IIAS Transaction
5. Card Not Activated
6. Expired Card
7. Card Reported Lost
8. Invalid PIN
9. COV-MCC/CTY/ZIP – incorrect MCC being past from Merchant
10. Invalid CVV/CVC- Incorrect 3 digit code on back of card

Top Ten Merchant Denials

1. Prairie Rose Family Dentist
2. Sanford Billing/Sioux Falls, SD
3. Mid Dakota Clinic Main
4. St. Alexius Health
5. Sanford Billing/Fargo, ND
6. Sanford Online Bill Pay
7. Sanford My Chart
8. Heritage Pharmacy
9. Altru Health System
10. Dakota Eye Institute

2016 Participant Contact Center Call Data

Metric Category	2015	Q1 2016	Q2 2016	Q3 2016	Q4 2016
Call Received	3,102	819	447	738	709
Calls Answered	2,173	844	437	527	584
ASA (seconds)	439	100	32	503	290
Abandon Rate	29.90%	5.3%	2.2%	29%	17%
Avg. Handle Time (seconds)	606	570	508	613	674

- In November 2016, ADP transitioned services to WageWorks, since then we have added 60 Customer Service Representatives. We have seen a substantial improvement and are on track to meet all of our standards by Q2.

2017 Participant Contact Center Call Data

Metric Category	Jan 2017	Feb 2017	March 2017
Call Received	300	211	226
Calls Answered	233	211	224
ASA(seconds)	386	9	12
Abandon Rate	22.3%	0%	0.9%
Avg. Handle Time (seconds)	769	672	718

Top Ten Call Reasons-

1. Validation/How to validate
2. Validation/Status-Need More Information
3. Account Overview
4. Debit Card Overview
5. Claim-Online/How to file
6. Balance
7. Web Assistance/user password
8. Card Swipe Notifications
9. Denied Claims/need additional information
10. Web Assistance/Navigation Assistance

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Memorandum

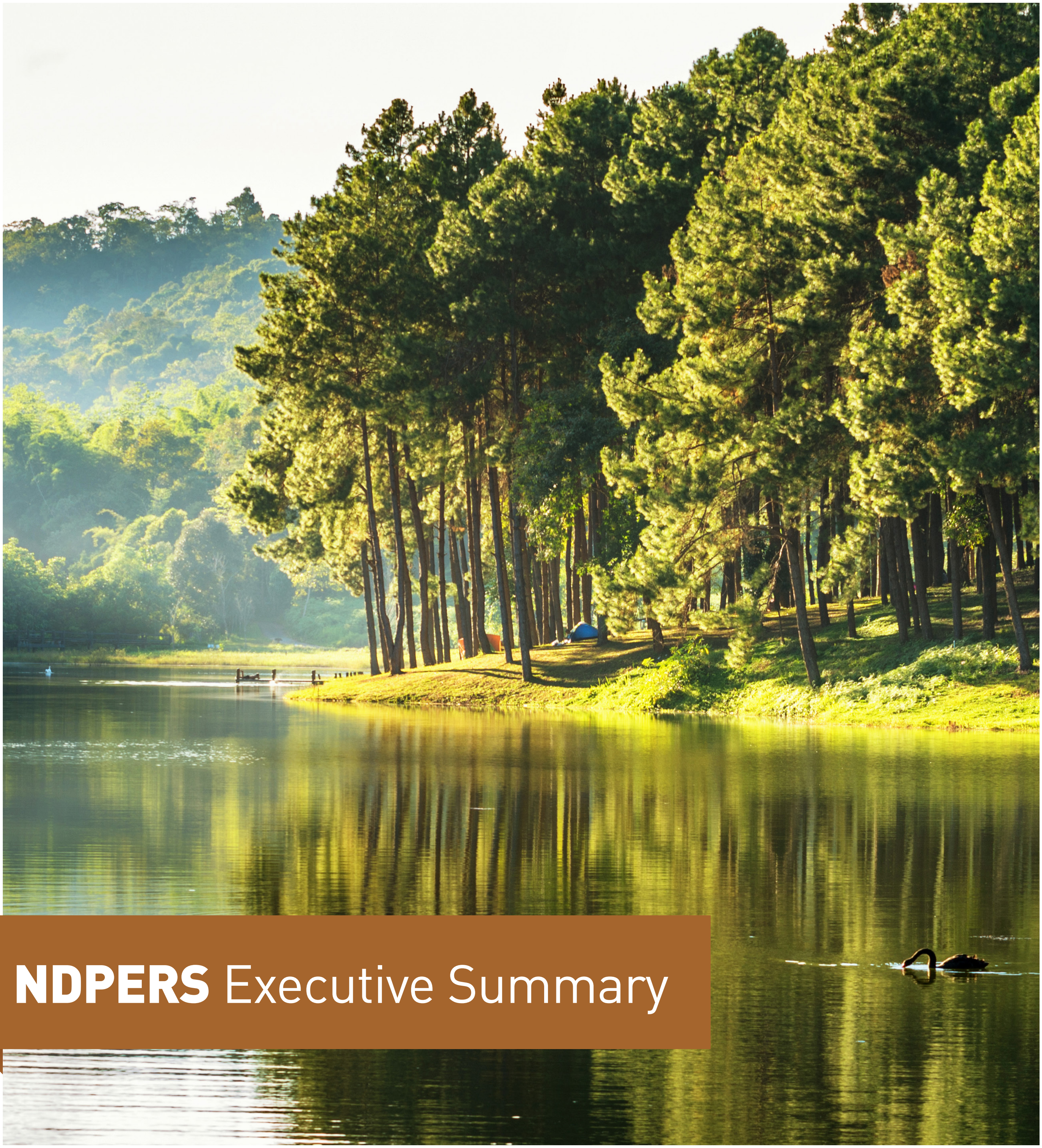
TO: PERS Board

FROM: Sparb

DATE: April 27, 2017

SUBJECT: Quarterly Report

Attached is the Sanford Quarterly Report. They will be at the meeting to present this to the board and answer any questions you may have.



NDPERS Executive Summary

Quarter 4 | 2016

Presented April 2017

NORTH DAKOTA
PUBLIC EMPLOYEES
RETIREMENT SYSTEM

SANFORD
HEALTH PLAN

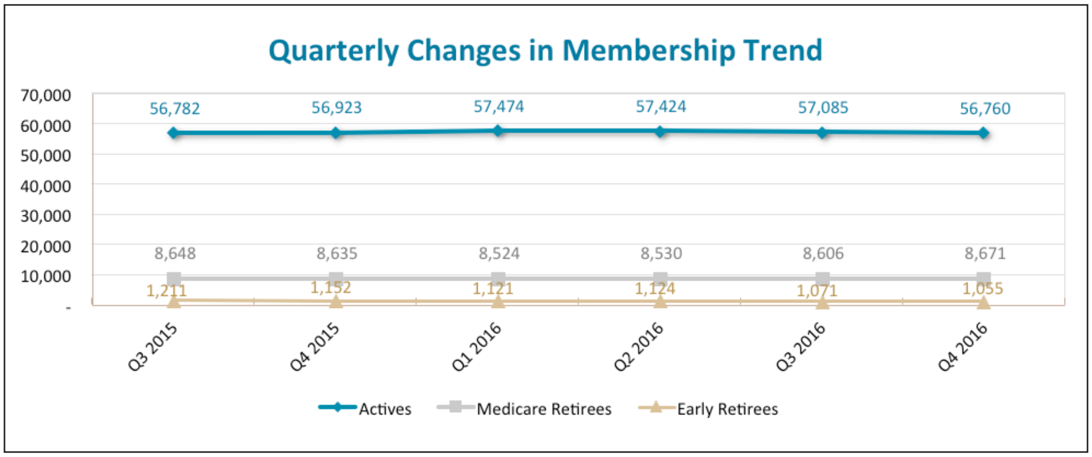
CONTENTS

Summary

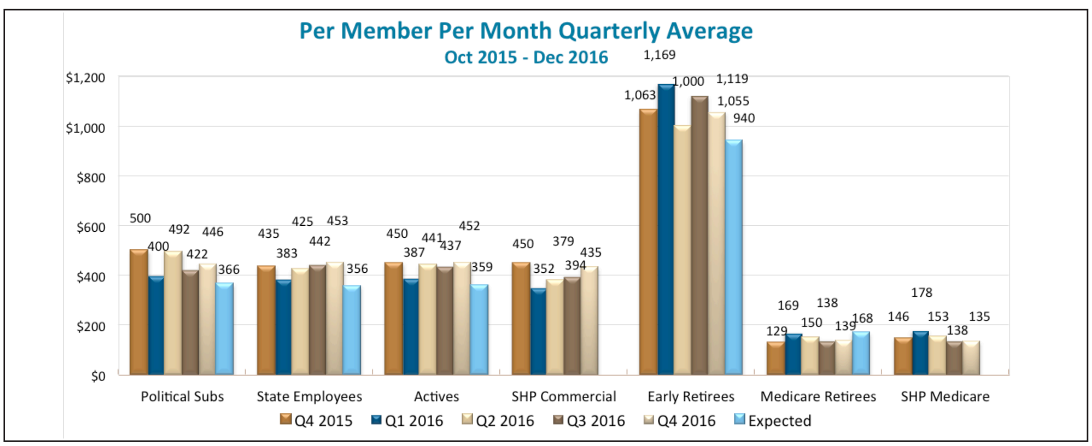
ANNUAL MEMBERSHIP SUMMARY

MEMBERSHIP COMPARISON							CHANGE	
	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q4 16/ Q4 15	Q4 16/ Q3 16
Actives	56,782	56,923	57,474	57,424	57,085	56,760	-0.3%	-0.6%
Early Retirees	1,211	1,152	1,121	1,124	1,071	1,055	-8.4%	-1.5%
Medicare Retirees	8,648	8,635	8,524	8,530	8,606	8,671	0.4%	0.8%

MEMBERSHIP TREND



MEDICAL PMPM SUMMARY



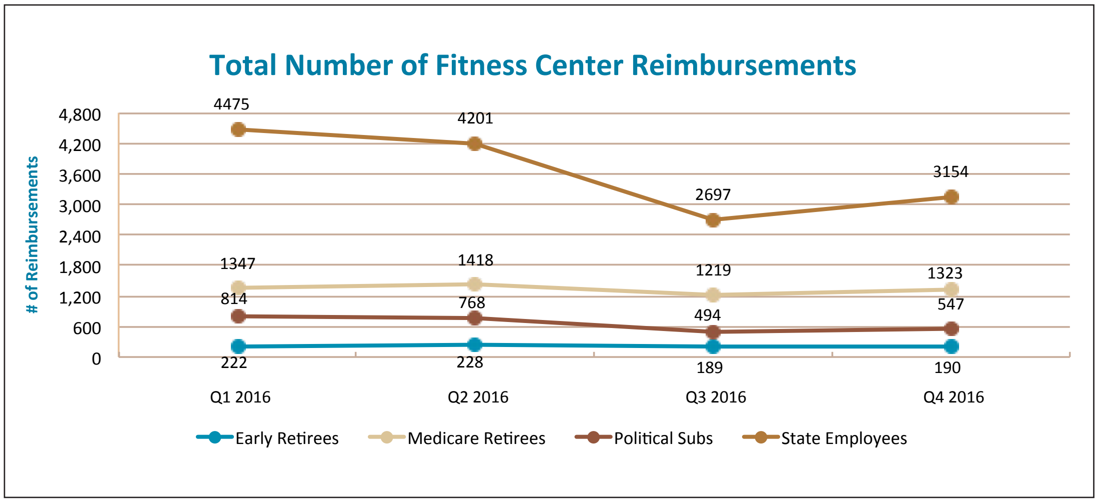
*Incurred between October 1, 2015 and December 31, 2016 and paid through February 28, 2017. Includes IBNR for October 2015 through December 2016, as of February 28, 2017.

*Historically, 98% of claims will be accounted for within 90 days of the effective date.

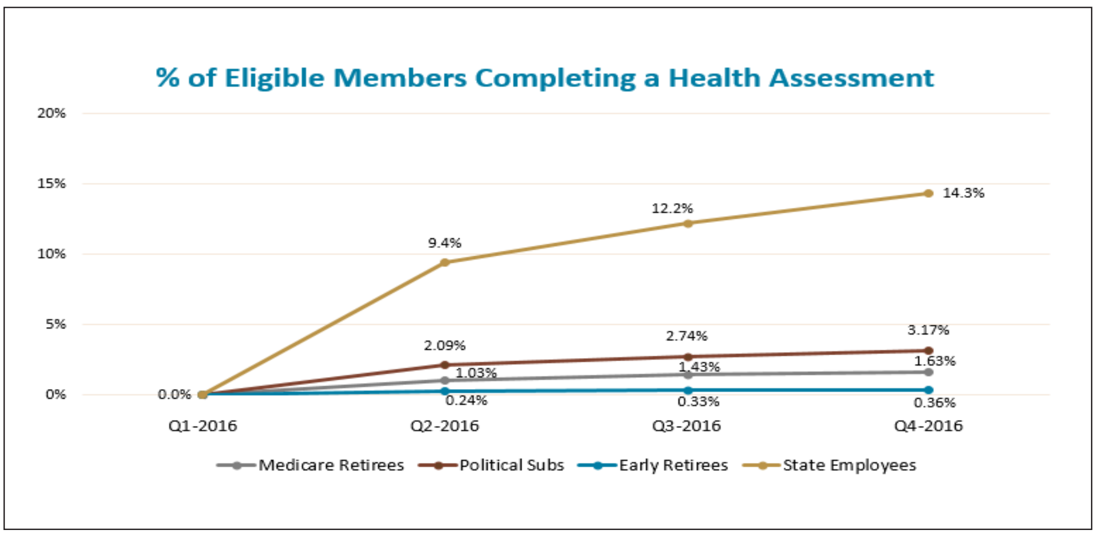
*Medicare Retirees PMPM excludes prescription drug coverage (Medicare Part D).

Summary

FITNESS CENTER REIMBURSEMENT



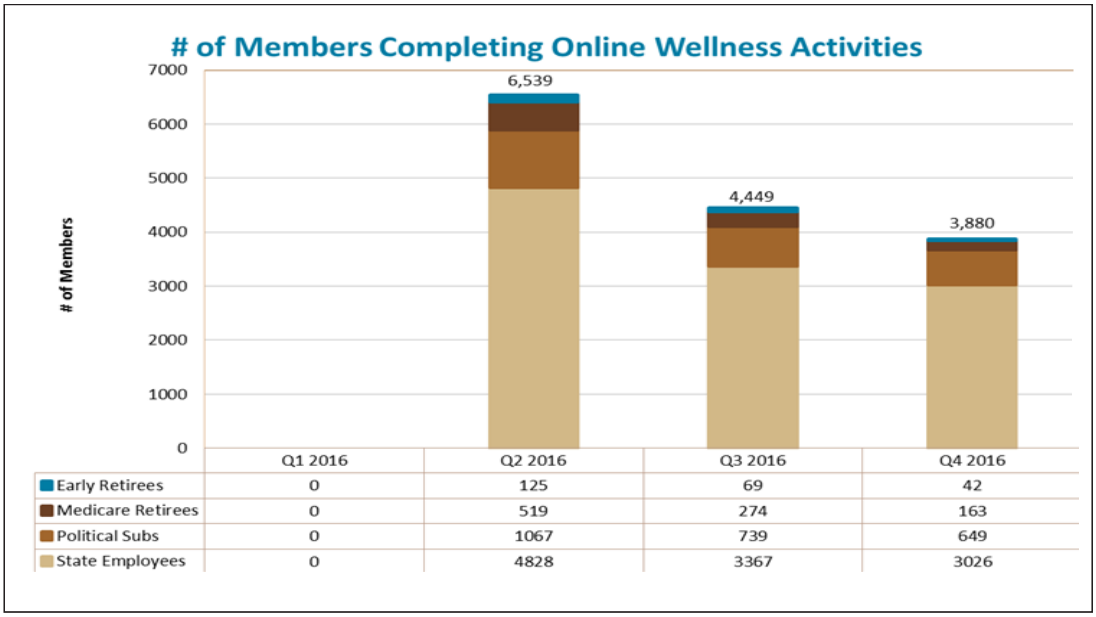
HEALTH ASSESSMENT



*Note: No health assessments or online activities were completed in Q1 2016 due to the new wellness portal being under development.

ONLINE WELLNESS ACTIVITIES

Summary



*Note: No health assessments or online activities were completed in Q1 2016 due to the new wellness portal being under development.

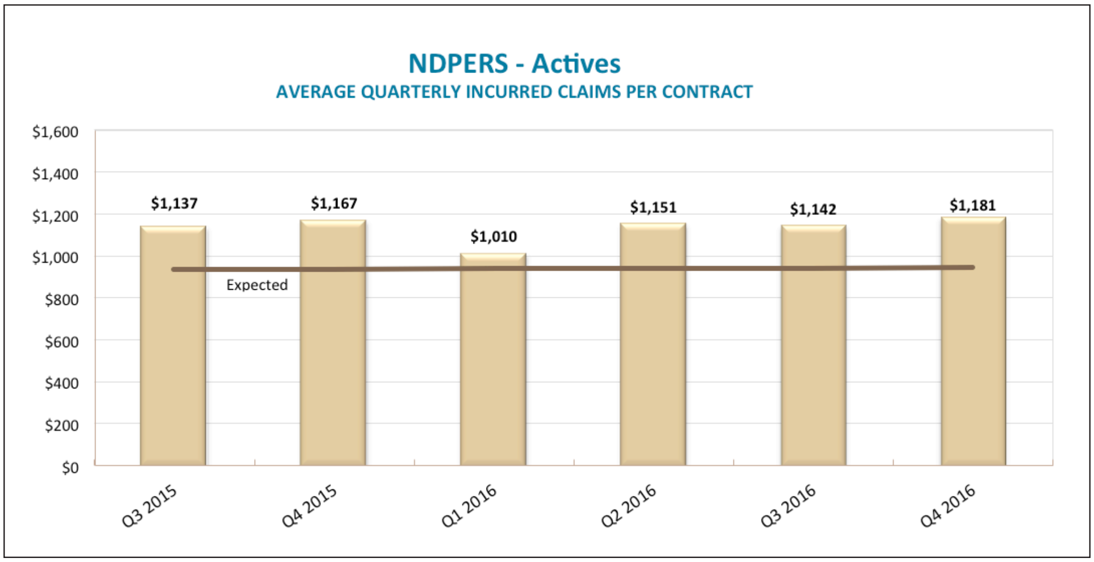
EGWP TOP LINE PERFORMANCE METRICS

	NDPERS EGWP
Description	**2016**
Avg Members per Month	8,582
Number of Unique Patients	8,518
Pct Members Utilizing Benefit	99.3%
Total Days	12,529,744
Total Rxs	275,559
Average Member Age	74.9
Nbr Rxs PMPM	2.68
Generic Fill Rate	88.0%
Home Delivery Utilization	1.1%
Member Cost %	20.8%
Specialty Percent of Plan Cost	29.0%
Formulary Compliance Rate	98.7%

*This data was prepared by Express Scripts Inc. (ESI)

Claims Analysis

PAID CLAIMS PER CONTRACT PER MONTH



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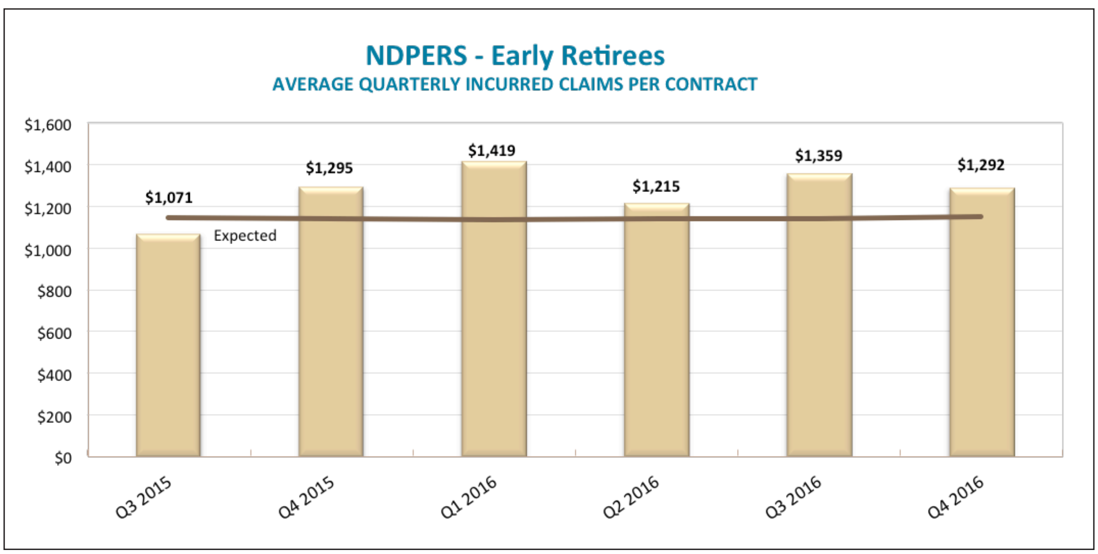
*Historically, 98% of claims will be accounted for within 90 days of the effective date.
*NDPERS Active contracts have approximately 2.60 members per contract.



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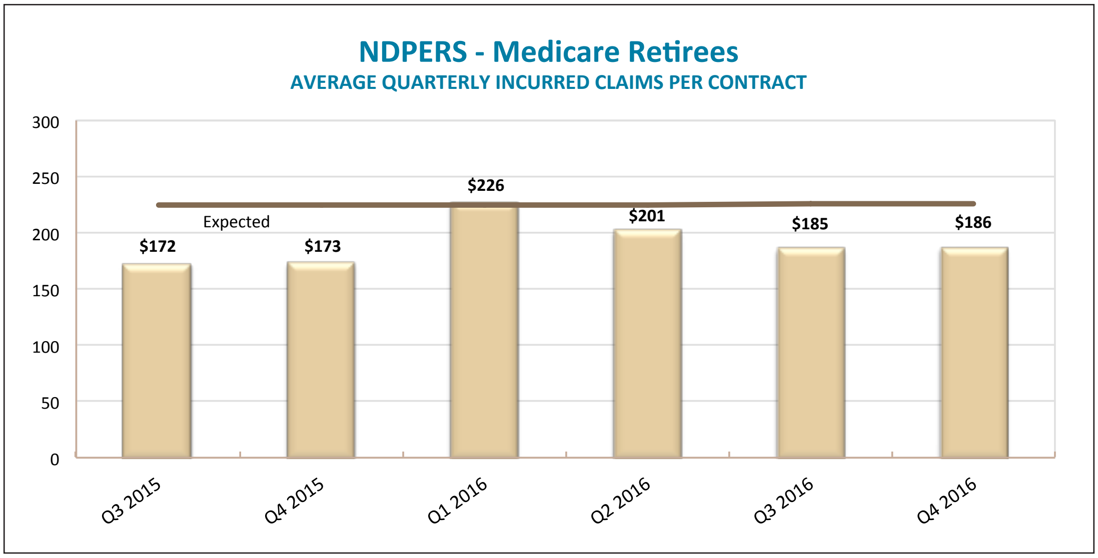
*NDPERS Early Retirees contracts have approximately 1.22 members per contract.

PAID CLAIMS PER CONTRACT PER MONTH

Claims Analysis



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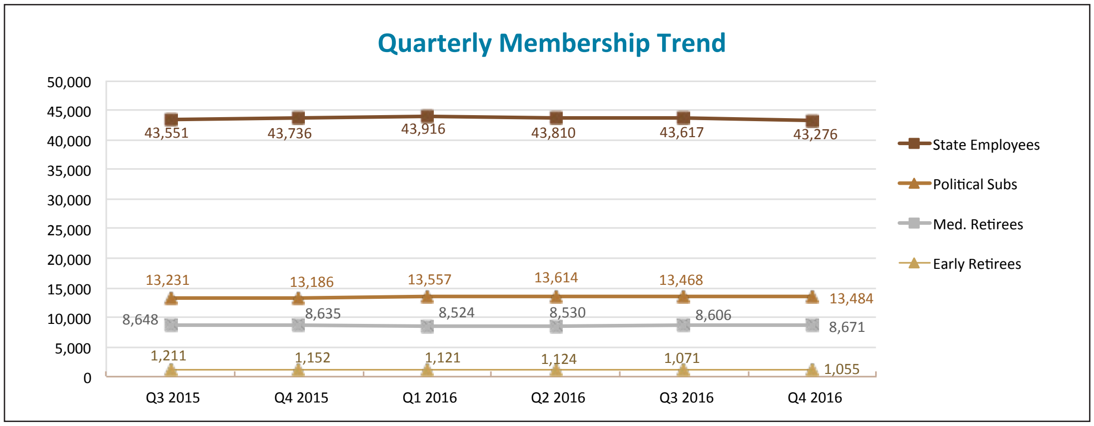
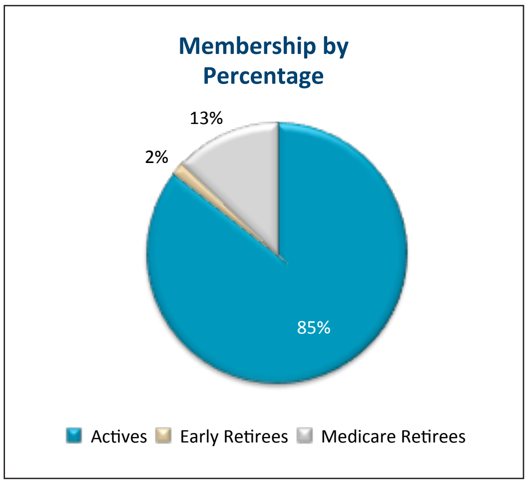
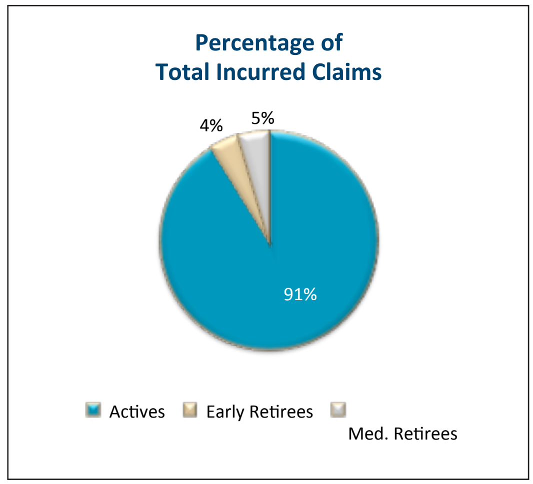
*NDPERS Medicare Retirees contracts have approximately 1.34 members per contract.

Membership & Utilization

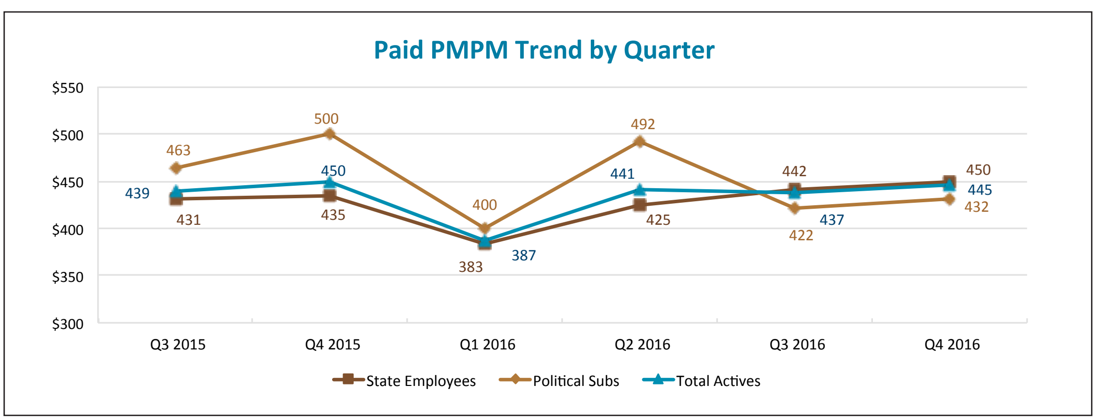
MEMBERSHIP PERCENTAGE







PAID PMPM TREND BY QUARTER



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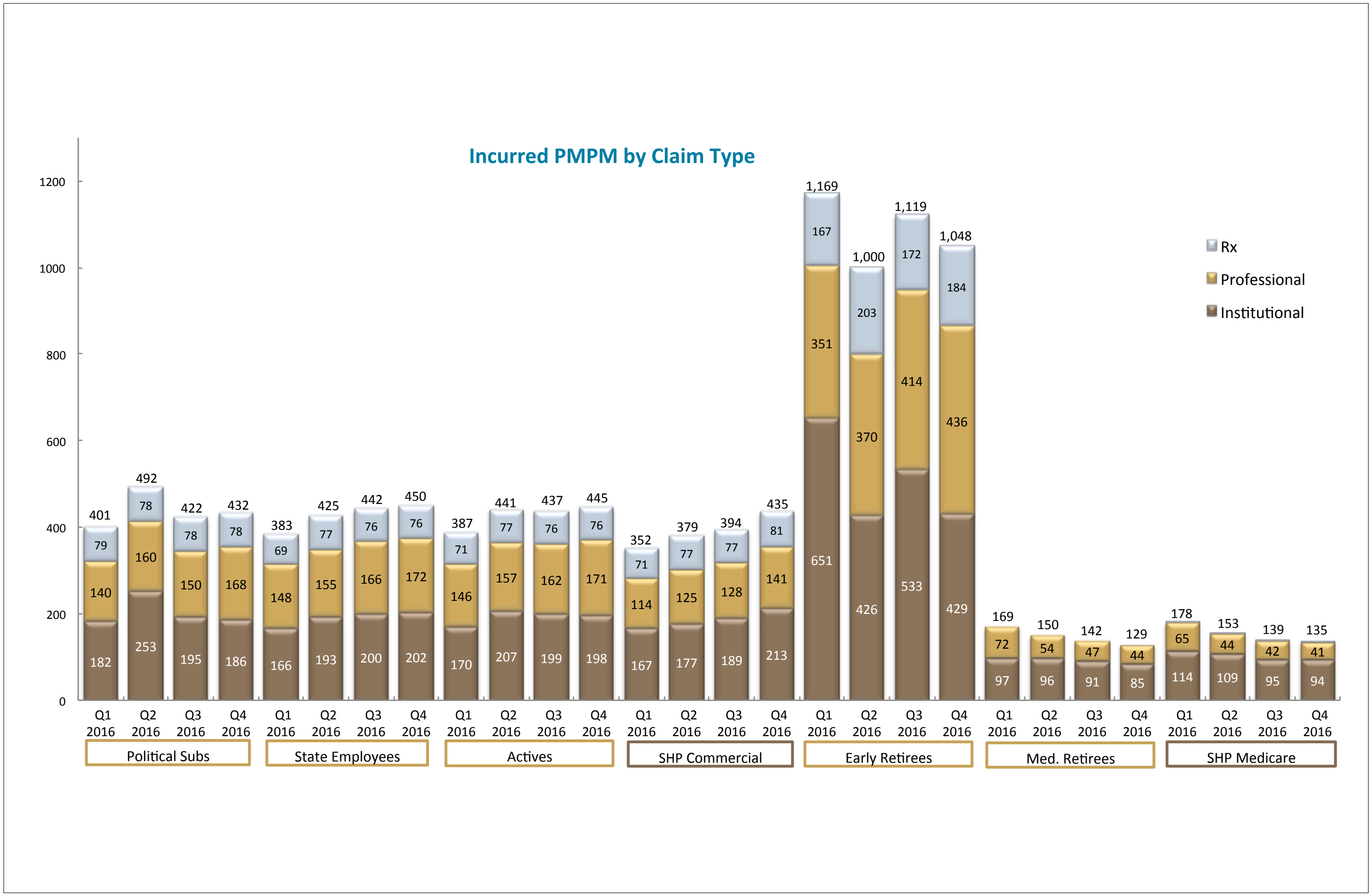
PMPM BY CLAIM TYPE



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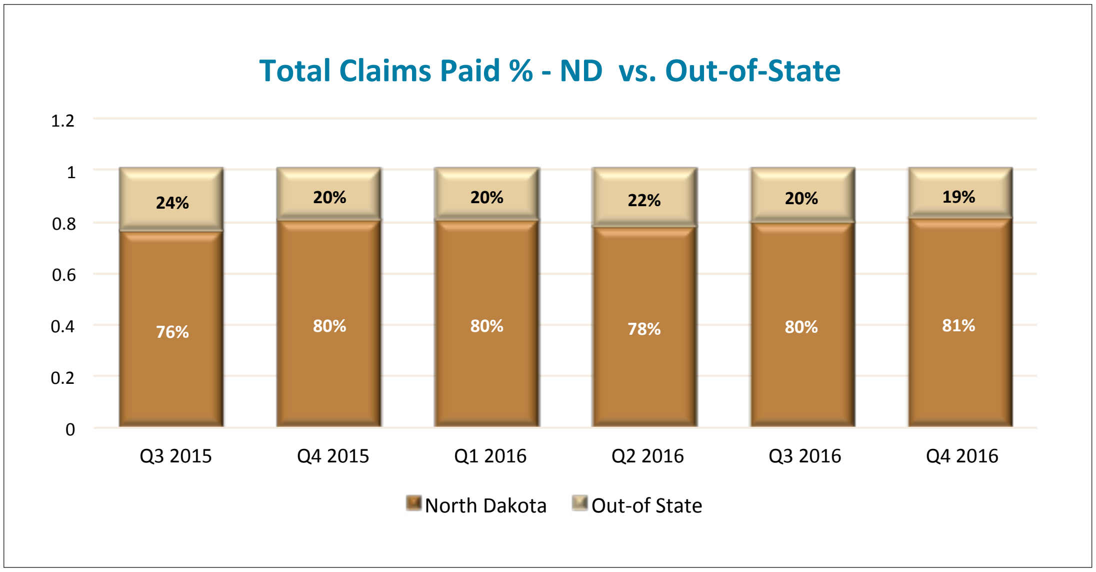
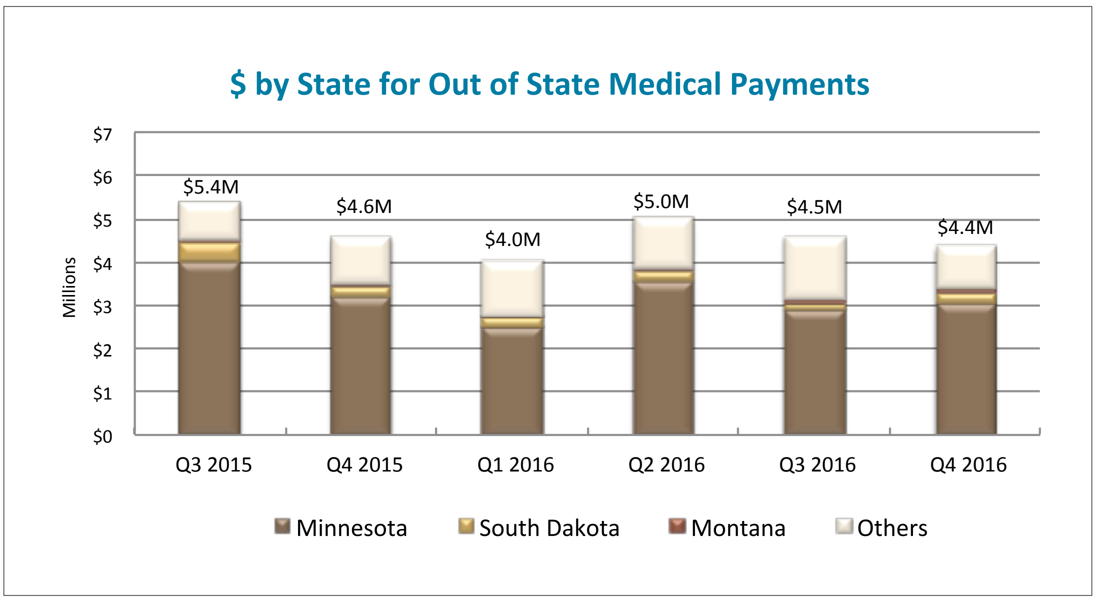
Membership & Utilization

PAID CLAIMS BY STATE





*Paid Claims by State charts include both active and retiree membership.

MEMBER RISK PROFILE & UTILIZATION

	NDPERS	SHP BoB
Average Age	35.13	33.77
% Male (Current)	49.17	44.92
Average Risk Score	1.24	1.13
Average Care Gap Index	0.80	1.09
Inpatient Days Per 1000	279	270
Total Admissions Per 1000	65	71
ER Visits Per 1000	217	165
Total Office Visits Per 1000	4,266	4,023
Pharmacy Scripts Per 1000	9,115	9,929

*Incurred between January 1, 2016 and December 31, 2016 and paid through February 28, 2017.

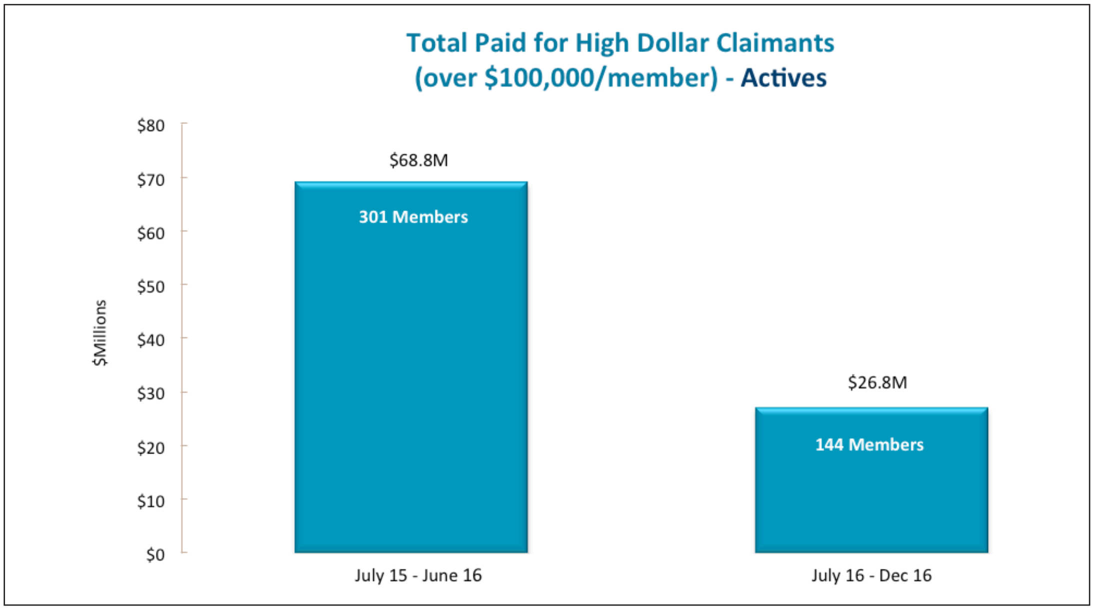
*All data was normalized using Verisk's methodologies and algorithms.

NDPERS includes Political subdivisions, Pre-Medicare Retirees and state employees.

*Average Care Gap Index is understated for NDPERS due to having less than two full years of claims data.

High Dollar Cases

ACTIVES



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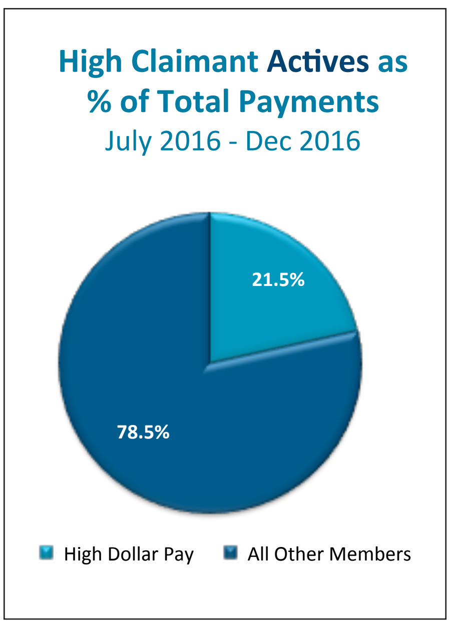
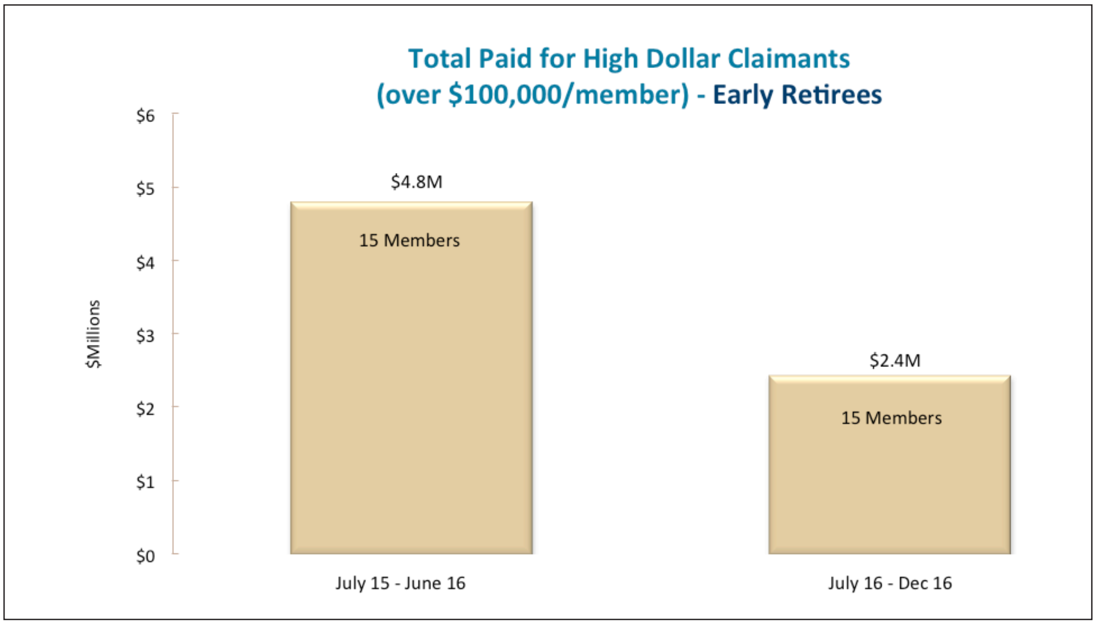


Avg. Paid/Case	$186,340
% of Total Payments	21.5%

EARLY RETIREES

High Dollar Cases



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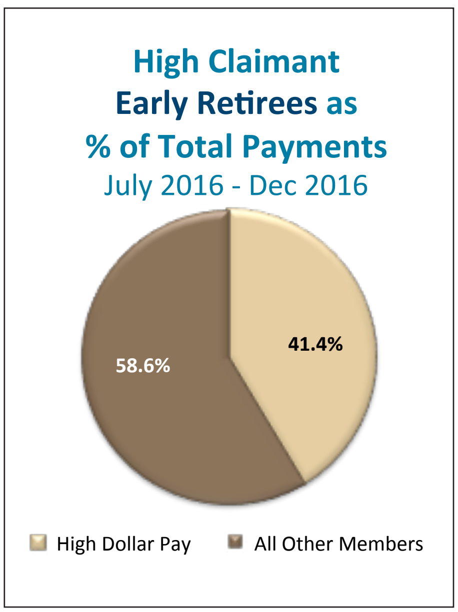
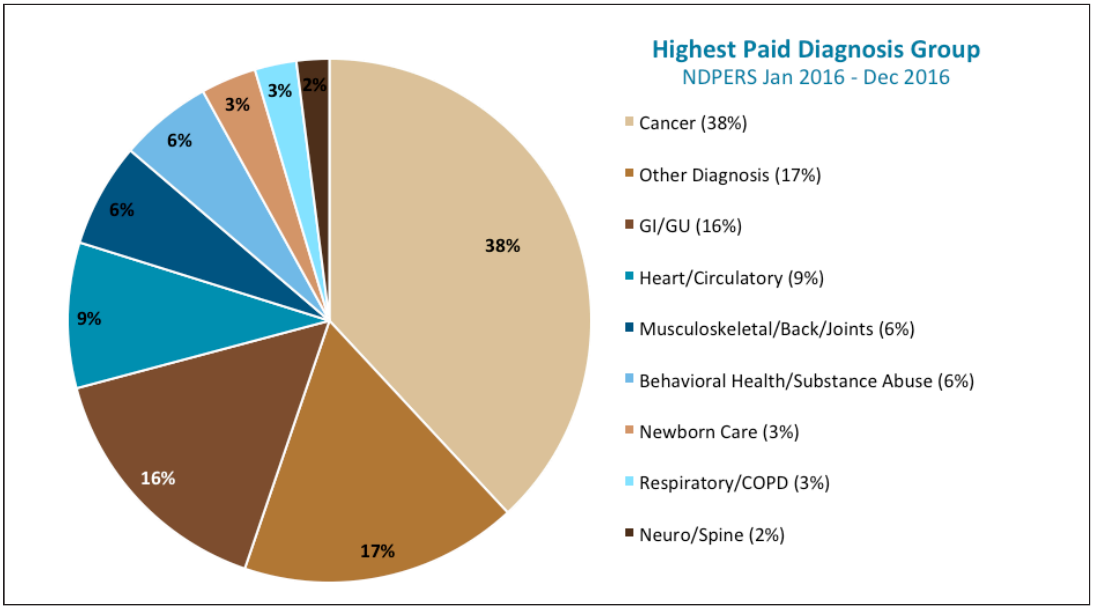
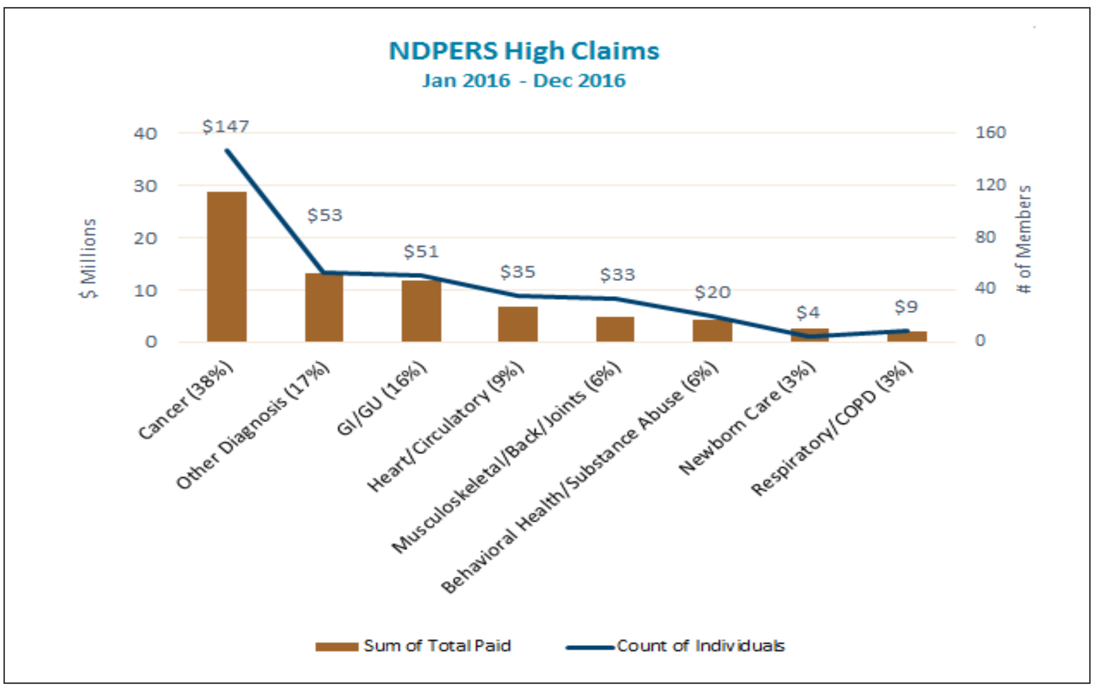


Avg. Paid/Case	$166,268
% of Total Payments	41.4%

High Dollar Cases

PRIMARY DIAGNOSIS

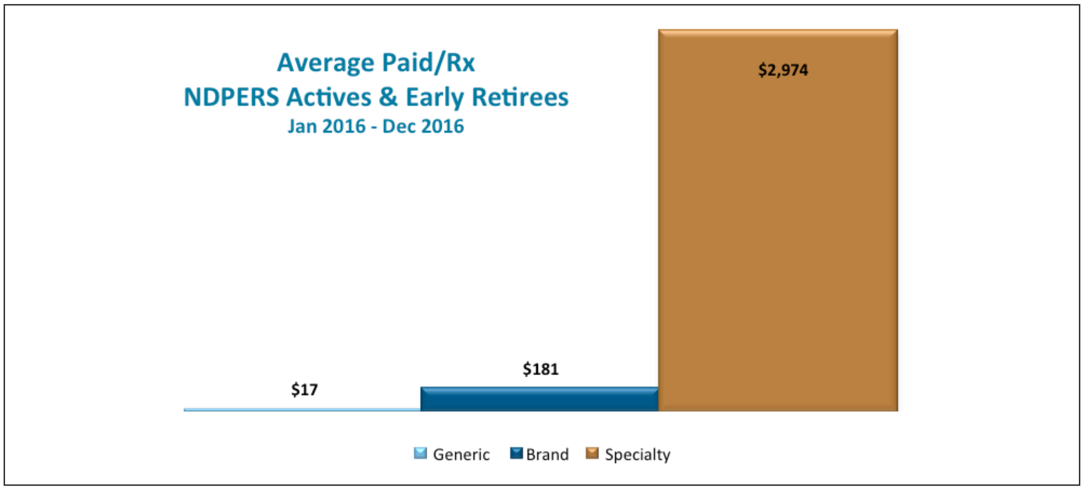




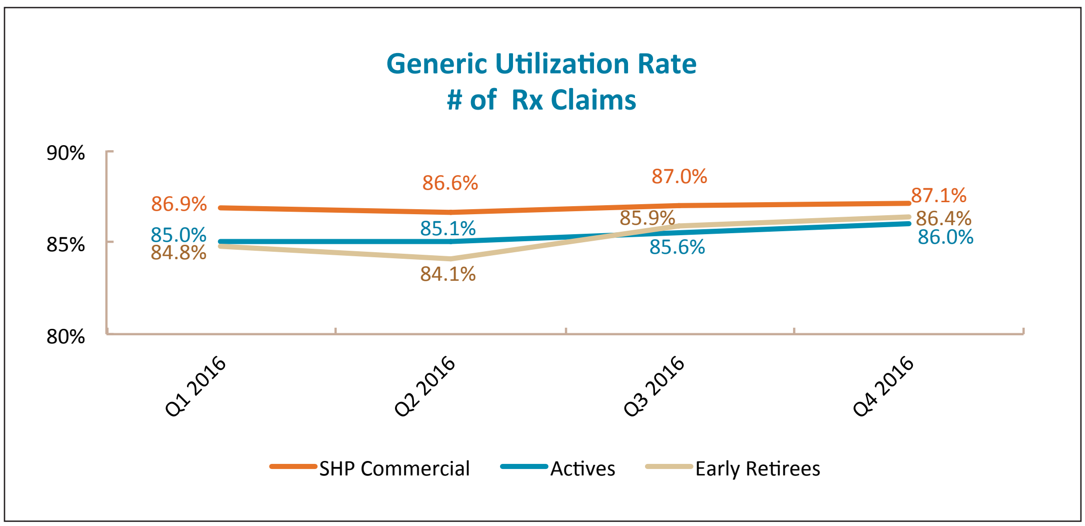
*High dollar cases consist of claims with a total over $100,000.

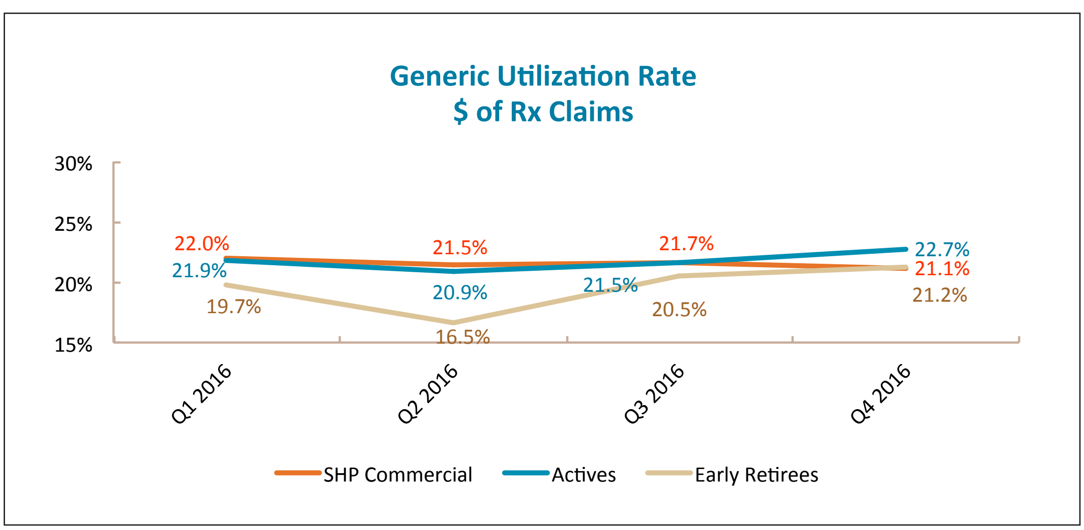
GENERIC UTILIZATION

Prescription Drugs



*Note: Updated chart to reflect utilization of generic, brand, or specialty.
Removed single-source brand for consistency.





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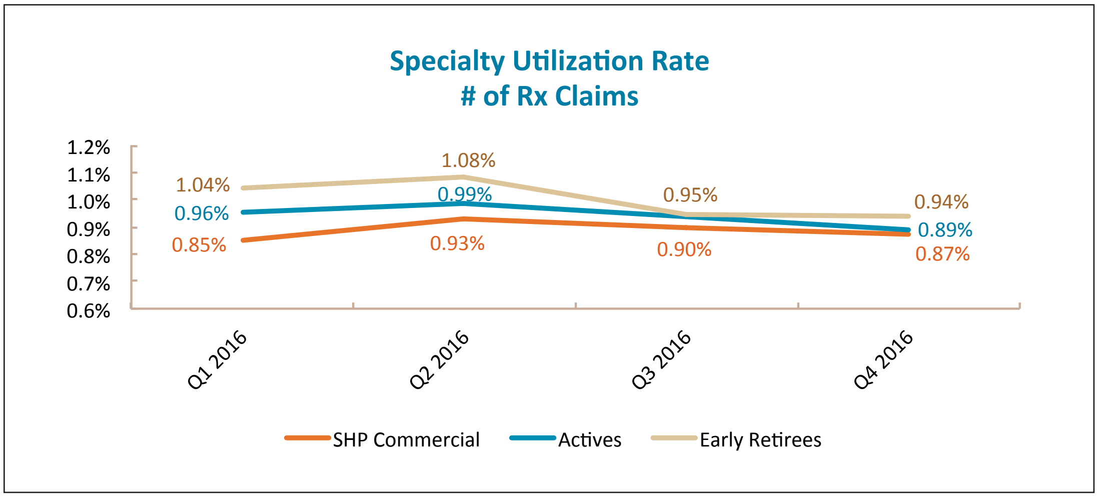
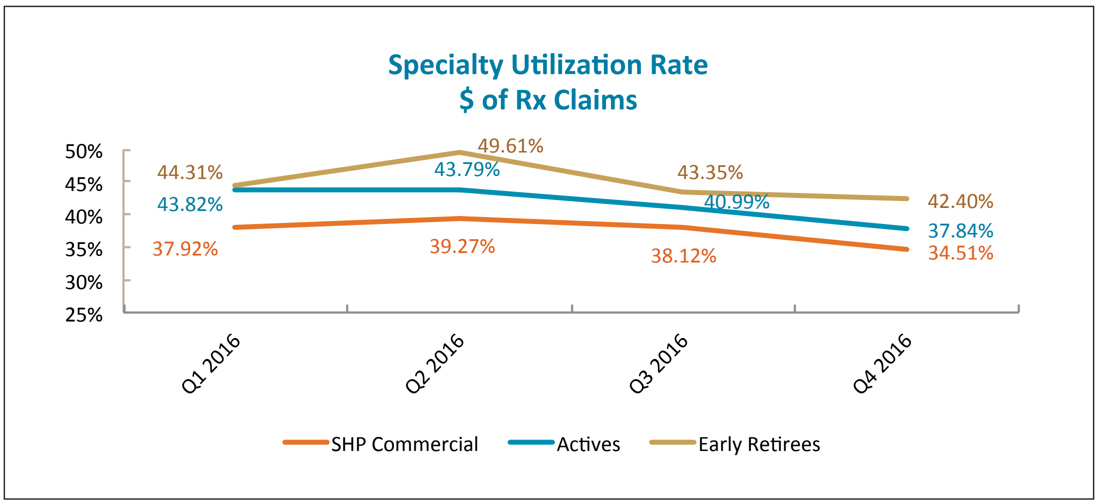
Prescription Drugs

SPECIALTY PHARMACY

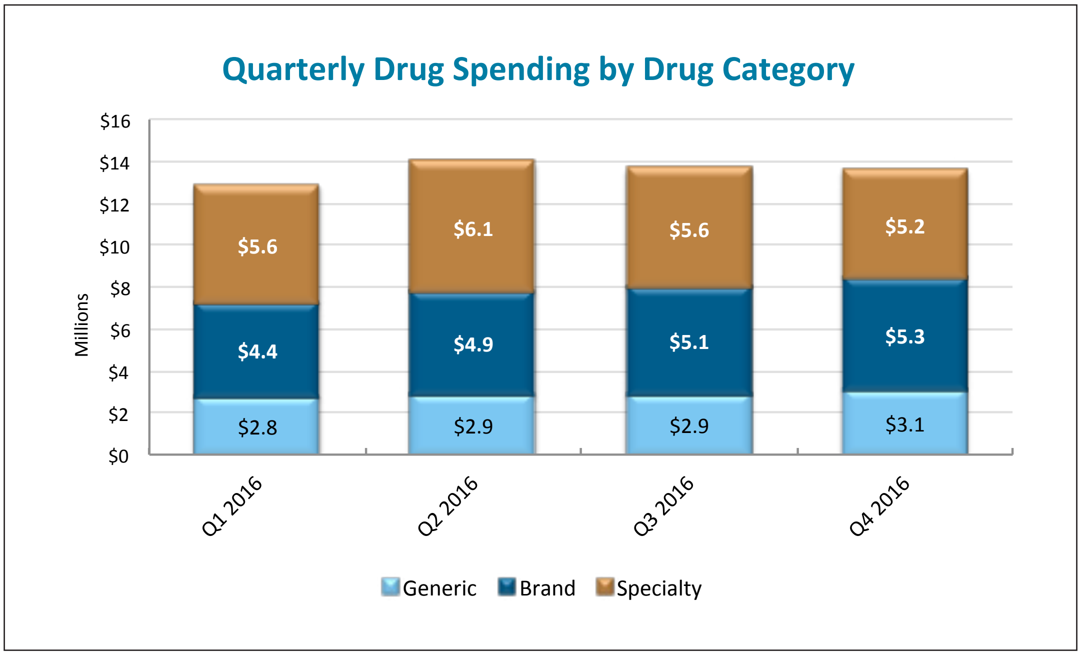




*Incurred between January 1, 2016 and December 31, 2016 and paid through February 28, 2017.

PHARMACY

Prescription Drugs

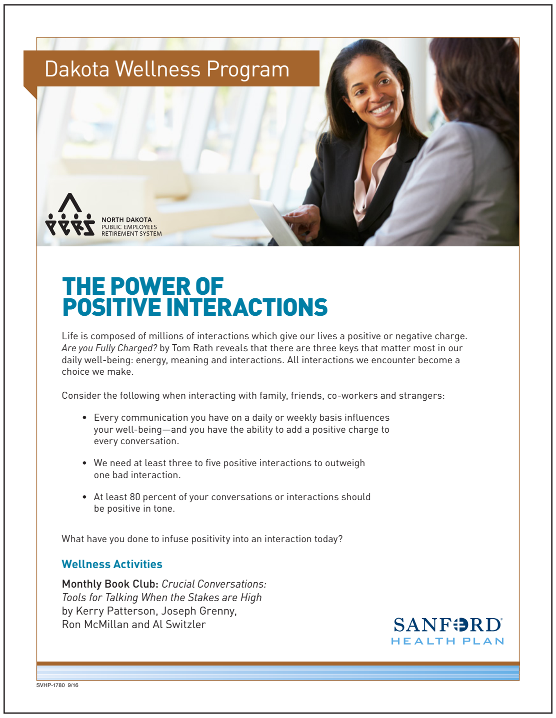


*Incurred between January 1, 2016 and December 31, 2016 and paid through February 28, 2017.

Dakota Wellness Program

MONTHLY WELLNESS THEMES

Monthly themes keep the wellness program fresh throughout the year and keeps members engaged in their individual wellness pursuit. Newsletters, e-blasts and worksite posters are used to introduce themes.



Dakota Wellness Program

NORTH DAKOTA PUBLIC EMPLOYEES RETIREMENT SYSTEM

THE POWER OF POSITIVE INTERACTIONS

Life is composed of millions of interactions which give our lives a positive or negative charge. *Are you Fully Charged?* by Tom Rath reveals that there are three keys that matter most in our daily well-being: energy, meaning and interactions. All interactions we encounter become a choice we make.

Consider the following when interacting with family, friends, co-workers and strangers:

- Every communication you have on a daily or weekly basis influences your well-being—and you have the ability to add a positive charge to every conversation.
- We need at least three to five positive interactions to outweigh one bad interaction.
- At least 80 percent of your conversations or interactions should be positive in tone.

What have you done to infuse positivity into an interaction today?

Wellness Activities

Monthly Book Club: *Crucial Conversations: Tools for Talking When the Stakes are High* by Kerry Patterson, Joseph Grenny, Ron McMillan and Al Switzler

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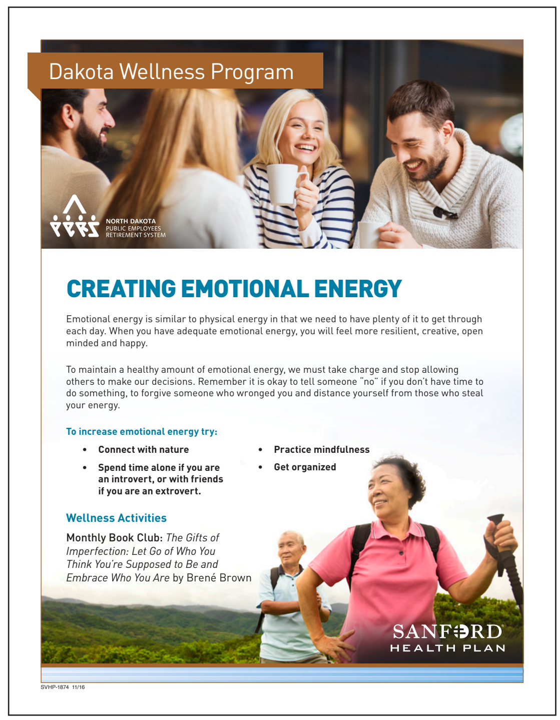
SVHP-1780 9/16



Dakota Wellness Program

NORTH DAKOTA PUBLIC EMPLOYEES RETIREMENT SYSTEM

CREATING EMOTIONAL ENERGY

Emotional energy is similar to physical energy in that we need to have plenty of it to get through each day. When you have adequate emotional energy, you will feel more resilient, creative, open minded and happy.

To maintain a healthy amount of emotional energy, we must take charge and stop allowing others to make our decisions. Remember it is okay to tell someone "no" if you don't have time to do something, to forgive someone who wronged you and distance yourself from those who steal your energy.

To increase emotional energy try:

- **Connect with nature**
- **Spend time alone if you are an introvert, or with friends if you are an extrovert.**
- **Practice mindfulness**
- **Get organized**

Wellness Activities

Monthly Book Club: *The Gifts of Imperfection: Let Go of Who You Think You're Supposed to Be and Embrace Who You Are* by Brené Brown

SANFORD HEALTH PLAN

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Dakota Wellness Program

NORTH DAKOTA PUBLIC EMPLOYEES RETIREMENT SYSTEM

STEPS TO FINANCIAL WELL-BEING

Step 1: Find your "why"
Connect your financial goals to your life's purpose or your "why." Develop your money mindset by analyzing how you think and feel about money. What is most important to me? What do I value? This will guide your choices to plan, save or spend.

Step 2: Set short and long-term goals
For short-term goals, consider:

- Make your money go further for your well-being by spending money on others and experiences and avoiding impulse decisions.
- Identify current spending habits and your wants versus your needs. For example, skip coffee on the way to work and cut back on dining out.

For long-term goals, consider:

- Think about where you want to be in 10 years or in retirement.
- Review your current income and expenses by creating a budget that includes savings.
- Set up automatic deposits into a savings account or retirement fund.

Step 3: Track your progress
Set aside time to review your progress every three or six months. If you've been successful, keep going! If you haven't made progress toward your goals, don't be too hard on yourself. Review your "why" again and adjust your goals to set yourself up for success.

Wellness Activities

Monthly Book Club: *You Only Live Once: The Roadmap to Financial Wellness and a Purposeful Life* by Jason Vitug

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Dakota
Wellness
Program

TOP 10 ONLINE WELLNESS ACTIVITIES

These are the top 10 online Novu activities that were selected and completed by NDPERS members.

#1 **NUTRITION**

#2 **CARDIO**

#3 **SLEEP HEALTH**

#4 **STRESS**

#5 **HEALTHY WEIGHT**

#6 **STRENGTH**

#7 **BALANCE &MOBILITY**

#8 **PURPOSE**

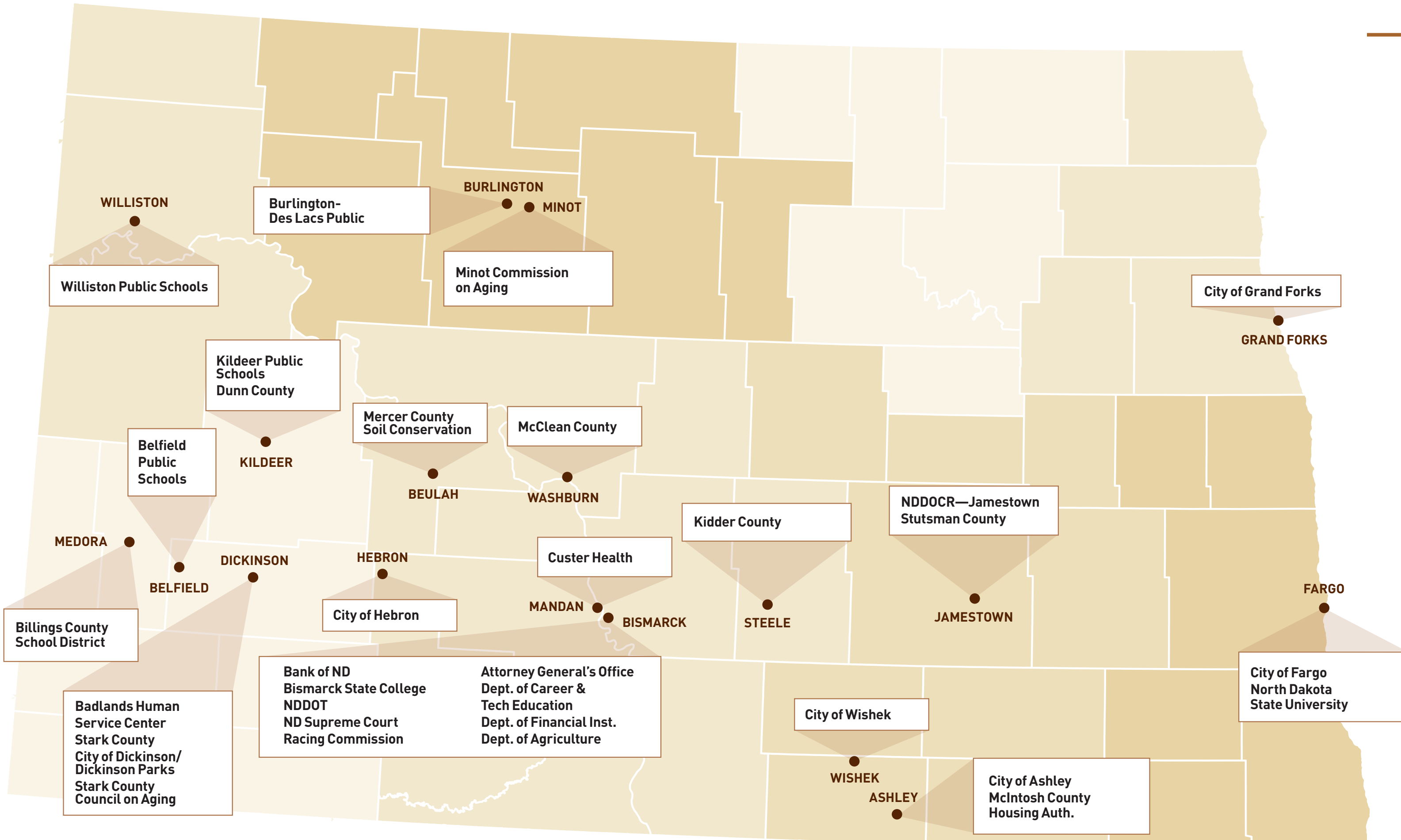
#9 **YOGA & RELAXATION**

#10 **DAILY HYDRATION CHALLENGE**

Dakota Wellness Program

EVENT ATTENDANCE BY AGENCY

The Sanford Health Plan NDPERS wellness team engages members both offline and online. Wellness educators travel across the state to support agency wellness coordinators and provide worksite education and activities. This map shows where they've been over the last quarter.



TOTAL MEMBER ATTENDANCE THIS QUARTER:

891

PRESENTATIONS/EVENTS:

- NOVU
- Health fair
- Self care
- 5-Star sleep
- Sitting disease
- Financial fitness
- Wellness coordinator 1:1 meetings
- Overcoming stress
- Gratitude
- Mindful eating
- Screening event

TOTAL NUMBER OF AGENCIES VISITED (UNDUPLICATED)

33

Dakota Wellness Program

WORKSITE TRAINING OUTCOMES

Sanford Health Plan wellness educators provide worksite training on a wide variety of health and wellness topics. The table below shows the training topics and responses to post-training surveys collected throughout 2016.

Health & Wellness Training	"I increased my knowledge on how to improve my health and wellness."	"I increased my awareness of how the topic impacts my health."	"I will apply the techniques I learned in the training."
Stress Review sources of stress and techniques to reduce it.	73%	82%	76%
Nutrition Paint your plate with colorful fruits and vegetables to improve your health and reduce your risk for chronic disease.	72%	72%	83%
Physical Activity Learn how sitting affects your health and how to combat sitting too much with easy office exercises.	96%	93%	89%
Organize My Life Learn ways to organize your mind, environment and life in order to use time wisely.	94%	87%	94%
Make It Happen! Set yourself up for lasting change and create an action plan to reach your goals.	78%	87%	80%
Financial Fitness Review overall well-being as it relates to finances along with tips to improve financial well-being.	87%	85%	61%
Sleep Learn to create healthy conditions that promote rest.	98%	96%	94%

Performance Standards & Guarantees

MEASURE	GOAL	OUTCOME REPORTING DATES	OUTCOME
COST MANAGEMENT:			
Health Risk Assessment	**10%**	Dec. 31, 2015	**17.9%**
HEALTH OUTCOMES:			
Medical Home Enrollment	30%	July 1, 2016	**36.5%**
Breast Cancer Screening Rates	80%	June 30, 2017	–
Cervical Cancer Screening Rates	85%	June 30, 2017	–
Colorectal Cancer Screening Rates	60%	June 30, 2017	–
PROVIDER NETWORK/CONTRACTING:			
NDPERS PPO network - in-state hospitals, MDs and DOs that participate in the Company's Par Network.	**Hospital = 85% MDs & DOs = 85%**	Dec. 31, 2015	**Hospital = 94% MDs & DOs = 87%**
Minimum provider discount from in-network providers	30% for Non-Medicare contracts	June 30, 2017	–
Claims Financial Accuracy	99%	June 30, 2017	–
Claims Payment Incidence Accuracy	97%	June 30, 2017	–
Claim Timeliness	99%	June 30, 2017	–
Average Speed of Answer	45 seconds	June 30, 2017	–
Call Abandoned Rate	7% or less	June 30, 2017	–
ANCILLARY ITEMS:			
The interest rate utilized currently is based on the US Treasury Notes quoted by the Wall Street Journal	verification	June 30, 2017	–
Rx rebates passed-through to NDPERS	100%	June 30, 2017	–
HRA WELLNESS SCORE:			
HRA Wellness Score	5% point increase	Dec. 31, 2016	N/A
bWell Participation	**10%**	Dec. 31, 2015	**10.8%**
Health Club Credit	Goal = 1,950	July 1, 2016	**1,879**

NOTES

NORTH DAKOTA
PUBLIC EMPLOYEES
RETIREMENT SYSTEM

SANFORD
HEALTH PLAN

SVHP-1726 1/17

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Memorandum

TO: PERS Board

FROM: Sparb

DATE: April 27, 2017

SUBJECT: Health Plan

Attached are three memos from Sanford:

- Attachment #1 – Concerns the Rx Generic Co-payment/ Member Rebate Program
- Attachment #2 – Concerns the Rare and complex disease management procedure
- Attachment #3 – Concerns the “dispense as written” process in the plan
- Attachment #4 – Glucometer

Sanford will be at the meeting to review the above memos with the board.

If the board has questions on the proposals we can follow-up and bring this back to you for final consideration at the May meeting. If not and you are comfortable with the explanations we can take action at this meeting. Staff would recommend:

- Item #1 – Select Option #1
- Item #2 – allow the change
- Item #3 – Defer until May
- Item #4 – Discuss ways to incent members to make the change instead of mandating.

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NORTH DAKOTA PUBLIC EMPLOYEES RETIREMENT SYSTEM | SANFORD HEALTH PLAN

NDPERS Prescription Drug Rebate Program

Purpose: Proposal on Member Rebate distribution through benefit enhancement:

In previous NDPERS board discussions, there was hesitation to enhance generic benefits with rebates due to concerns surrounding uncertainty within the pharmaceutical industry. Rebate volume and value may change with marketplace.

Sanford Health Plan has developed concepts that assure long term sustainability of these benefit enhancements with minimal benefit changes. This change surrounds how we handle brand prescriptions where generics are available, also known as dispense as written ("DAW"). In most plan designs, including NDPERS, when a brand product is selected where a generic alternative is available, the member is charged the difference in cost between the brand and generic. This penalty is known as an ancillary charge, and it deters members from using a brand that has an FDA approved generic available. In the current benefit configuration, we allow prescribers to mandate use of brand without question by designating their request. Once this request is designated by the pharmacy on a prescription claim, the penalty is automatically waived. Provided the current benefit election (copay plus coinsurance), and the availability for manufacturers to offer coupons to reduce brand copays, many members will take advantage of this benefit loophole for financial benefit. We recommend limiting this bypass to cases where there is established medical necessity, which is very rare. This slight processing guideline modification will help drive utilization to lower cost generics, making the benefits outlined below sustainable despite fluctuations in rebates. In 2016, there were 706 prescriptions filled with a physician approved exception to the ancillary charge.

The proposed 2017 pharmacy benefit increases the member cost share by $5 copay (30-day) and applies the same proportion for 31-90 day supplies. In this circumstance, a member can acquire up to 90-day supply for the same coinsurance percentage, but double the 30-day copay. This increase as shown below has been determined to be within guidelines needed to maintain grandfathered status, with one exception in the generic 31-90 day benefit. Since we propose opportunities to enhance the generic benefit, this should not have an impact on the plan.

	Current 30-day	Current 31-90-day	2017 - 30-day	2017 31-90 day
Generic (tier1)	$5 + 15% coinsurance	$10 + 15% coinsurance	$10 + 15% coinsurance	$15* + 15% coinsurance
Preferred Brand (tier2)	$20 + 25% coinsurance	$40 + 25% coinsurance	$25 + 25% coinsurance	$50 + 25% coinsurance
Non-Preferred Brand (tier3)	$25 + 50% coinsurance	$50 + 50% coinsurance	$30 + 50% coinsurance	$60 + 50% coinsurance

*Cannot increase to $20 due to grandfathering status regulations

Grandfathering status does not permit a health plan to increase coinsurance amount from the baseline plan. It does permit copay increases based on an inflation model with conservative limits afforded. The following options can be considered for 2017.

Danny Weiss 4/17/17

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Benefit Description	Increase plan cost compared to baseline for plan year	Total Copay	Total Plan Cost	Member cost share
2016 Benefits: $5 copay - 15% coinsurance	**$1,286,874**	**$4,238,126**	**$11,879,323**	**26%**
2017 Proposed: $10 copay - 15% coinsurance	**$0**	**$5,525,000**	**$10,571,102**	**34%**
2017 Option #1: $7.5 copay -12% coinsurance	**$686,735**	**$4,850,572**	**$11,257,838**	**30%**
2017 Option #2: $15 copay – 0% coinsurance	**$697,961**	**$4,449,311**	**$11,659,098**	**28%**

To maintain 2016 benefits in this renewal would utilize more rebate funding than this program was designed to accommodate. For this reason, the lower option is not a reasonable option. The only way to modify the $5 copay benefit to reduce this plan expense would be to increase the coinsurance, which would violate grandfathering status for the plan, which is not reasonable either.

Danny Weiss 4/17/17

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NORTH DAKOTA PUBLIC EMPLOYEES RETIREMENT SYSTEM | SANFORD HEALTH PLAN

Accordant Health Program - transition plan

Background: SHP presently contracts with Accordant Health to provide rare and complex disease management services for the NDPERS employer group. 295 members enrolled in the Accordant program were transitioned from the legacy carrier to the SHP platform on 7.1.15. The current agreement expires 6.30.17, prompting SHP to conduct a performance and financial assessment of the program.

The program includes disease management of the following conditions.

Amyotrophic Lateral Sclerosis (Lou Gehrig's Disease)	Dermatomyositis	Human Immunodeficiency Virus	Polymyositis	Systemic Lupus Erythematosus (Lupus)
Cystic Fibrosis	Epilepsy (Seizure)	Multiple Sclerosis	Rheumatoid Arthritis	Ulcerative Colitis
Crohn's Disease	Gaucher Disease	Myasthenia Gravis	Scleroderma	
Chronic Inflammatory Demyelinating Polyradiculoneuropathy (CIDP)	Hemophilia	Parkinson's Disease	Sickle Cell Disease	

In addition to disease management, the program includes telephonic outreach by a Nurse, along with disease -specific education and preventive care materials. Provider outreach is conducted by mail or telephone, including preventive care reminders and care plan instruction. 395 members are currently enrolled in the program, classified as *Interactive* (348) and *Self-Directed* (48).

Go Forward Plan: In addition to adding services, utilized existing SHP staff to replicate the services provided by Accordant, reducing direct/indirect costs to the benefit of the Member and PERS. Hard cost savings estimated @ $50,000 per month with soft cost savings through Utilization Review and Behavioral Health management.

1. Replication of current program, Plus (+)
   - 18 disease states are currently included in the SHP case management program, allowing turn key management for active members. Whether by claim or PA/Pre-authorization, triggers are configured within our platform to activate case and utilization management.
   - Disease-state patient education
   - Case Managers perform utilization review and medication adherence.
   - MCG evidence-based criteria used to determine comorbidities & medical condition goal setting.

   \+ Software applications to review claims history, pharmacy fills, health risk scores.
   \+ Referrals and coordination with a SHP Behavioral Counselor for members with behavioral health needs.

2. Value added services
   a. Rx management
   b. Behavioral health support
   c. Reporting

3. Transition Plan
   a. Sunset Accordant agreement effective 7.1.17
   b. Member Communication plan: Notify members of the changes occurring, continuation of care steps and contact information.
   c. Case Management performs outreach to current enrollees to complete a needs assessment.

Steve Webster 4/17/17

Attachment #3

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NORTH DAKOTA PUBLIC EMPLOYEES RETIREMENT SYSTEM | SANFORD HEALTH PLAN

NDPERS Pharmacy Ancillary Penalty Policy Change

Previously member rebate programs were discussed by the board, and sustainability was identified as a major concern. While these programs offer positive benefit to the member, questions of sustainability become prevalent, as the board considered what the impact would be if rebate funding declined or was removed completely in the future. The board would be then faced with the difficult decision on whether to continue the program without the financial support of the rebate funding.

To increase the sustainability of this project, Sanford Health Plan has identified an aspect of plan design that can help improve member behavior. This area focuses on the benefit surrounding Ancillary Charges or Dispense as Written benefits.

In the current benefit structure, if a member uses a brand name medication where a generic is available for that exact medication, there is what is called an ancillary penalty. This penalty is an additional charge that makes the member responsible for the difference in cost between the brand and generic medication. The intent of this penalty is to financially incentivize members to use generics whenever possible.

In the current benefit election, if a provider indicates that they request brand for a member, the ancillary penalty is automatically waived. In the majority of cases, when asked, a provider is willing to indicate this to appease a member request. When factoring in the effects of coupon cards, many members can exploit this loophole for personal gain.

It is advised that the board consider allowing the health plan to review any ancillary bypass requests for medical necessity. In rare cases, there is evidence to support this and it is then appropriate to allow member access to brand without the ancillary penalty. This is rare, but usually seen in medications that are known to have a “narrow therapeutic window”.

In 2016, there were 706 claims for members who had physicians bypass their ancillary charge based on data extracted from claims submitted (brand claims with DAW1). The average plan cost per brand was $278. The average plan cost per generic was $30. So for each claim converted, the total plan cost reduces by $248 on average. Because we are taking an average of a large volume of claims, our actuary advises that we take 80% of this difference, as a conservative factor. Applying that 80% conservative factor, for every claim converted from brand to generic, the plan cost reduces by $198. If 90% of these 706 claims are eligible for conversion to brand, the plan will save $125,000 on existing claims, and prevent additional unnecessary brand usage. While this isn’t enough to sustain an entire program, it will contribute to sustainability.

Danny Weiss 4/17/17

Attachment #4

III. GROUP INSURANCE

A. Health Plan
   4. Glucometer

This material will available at the Board Meeting.

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Memorandum

TO: NDPERS Board

FROM: Bryan Reinhardt

DATE: **April 27, 2017**

SUBJECT: **Vision Plan RFP Update**

We issued the NDPERS Vision Plan RFP in February. Proposers are required to submit a bid to provide services for eligible active and retired employees and their dependents. There were 14 firms sent in the non-disclosure agreement and were sent the NDPERS Vision Plan data. We received questions from eight vendors and nine proposals. The proposals we received were from:

MetLife	Superior Vision	Eyemed
VSP	The Standard	Ameritas
Aetna	UNUM	Davis Vision

Below is the timeline from the RFP:

Date	Activity
February 1, 2017	RFP is issued.
February 24, 2017	Written questions regarding proposals must be received by NDPERS no later than 5:00 p.m. (CDT).
March 10, 2017	NDPERS posts responses to all questions received.
March 31, 2017	Proposals must be received by NDPERS no later than 5:00 p.m. (CDT).
May , 2017	NDPERS Board review of proposals.
June 2017	Finalist interviews and Best and Final Offers due, if deemed necessary by the NDPERS Board.
No later than August 2017	Selection and award of contract by NDPERS.

Conduent will analyze the proposals and narrow them down with staff to 3 or 4 for the NDPERS Board to review in May. If interviews are needed they will be at the June meeting.

If you have any questions, we will be available at the NDPERS Board meeting.

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Memorandum

TO: NDPERS Board

FROM: Kathy

DATE: April 18, 2017

SUBJECT: Sanford Heart of America Health Plan

Attached is the request from Sanford Heart of America Health Plan to continue to offer its health plan to state and participating political subdivision employees in its Rugby service area. The term of this renewal is from July 1, 2017 through June 30, 2018. The new rates are included in the materials provided by Sanford Heart of America. The premiums for all levels of coverage and plan options for the upcoming contract period have increased by approximately 6.01% over the current year. All other required information is attached and appears to be in order. The State Insurance Department has indicated that there have been no complaints or appeals filed against Sanford Heart of America over the past year.

The following outlines the current number of contracts for those employers in the Rugby service area:

Rolette County	1
Pierce County	12

Since we last reported, participation in the Sanford HOA plan between the two participating employers above has decreased by 5 contracts.

BOARD ACTION REQUESTED

Accept or reject the Sanford Heart of America request to continue to offer its health plan to PERS membership in the Rugby service area.

NDPERS

Memo

To: NDPERS Board

From: Bryan T. Reinhardt

Date: 4/20/2017

Re: 2016 EAP Utilization

The following table shows the self-reported 2016 utilization from the NDPERS Employee Assistance Program (EAP) providers. The overall EAP utilization rate is at 6.5%. This is about the same as reported in 2015, but lower than the historical 8-9% reported rate.

NDPERS Employee Assistance Program – 2016

	NDPERS TOTAL	Live Well	Deer Oaks	The Village	St. Alexius
Contracts	16007	124	391	7982	7510
Cases*	1047	12	23	475	537
%	6.5%	9.7%	5.9%	6.0%	7.2%
Sessions**	2432	56	23	1816	537
%	15.2%	45.2%	5.9%	22.8%	7.2%
Case Types:					
Psychiatric	552	3	8	220	321
Family/Personal	380	5	10	168	197
Work Problems	37	2	1	22	12
Financial/Legal	26	2	3	21	0
Drugs/Alcohol	16	0	0	12	4
Other/Unknown	36	0	1	32	3

* - Note that family members are also eligible for the EAP.
** - Per Session information was not available from St. Alexius.

If you have any questions or need anymore information, I will be available at the NDPERS Board meeting.

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Memorandum

TO: PERS Board

FROM: Sparb & Bryan

DATE: April 27, 2017

SUBJECT: Health Plan Design and Rates

Now that the session is drawing to a close and we have the benefit of Legislature and the Governor's direction concerning the health plan, we need to move forward to set the final rates and plan design for the 2017-19 biennium. We have three areas that need approval from the Board and they are:

A. The Health Plan Design
B. The Billed Health Rates and Buydown
C. The Wellness Rates

A. The Health Plan Design

The table below is from the Sanford renewal. These are the plan design changes allowed that still allow us to maintain grandfathered status for the plan.

Options		
Increase in Deductible Levels • From $400 single/$1,200 family to $500 single/$1,500 family	$1.5 M	0.6%
Increase in Co-Insurance Out-of-Pocket Change from $750/1,500 to $1,000/$2,000	$4.5 M	1.8%
Increase Pharmacy Co-Pay and Co-Insurance • From $5 to $10 change in generic copay • From $20 to $25 change in formulary brand copay • From $25 to $30 copay in non-formulary copay • From $1,000 coinsurance to $1,200 coinsurance	$2.8 M	1.1%
Increase in Office Visit/Emergency Room Copays • From $25 to $30 copay in office visit • From $50 to $60 copay in emergency room copay	$2.3 M	0.9%
Subtotal	$11.1 M	4.4%

The following table shows what the current plan design looks like and what the new plan will be after all the changes are made.

	Existing Grandfathered Plan Design		New Grandfathered Plan	
Cost Sharing	PPO	Basic	PPO	Basic
Single Deductible	$400	$400	*$500*	*$500*
Family Deductible	$1,200	$1,200	*$1,500*	*$1,500*
Single Coinsurance / Max	80% /750	75% /1250	80% /1000	75% /1500
Family Coinsurance / Max	80% /1500	75% /2500	80% /2000	75% /3000
Office call copayment	$25	$30	$30	$35
Emergency Room copayment	$50	$50	$60	$60
RX Formulary				
Generic	$5/85%	$5/85%	$10/85%	$10/85%
Brand	$20/75%	$20/75%	$25/75%	$25/75%
Coinsurance Max	$1,000	$1,000	$1,200	$1,200
Non-formulary	$25/50%	$25/50%	$30/50%	$30/50%

	Existing HDHP Plan Design		New HDHP Plan Design	
Cost Sharing	PPO	Basic	PPO	Basic
Single Deductible	$1,500	$1,500	*$2,000*	*$2,000*
Family Deductible	$3,000	$3,000	*$4,000*	*$4,000*
Single Coinsurance / Max	80% /$1,500	75% /$2,000	80% /$1,500	75% /$2,000
Family Coinsurance / Max	80% /$3,000	75% /$4,000	80% /$3,000	75% /$4,000

Board Action:

Approve the new plan design for the NDPERS Health Plan.

A. The Billed Health Rates and Buydown

1. Active & Pre-Medicare Retirees

The combined rate for the state health plan as submitted by Sanford in the renewal bid was $1,326.38 which is a 17.4% increase. After the plan design changes, the rate is reduced to $1,268.14 which is a 12.2% increase. The Governor and Legislature approved a rate of $1,240.83 which is a 9.8% increase. Our existing rate is $1,130.22 per contract. The difference was anticipated to be made up from our reserves. Since we need to round our rate to an even number, the rate we would charge the state would be $1,240.82 per contract. This means the rate increase for the state is $27.32 or about 2.15% less than the Sanford rate after the plan design changes. This would need to be the buydown from reserves. Since the state rate is at 9.8%, this sets the standard for the rates for the other categories (Non-Medicare, political subdivisions, temporary employees, etc). The pre-Medicare rates match the requirements in NDCC 54-52.1-02.

Therefore, staff would recommend that the Board approve the rates in Attachment A (a 9.8% increase for all groups on the plan in Rate Structure A (those on the plan before July 1, 2017). Groups joining the plan after would pay the full rates (Rate Structure B). As in the past, rate structure B will apply to all groups that join the plan on or after July 1, 2017 and has a year 1 and year 2 rate to recognize the additional risk for enrollees joining the plan during the biennium. In the past, the COBRA rates did not receive buydown, therefore their rates would be the full Sanford rate (a 12.2% increase).

2. Medicare Retiree

The rates for this group are composed of the medical premium and the PDP premium (prescription drug premium). The medical portion of the premium participates in the gain/loss of the PERS plan. The PDP portion of the premium does not. As you will recall the medical premiums for this group will not be going up as much as the active premiums (6.5% based on the Sanford renewal). **Therefore, staff is suggesting that medical premiums for all members on this plan before July 1 be reduced by 2.15% (the same percentage buydown for the active group). For those members joining on July 1 and after they would not get the "buydown" and would be rate structure B.**

3. Wellness and Pre-Medicare rates

Added to the rates will be the 1% for those employers not having an employer based wellness program.

<u>Board Action:</u>

Approve the new plan design rates for the NDPERS Health Plan (Attachment A).

JULY 2017 NDPERS Health Rates - Medicare Plan F Option

Rate Structure A
For Anyone Enrolled Prior to July/2017
Rates for July/2017 - June/2019

Jan-17 NDPERS Billing Rate	Code	Struct	Description	Total Health Premiums	1-1-17 Medicare Part D Premiums	(1) Total SHP Premiums	% Increase	(2) Less NDPERS Retention	(3) (1)-(2) Total Prem Paid to SHP	(4) Premium Buydown	Buydown %	(6) (3)-(4)+(5) Total Paid to SHP	(7) NDPERS Retention	**(8) (6)+(7) NDPERS Billing Rate**	Increase From 15-17 Billing Rate
	Non-Medicare Retiree														
$816.42	21	11	Single			$914.38	12.00%	$2.80	$911.58	$18.04	1.97%	$893.54	$2.80	**$896.34**	9.8%
$1,632.84	22	11	Family			$1,825.96	11.83%	$2.80	$1,823.16	$33.28	1.82%	$1,789.88	$2.80	**$1,792.68**	9.8%
$2,041.04	23	11	Family (3+)			$2,281.74	11.79%	$2.80	$2,278.94	$40.90	1.79%	$2,238.04	$2.80	**$2,240.84**	9.8%
	COBRA														
$832.74	24	11	Single			$914.38	9.80%	$2.80	$911.58	$0.00	0.00%	$911.58	$2.68	**$914.26**	9.8%
$1,665.50	25	11	Family			$1,825.96	9.63%	$2.80	$1,823.16	$0.00	0.00%	$1,823.16	$5.38	**$1,828.54**	9.8%
$2,081.86	26	11	Family (3+)			$2,281.74	9.60%	$2.80	$2,278.94	$0.00	0.00%	$2,278.94	$6.72	**$2,285.66**	9.8%
	State Contracts with Wellness Program														
	Active					(Flat Single/Family Rate)									
$1,130.22	1-3	2	S/F/Dual			$1,268.14	12.20%	$2.80	$1,265.34	$27.32	2.15%	$1,238.02	$2.80	**$1,240.82**	9.8%
	COBRA														
$555.16	4	2	Single			$610.52	9.97%	$2.80	$607.72	$0.00	0.00%	$607.72	$15.00	**$622.72**	12.2%
$1,337.96	5	2	Family			$1,471.88	10.01%	$2.80	$1,469.08	$0.00	0.00%	$1,469.08	$32.24	**$1,501.32**	12.2%
	Part-Time/Temporary/LOA														
$544.28	6	2	Single			$610.52	12.17%	$2.80	$607.72	$12.96	2.12%	$594.76	$2.80	**$597.56**	9.8%
$1,311.74	7	2	Family			$1,471.88	12.21%	$2.80	$1,469.08	$31.70	2.15%	$1,437.38	$2.80	**$1,440.18**	9.8%
	Active HDHP														
$1,130.22	1-3	17	S/F/Dual			$1,110.42	-1.75%	$2.80	$1,107.62	$27.32	2.46%	$1,080.30	$160.52	**$1,240.82**	9.8%
	COBRA HDHP														
$483.82	4	17	Single			$532.02	9.96%	$2.80	$529.22	$0.00	0.00%	$529.22	$13.44	**$542.66**	12.2%
$1,165.34	5	17	Family			$1,281.92	10.00%	$2.80	$1,279.12	$0.00	0.00%	$1,279.12	$28.44	**$1,307.56**	12.2%
	LOA HDHP														
$474.34	6	17	Single			$532.02	12.16%	$2.80	$529.22	$11.26	2.12%	$517.96	$2.80	**$520.76**	9.8%
$1,142.50	7	17	Family			$1,281.92	12.20%	$2.80	$1,279.12	$27.62	2.15%	$1,251.50	$2.80	**$1,254.30**	9.8%
	State Contracts w/o Wellness Program														
	Active					(Flat Single/Family Rate)									
$1,141.52	1-3	1	S/F/Dual			$1,268.14	11.09%	$2.80	$1,265.34	$27.32	2.15%	$1,238.02	$15.20	**$1,253.22**	9.8%
	COBRA														
$555.16	4	1	Single			$610.52	9.97%	$2.80	$607.72	$0.00	0.00%	$607.72	$15.00	**$622.72**	12.2%
$1,337.96	5	1	Family			$1,471.88	10.01%	$2.80	$1,469.08	$0.00	0.00%	$1,469.08	$32.24	**$1,501.32**	12.2%
	Part-Time/Temporary/LOA														
$549.02	6	1	Single			$610.52	11.20%	$2.80	$607.72	$13.15	2.15%	$594.57	$8.96	**$603.52**	9.9%
$1,323.16	7	1	Family			$1,471.88	11.24%	$2.80	$1,469.08	$31.71	2.15%	$1,437.37	$17.21	**$1,454.58**	9.9%
	Active HDHP														
$1,141.52	1-3	16	S/F/Dual			$1,110.42	-2.72%	$2.80	$1,107.62	$27.32	2.46%	$1,080.30	$172.92	**$1,253.22**	9.8%
	COBRA HDHP														
$483.82	4	16	Single			$532.02	9.96%	$2.80	$529.22	$0.00	0.00%	$529.22	$13.44	**$542.66**	12.2%
$1,165.34	5	16	Family			$1,281.92	10.00%	$2.80	$1,279.12	$0.00	0.00%	$1,279.12	$28.44	**$1,307.56**	12.2%
	LOA HDHP														
$479.08	6	16	Single			$532.02	11.05%	$2.80	$529.22	$11.46	2.15%	$517.76	$8.20	**$525.96**	9.8%
$1,153.92	7	16	Family			$1,281.92	11.09%	$2.80	$1,279.12	$27.62	2.15%	$1,251.50	$15.33	**$1,266.84**	9.8%

JULY 2017 NDPERS Health Rates - Medicare Plan F Option

Rate Structure A
For Anyone Enrolled Prior to July/2017
Rates for July/2017 - June/2019

Jan-17 NDPERS Billing Rate	Code	Struct	Description	Total Health Premiums	1-1-17 Medicare Part D Premiums	(1) Total SHP Premiums	% Increase	(2) Less NDPERS Retention	(3) (1)-(2) Total Prem Paid to SHP	(4) Premium Buydown	Buydown %	(6) (3)-(4)+(5) Total Paid to SHP	(7) NDPERS Retention	**(8) (6)+(7) NDPERS Billing Rate**	Increase From 15-17 Billing Rate
	Political Subdivision Rates with Wellness Program														
	Active														
$581.48	1	4	Single			$652.26	12.17%	$2.80	$649.46	$13.88	2.13%	$635.58	$2.80	**$638.38**	9.8%
$1,404.84	2	4	Family			$1,576.36	12.21%	$2.80	$1,573.56	$33.96	2.15%	$1,539.60	$2.80	**$1,542.40**	9.8%
	COBRA														
$593.10	4	4	Single			$652.26	9.97%	$2.80	$649.46	$0.00	0.00%	$649.46	$15.84	**$665.30**	12.2%
$1,432.94	5	4	Family			$1,576.36	10.01%	$2.80	$1,573.56	$0.00	0.00%	$1,573.56	$34.32	**$1,607.88**	12.2%
	Political Subdivision Rates w/o Wellness Program														
	Active														
$587.28	1	3	Single			$652.26	11.06%	$2.80	$649.46	$13.88	2.13%	$635.58	$9.18	**$644.76**	9.8%
$1,418.88	2	3	Family			$1,576.36	11.10%	$2.80	$1,573.56	$33.96	2.15%	$1,539.60	$18.22	**$1,557.82**	9.8%
	COBRA														
$593.10	4	3	Single			$652.26	9.97%	$2.80	$649.46	$13.88	2.13%	$635.58	$29.72	**$665.30**	12.2%
$1,432.94	5	3	Family			$1,576.36	10.01%	$2.80	$1,573.56	$33.96	2.15%	$1,539.60	$68.28	**$1,607.88**	12.2%
	NGF Political Subdivision Rates with Wellness Program														
	Active														
$590.32	1	24	Single			$662.18	12.17%	$2.80	$659.38	$14.10	2.13%	$645.28	$2.80	**$648.08**	9.8%
$1,426.20	2	24	Family			$1,600.32	12.21%	$2.80	$1,597.52	$34.48	2.15%	$1,563.04	$2.80	**$1,565.84**	9.8%
	COBRA														
$602.12	4	24	Single			$662.18	9.98%	$2.80	$659.38	$0.00	0.00%	$659.38	$16.04	**$675.42**	12.2%
$1,454.72	5	24	Family			$1,600.32	10.01%	$2.80	$1,597.52	$0.00	0.00%	$1,597.52	$34.80	**$1,632.32**	12.2%
	Active HDHP														
$521.10	1	26	Single			$584.50	12.17%	$2.80	$581.70	$12.40	2.12%	$569.30	$2.80	**$572.10**	9.8%
$1,258.98	2	26	Family			$1,412.66	12.21%	$2.80	$1,409.86	$30.42	2.15%	$1,379.44	$2.80	**$1,382.24**	9.8%
	COBRA HDHP														
$531.52	4	26	Single			$584.50	9.97%	$2.80	$581.70	$0.00	0.00%	$581.70	$14.48	**$596.18**	12.2%
$1,284.16	5	26	Family			$1,412.66	10.01%	$2.80	$1,409.86	$0.00	0.00%	$1,409.86	$31.04	**$1,440.90**	12.2%
	NGF Political Subdivision Rates w/o Wellness Program														
	Active														
$595.52	1	23	Single			$662.18	11.19%	$2.80	$659.38	$14.10	2.13%	$645.28	$9.27	**$654.56**	9.9%
$1,438.78	2	23	Family			$1,600.32	11.23%	$2.80	$1,597.52	$34.48	2.15%	$1,563.04	$18.46	**$1,581.50**	9.9%
	COBRA														
$602.12	4	23	Single			$662.18	9.98%	$2.80	$659.38	$0.00	0.00%	$659.38	$16.04	**$675.42**	12.2%
$1,454.72	5	23	Family			$1,600.32	10.01%	$2.80	$1,597.52	$0.00	0.00%	$1,597.52	$34.80	**$1,632.32**	12.2%
	Active HDHP														
$526.30	1	25	Single			$584.50	11.06%	$2.80	$581.70	$12.40	2.12%	$569.30	$8.52	**$577.82**	9.8%
$1,271.56	2	25	Family			$1,412.66	11.10%	$2.80	$1,409.86	$30.42	2.15%	$1,379.44	$16.62	**$1,396.06**	9.8%
	COBRA HDHP														
$531.52	4	25	Single			$584.50	9.97%	$2.80	$581.70	$0.00	0.00%	$581.70	$14.48	**$596.18**	12.2%
$1,284.16	5	25	Family			$1,412.66	10.01%	$2.80	$1,409.86	$0.00	0.00%	$1,409.86	$31.04	**$1,440.90**	12.2%

Not Used in Second Year

Rate Structure B (new July/2017 or after)

First Year July/2017 - June/2018

Code	Struct	Description	Total Health Premiums	1-1-17 Medicare Part D Premiums	(1) Total SHP Premiums	(2) Less NDPERS Retention	(3) (1)-(2) Total Prem Paid to SHP	(6) (3)-(4)+(5) Total Paid to SHP	(7) NDPERS Retention	(8) (6)+(7) NDPERS Billing Rate	
Political Subdivision Rates with Wellness Program											
Active											
1	8	Single			$635.40	$2.80	$632.60	$632.60	$2.80	**$635.40**	-0.5%
2	8	Family			$1,536.98	$2.80	$1,534.18	$1,534.18	$2.80	**$1,536.98**	-0.4%
COBRA											
4	8	Single			$635.40	$2.80	$632.60	$632.60	$15.50	**$648.10**	-2.6%
5	8	Family			$1,536.98	$2.80	$1,534.18	$1,534.18	$33.54	**$1,567.72**	-2.5%
Political Subdivision Rates w/o Wellness Program											
Active											
1	7	Single			$635.40	$2.80	$632.60	$632.60	$9.14	**$641.74**	-0.5%
2	7	Family			$1,536.97	$2.80	$1,534.17	$1,534.17	$18.17	**$1,552.34**	-0.4%
COBRA											
4	7	Single			$635.40	$2.80	$632.60	$632.60	$15.50	**$648.10**	-2.6%
5	7	Family			$1,536.97	$2.80	$1,534.17	$1,534.17	$33.55	**$1,567.72**	-2.5%
NGF Political Subdivision Rates with Wellness Program											
Active											
1	28	Single			$645.06	$2.80	$642.26	$642.26	$2.80	**$645.06**	-0.5%
2	28	Family			$1,558.90	$2.80	$1,556.10	$1,556.10	$2.80	**$1,558.90**	-0.4%
COBRA											
4	28	Single			$645.06	$2.80	$642.26	$642.26	$15.70	**$657.96**	-2.6%
5	28	Family			$1,558.90	$2.80	$1,556.10	$1,556.10	$33.98	**$1,590.08**	-2.6%
Active HDHP											
1	30	Single			$568.86	$2.80	$566.06	$566.06	$2.80	**$568.86**	-0.6%
2	30	Family			$1,374.90	$2.80	$1,372.10	$1,372.10	$2.80	**$1,374.90**	-0.5%
COBRA HDHP											
4	30	Single			$568.86	$2.80	$566.06	$566.06	$14.18	**$580.24**	-2.7%
5	30	Family			$1,374.90	$2.80	$1,372.10	$1,372.10	$30.30	**$1,402.40**	-2.7%
NGF Political Subdivision Rates w/o Wellness Program											
Active											
1	27	Single			$645.06	$2.80	$642.26	$642.26	$9.24	**$651.50**	-0.5%
2	27	Family			$1,558.90	$2.80	$1,556.10	$1,556.10	$18.38	**$1,574.48**	-0.4%
COBRA											
4	27	Single			$645.06	$2.80	$642.26	$642.26	$15.70	**$657.96**	-2.6%
5	27	Family			$1,558.90	$2.80	$1,556.10	$1,556.10	$33.98	**$1,590.08**	-2.6%
Active HDHP											
1	29	Single			$568.85	$2.80	$566.05	$566.05	$8.49	**$574.54**	-0.6%
2	29	Family			$1,374.89	$2.80	$1,372.09	$1,372.09	$16.55	**$1,388.64**	-0.5%
COBRA HDHP											
4	29	Single			$568.85	$2.80	$566.05	$566.05	$14.19	**$580.24**	-2.7%
5	29	Family			$1,374.89	$2.80	$1,372.09	$1,372.09	$30.31	**$1,402.40**	-2.7%

Rate Structure B (new July/2017 or after)

Second Year July/2018 - June/2019

Code	Struct	Description	Total Health Premiums	1-1-17 Medicare Part D Premiums	(1) Total SHP Premiums	(2) Less NDPERS Retention & Wellness	(3) (1)-(2) Total Prem Paid to SHP	(6) (3)-(4)+(5) Total Paid to SHP	(7) NDPERS Retention	(8) (6)+(7) NDPERS Billing Rate	
Political Subdivision Rates with Wellness Program											
Active											
1	8	Single			$669.16	$2.80	$666.36	$666.36	$2.80	**$669.16**	4.8%
2	8	Family			$1,615.80	$2.80	$1,613.00	$1,613.00	$2.80	**$1,615.80**	4.8%
COBRA											
4	8	Single			$669.16	$2.80	$666.36	$666.36	$16.18	**$682.54**	2.6%
5	8	Family			$1,615.80	$2.80	$1,613.00	$1,613.00	$35.12	**$1,648.12**	2.5%
Political Subdivision Rates w/o Wellness Program											
Active											
1	7	Single			$669.16	$2.80	$666.36	$666.36	$9.48	**$675.84**	4.8%
2	7	Family			$1,615.80	$2.80	$1,613.00	$1,613.00	$18.96	**$1,631.96**	4.8%
COBRA											
4	7	Single			$669.16	$2.80	$666.36	$666.36	$16.18	**$682.54**	2.6%
5	7	Family			$1,615.80	$2.80	$1,613.00	$1,613.00	$35.12	**$1,648.12**	2.5%
NGF Political Subdivision Rates with Wellness Program											
Active											
1	28	Single			$679.36	$2.80	$676.56	$676.56	$2.80	**$679.36**	4.8%
2	28	Family			$1,641.78	$2.80	$1,638.98	$1,638.98	$2.80	**$1,641.78**	4.8%
COBRA											
4	28	Single			$679.36	$2.80	$676.56	$676.56	$16.38	**$692.94**	2.6%
5	28	Family			$1,641.78	$2.80	$1,638.98	$1,638.98	$35.64	**$1,674.62**	2.6%
Active HDHP											
1	30	Single			$599.10	$2.80	$596.30	$596.30	$2.80	**$599.10**	4.7%
2	30	Family			$1,447.98	$2.80	$1,445.18	$1,445.18	$2.80	**$1,447.98**	4.8%
COBRA HDHP											
4	30	Single			$599.10	$2.80	$596.30	$596.30	$14.78	**$611.08**	2.5%
5	30	Family			$1,447.98	$2.80	$1,445.18	$1,445.18	$31.76	**$1,476.94**	2.5%
NGF Political Subdivision Rates w/o Wellness Program											
Active											
1	27	Single			$679.36	$2.80	$676.56	$676.56	$9.58	**$686.14**	4.8%
2	27	Family			$1,641.78	$2.80	$1,638.98	$1,638.98	$19.22	**$1,658.20**	4.8%
COBRA											
4	27	Single			$679.36	$2.80	$676.56	$676.56	$16.38	**$692.94**	2.6%
5	27	Family			$1,641.78	$2.80	$1,638.98	$1,638.98	$35.64	**$1,674.62**	2.6%
Active HDHP											
1	29	Single			$599.10	$2.80	$596.30	$596.30	$8.78	**$605.08**	4.7%
2	29	Family			$1,447.98	$2.80	$1,445.18	$1,445.18	$17.28	**$1,462.46**	4.8%
COBRA HDHP											
4	29	Single			$599.10	$2.80	$596.30	$596.30	$14.78	**$611.08**	2.5%
5	29	Family			$1,447.98	$2.80	$1,445.18	$1,445.18	$31.76	**$1,476.94**	2.5%

JULY 2017 NDPERS Health Rates - Medicare Plan F Option

Rate Structure A
For Anyone Enrolled Prior to July/2017
Rates for July/2017 - June/2019

Jan-17 NDPERS Billing Rate	Code	Struct	Description	Total Health Premiums	1-1-17 Medicare Part D Premiums	(1) Total SHP Premiums	% Increase	(2) Less NDPERS Retention	(3) (1)-(2) Total Prem Paid to SHP	(4) Premium Buydown	Buydown %	(6) (3)-(4)+(5) Total Paid to SHP	(7) NDPERS Retention	**(8) (6)+(7) NDPERS Billing Rate**	Increase From 15-17 Billing Rate
	Medicare Retiree														
$274.08	41	11	1 Medicare only	$195.52	$90.32	$285.84	4.29%	$2.80	$283.04	$6.16	2.15%	$276.88	$2.80	**$279.68**	2.0%
$545.06	42	11	2 Medicare only	$388.24	$180.64	$568.88	4.37%	$2.80	$566.08	$12.26	2.15%	$553.82	$2.80	**$556.62**	2.1%
$816.64	50	11	3 Medicare only	$580.96	$270.96	$851.92	4.32%	$2.80	$849.12	$18.34	2.15%	$830.78	$2.80	**$833.58**	2.1%
$1,087.92	51	11	4 Medicare only	$773.68	$361.28	$1,134.96	4.32%	$2.80	$1,132.16	$24.44	2.15%	$1,107.72	$2.80	**$1,110.52**	2.1%
$711.76	43	11	1 Medicare+Others	$686.74	$90.32	$777.06	9.17%	$2.80	$774.26	$16.74	2.15%	$757.52	$2.80	**$760.32**	6.8%
$982.74	49	11	2 Medicare+Others	$879.46	$180.64	$1,060.10	7.87%	$2.80	$1,057.30	$22.84	2.15%	$1,034.46	$2.80	**$1,037.26**	5.5%
$1,254.32	55	11	3 Medicare+Others	$1,072.18	$270.96	$1,343.14	7.08%	$2.80	$1,340.34	$28.94	2.15%	$1,311.40	$2.80	**$1,314.20**	4.8%
$1,525.60	58	11	4 Medicare+Others	$1,264.90	$361.28	$1,626.18	6.59%	$2.80	$1,623.38	$35.02	2.15%	$1,588.36	$2.80	**$1,591.16**	4.3%
$551.34	44	11	Part A Single	$490.80	$90.32	$581.12	5.40%	$2.80	$578.32	$12.52	2.15%	$565.80	$2.80	**$568.60**	3.1%
	Medicare Low Income Subsidy														
$240.98	41	13	1 Medicare only (1cr)	$195.52	$57.22	$252.74	4.88%	$2.80	$249.94	$6.16	2.44%	$243.78	$2.80	**$246.58**	2.3%
$478.86	42	13	2 Medicare only (2cr)	$388.24	$114.44	$502.68	4.97%	$2.80	$499.88	$12.26	2.44%	$487.62	$2.80	**$490.42**	2.4%
$783.54	50	13	3 Medicare only (1cr)	$580.96	$237.86	$818.82	4.50%	$2.80	$816.02	$18.34	2.24%	$797.68	$2.80	**$800.48**	2.2%
$1,054.82	51	13	4 Medicare only (1cr)	$773.68	$328.18	$1,101.86	4.46%	$2.80	$1,099.06	$24.44	2.22%	$1,074.62	$2.80	**$1,077.42**	2.1%
$678.66	43	13	1 Medicare+Others (1cr)	$686.74	$57.22	$743.96	9.62%	$2.80	$741.16	$16.74	2.25%	$724.42	$2.80	**$727.22**	7.2%
$952.44	49	13	2 Medicare+Others (1cr)	$879.46	$147.54	$1,027.00	7.83%	$0.00	$1,027.00	$22.84	2.22%	$1,004.16	$2.80	**$1,006.96**	5.7%
$1,190.92	55	13	3 Medicare+Others (2cr)	$1,072.18	$204.76	$1,276.94	7.22%	$0.00	$1,276.94	$28.94	2.27%	$1,248.00	$2.80	**$1,250.80**	5.0%
$249.28	41	13	1 Medicare only (.75cr)	$195.52	$65.52	$261.04	4.72%	$2.80	$258.24	$6.16	2.36%	$252.08	$2.80	**$254.88**	2.2%
$257.58	41	13	1 Medicare only (.5cr)	$195.52	$73.82	$269.34	4.57%	$2.80	$266.54	$6.16	2.29%	$260.38	$2.80	**$263.18**	2.2%
$265.78	41	13	1 Medicare only (.25cr)	$195.52	$82.02	$277.54	4.42%	$2.80	$274.74	$6.16	2.22%	$268.58	$2.80	**$271.38**	2.1%
$1,024.52	51	13	4 Medicare only (2cr)	$773.68	$295.08	$1,068.76	4.32%	$0.00	$1,068.76	$35.02	3.28%	$1,033.74	$2.80	**$1,036.54**	1.2%
$511.96	42	13	2 Medicare only (1cr)	$388.24	$147.54	$535.78	4.65%	$2.80	$532.98	$12.26	2.29%	$520.72	$2.80	**$523.52**	2.3%
	Grandfathered Rates														
$545.10	42	14	2 Medicare only	$387.96	$180.64	$568.60	4.31%	$2.80	$565.80	$12.24	2.15%	$553.56	$2.80	**$556.36**	2.1%
$658.46	50	14	3 Medicare only	$412.50	$270.96	$683.46	3.80%	$2.80	$680.66	$14.72	2.15%	$665.94	$2.80	**$668.74**	1.6%
$599.12	51	14	4 Medicare only	$253.10	$361.28	$614.38	2.55%	$2.80	$611.58	$13.24	2.15%	$598.34	$2.80	**$601.14**	0.3%
$755.76	49	14	2 Medicare+Others	$635.26	$180.64	$815.90	7.96%	$2.80	$813.10	$17.58	2.15%	$795.52	$2.80	**$798.32**	5.6%
	Medicare Retirees COBRA (for Non-Medicare dependents of Medicare Retirees)														
$449.28	30	11	Single	$494.02		$494.02	9.96%	$2.80	$491.22	$0.00	0.00%	$491.22	$12.68	**$503.90**	12.2%
$633.56	31	11	Family	$696.78		$696.78	9.98%	$2.80	$693.98	$0.00	0.00%	$693.98	$16.74	**$710.72**	12.2%

Not Used in Second Year

Rate Structure B (new July/2017 or after)

First Year July/2017 - June/2018

Code	Struct	Description	Total Health Premiums	1-1-17 Medicare Part D Premiums	(1) Total SHP Premiums	(2) Less NDPERS Retention	(3) (1)-(2) Total Prem Paid to SHP	(6) (3)-(4)+(5) Total Paid to SHP	(7) NDPERS Retention	(8) (6)+(7) NDPERS Billing Rate	
Medicare Retiree											
41	12	1 Medicare only	$193.02	$90.32	$283.34	$2.80	$280.54	$280.54	$2.80	**$283.34**	1.3%
42	12	2 Medicare only	$383.24	$180.64	$563.88	$2.80	$561.08	$561.08	$2.80	**$563.88**	1.3%
50	12	3 Medicare only	$573.46	$270.96	$844.42	$2.80	$841.62	$841.62	$2.80	**$844.42**	1.3%
51	12	4 Medicare only	$763.68	$361.28	$1,124.96	$2.80	$1,122.16	$1,122.16	$2.80	**$1,124.96**	1.3%
43	12	1 Medicare+Others	$677.94	$90.32	$768.26	$2.80	$765.46	$765.46	$2.80	**$768.26**	1.0%
49	12	2 Medicare+Others	$868.16	$180.64	$1,048.80	$2.80	$1,046.00	$1,046.00	$2.80	**$1,048.80**	1.1%
55	12	3 Medicare+Others	$1,058.38	$270.96	$1,329.34	$2.80	$1,326.54	$1,326.54	$2.80	**$1,329.34**	1.2%
58	12	4 Medicare+Others	$1,248.60	$361.28	$1,609.88	$2.80	$1,607.08	$1,607.08	$2.80	**$1,609.88**	1.2%
Medicare Low Income Subsidy											
41	12	1 Medicare only (1cr)	$193.02	$57.22	$250.24	$2.80	$247.44	$247.44	$2.80	**$250.24**	1.5%
42	12	2 Medicare only (2cr)	$383.24	$114.44	$497.68	$2.80	$494.88	$494.88	$2.80	**$497.68**	1.5%
50	12	3 Medicare only (1cr)	$573.46	$237.86	$811.32	$2.80	$808.52	$808.52	$2.80	**$811.32**	1.4%
51	12	4 Medicare only (1cr)	$763.68	$328.18	$1,091.86	$2.80	$1,089.06	$1,089.06	$2.80	**$1,091.86**	1.3%
43	12	1 Medicare+Others (1cr)	$677.94	$57.22	$735.16	$2.80	$732.36	$732.36	$2.80	**$735.16**	1.1%
49	12	2 Medicare+Others (1cr)	$868.16	$147.54	$1,015.70	$2.80	$1,012.90	$1,012.90	$2.80	**$1,015.70**	0.9%
55	12	3 Medicare+Others (2cr)	$1,058.38	$204.76	$1,263.14	$2.80	$1,260.34	$1,260.34	$2.80	**$1,263.14**	1.0%
41	12	1 Medicare only (.75cr)	$193.02	$65.52	$258.54	$2.80	$255.74	$255.74	$2.80	**$258.54**	1.4%
41	12	1 Medicare only (.5cr)	$193.02	$73.82	$266.84	$2.80	$264.04	$264.04	$2.80	**$266.84**	1.4%
41	12	1 Medicare only (.25cr)	$193.02	$82.02	$275.04	$2.80	$272.24	$272.24	$2.80	**$275.04**	1.3%
51	12	4 Medicare only (2cr)	$763.68	$295.08	$1,058.76	$2.80	$1,055.96	$1,055.96	$2.80	**$1,058.76**	2.1%
42	12	2 Medicare only (1cr)	$383.24	$147.54	$530.78	$2.80	$527.98	$527.98	$2.80	**$530.78**	1.4%
Medicare Retirees COBRA (for Non-Medicare dependents of Medicare Retirees)											
30	12	Single	$487.72		$487.72	$2.80	$484.92	$484.92	$12.54	**$497.46**	-1.3%
31	12	Family	$677.94		$677.94	$2.80	$675.14	$675.14	$16.36	**$691.50**	-2.7%

Rate Structure B (new July/2017 or after)

Second Year July/2018 - June/2019

Code	Struct	Description	Total Health Premiums	1-1-17 Medicare Part D Premiums	(1) Total SHP Premiums	(2) Less NDPERS Retention & Wellness	(3) (1)-(2) Total Prem Paid to SHP	(6) (3)-(4)+(5) Total Paid to SHP	(7) NDPERS Retention	(8) (6)+(7) NDPERS Billing Rate	
Medicare Retiree											
41	12	1 Medicare only	$198.00	$90.32	$288.32	$2.80	$285.52	$285.52	$2.80	**$288.32**	3.1%
42	12	2 Medicare only	$393.20	$180.64	$573.84	$2.80	$571.04	$571.04	$2.80	**$573.84**	3.1%
50	12	3 Medicare only	$588.40	$270.96	$859.36	$2.80	$856.56	$856.56	$2.80	**$859.36**	3.1%
51	12	4 Medicare only	$783.60	$361.28	$1,144.88	$2.80	$1,142.08	$1,142.08	$2.80	**$1,144.88**	3.1%
43	12	1 Medicare+Others	$695.50	$90.32	$785.82	$2.80	$783.02	$783.02	$2.80	**$785.82**	3.4%
49	12	2 Medicare+Others	$890.70	$180.64	$1,071.34	$2.80	$1,068.54	$1,068.54	$2.80	**$1,071.34**	3.3%
55	12	3 Medicare+Others	$1,085.90	$270.96	$1,356.86	$2.80	$1,354.06	$1,354.06	$2.80	**$1,356.86**	3.2%
58	12	4 Medicare+Others	$1,281.10	$361.28	$1,642.38	$2.80	$1,639.58	$1,639.58	$2.80	**$1,642.38**	3.2%
41	12	1 Medicare only (1cr)	$198.00	$57.22	$255.22	$2.80	$252.42	$252.42	$2.80	**$255.22**	3.5%
42	12	2 Medicare only (2cr)	$393.20	$114.44	$507.64	$2.80	$504.84	$504.84	$2.80	**$507.64**	3.5%
50	12	3 Medicare only (1cr)	$588.40	$237.86	$826.26	$2.80	$823.46	$823.46	$2.80	**$826.26**	3.2%
51	12	4 Medicare only (1cr)	$783.60	$328.18	$1,111.78	$2.80	$1,108.98	$1,108.98	$2.80	**$1,111.78**	3.2%
43	12	1 Medicare+Others (1cr)	$695.50	$57.22	$752.72	$2.80	$749.92	$749.92	$2.80	**$752.72**	3.5%
49	12	2 Medicare+Others (1cr)	$890.70	$147.54	$1,038.24	$2.80	$1,035.44	$1,035.44	$2.80	**$1,038.24**	3.1%
55	12	3 Medicare+Others (2cr)	$1,085.90	$204.76	$1,290.66	$2.80	$1,287.86	$1,287.86	$2.80	**$1,290.66**	3.2%
41	12	1 Medicare only (.75cr)	$198.00	$65.52	$263.52	$2.80	$260.72	$260.72	$2.80	**$263.52**	3.4%
41	12	1 Medicare only (.5cr)	$198.00	$73.82	$271.82	$2.80	$269.02	$269.02	$2.80	**$271.82**	3.3%
41	12	1 Medicare only (.25cr)	$198.00	$82.02	$280.02	$2.80	$277.22	$277.22	$2.80	**$280.02**	3.2%
51	12	4 Medicare only (2cr)	$783.60	$295.08	$1,078.68	$2.80	$1,075.88	$1,075.88	$2.80	**$1,078.68**	4.1%
42	12	2 Medicare only (1cr)	$393.20	$147.54	$540.74	$2.80	$537.94	$537.94	$2.80	**$540.74**	3.3%
30	12	Single	$500.29	$0.00	$500.29	$2.80	$497.49	$497.49	$12.81	**$510.30**	1.3%
31	12	Family	$702.86	$0.00	$702.86	$2.80	$700.06	$700.06	$16.86	**$716.92**	0.9%

Health, RX & HMO Insurance Plans:

1 Rates must be evenly divisible by 2, carried out to 2 decimal places, to accommodate employers who have semi-monthly payrolls

2 The rate must not exceed 2 decimal places (example: xxx.xx). The PERS billing and payroll systems do not accommodate thousandths (example xxx.xxx).

Medicare Retiree (NonMedicare Split Rate)											
98	11	Single NM Dependents with GF Status									$494.00
99	11	Family NM Dependents with GF Status									$494.00
Grandfathered Rate											
98	14	Single NM Dependents with GF Status									$239.22
GAP Coverage											
61	11	GAP Single			$914.38	$2.80	$911.58	$0.00	$911.58	$2.80	**$914.38**
62	11	GAP Family			$1,825.96	$2.80	$1,823.16	$0.00	$1,823.16	$2.80	**$1,825.96**
63	11	GAP Family (3+)			$2,281.74	$2.80	$2,278.94	$0.00	$2,278.94	$2.80	**$2,281.74**
64	11	GAP 1 Medicare + Others	$686.74	$90.32	$777.06	$2.80	$774.26	$0.00	$774.26	$2.80	**$777.06**
65	11	GAP 2 Medicare + Others	$879.46	$180.64	$1,060.10	$2.80	$1,057.30	$0.00	$1,057.30	$2.80	**$1,060.10**
66	11	GAP 3 Medicare + Others	$1,072.18	$270.96	$1,343.14	$2.80	$1,340.34	$0.00	$1,340.34	$2.80	**$1,343.14**
67	11	GAP 4 Medicare + Others	$1,264.90	$361.28	$1,626.18	$2.80	$1,623.38	$0.00	$1,623.38	$2.80	**$1,626.18**

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Memorandum

TO: PERS Board

FROM: Sparb

DATE: April 27, 2017

SUBJECT: Economic Assumptions

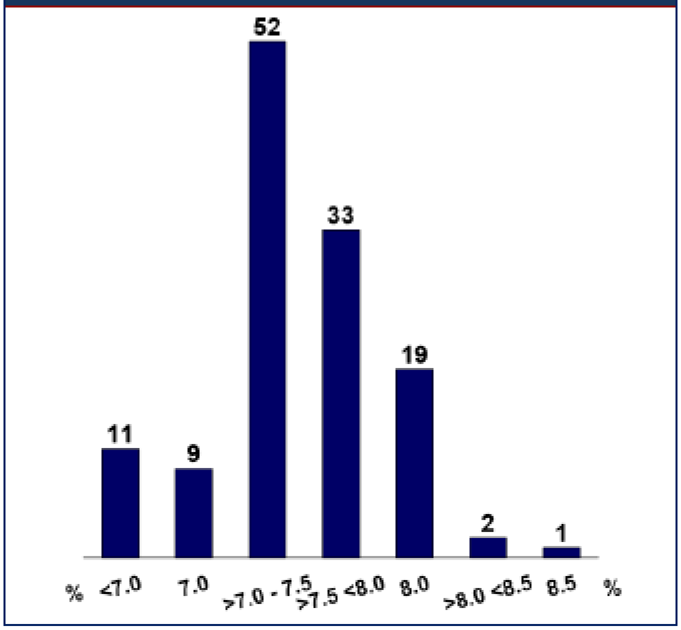
Economic Assumptions for the Retirement plan

At the last meeting GRS presented there report which reviewed the retirement plans economic assumptions (exhibit #1 - attachment #1). In that report they made several suggestions relating to our assumptions. These were:

> *Following is a summary of our key findings and recommendations:*
>
> ☐ ***Price inflation**: We recommend reducing the rate of price inflation from 3.50 percent to 2.50 percent.*
>
> ☐ ***Investment return**: The investment return assumption, net of investment expenses, compounded annually, is currently 8.00 percent for all Systems except Job Service. This reflects an underlying inflation assumption of 3.50 percent and a real return assumption of 4.50 percent. We recommend reducing the investment return assumption from 8.00 percent to 7.50 percent (based on a 2.50 percent inflation assumption and a real return assumption of 5.00 percent). The decrease in the investment return assumption of 0.50 percent reflects a decrease in the inflation assumption of 1.00 percent and an increase in the real return assumption of 0.50 percent. We also recommend monitoring the assumption for continued reasonableness in the future. This is based on NDPERS maintaining the same target asset allocation in the future.*
>
> ☐ ***Payroll growth assumption**: We recommend reducing the general payroll growth assumption from 4.50 percent (which reflects an underlying general or price inflation assumption of 3.50 percent) to 3.75 percent (based on an underlying price inflation assumption of 2.50 percent) for the Main System and Law Enforcement and from 4.00 percent to 3.25 percent for Judges.*
>
> ☐ ***Asset Valuation Method:** We recommend changing the current asset valuation method (which is biased toward the actuarial value of assets being lower than the market value of assets) to a method which smooths total investment gains or losses compared to the investment return assumption (recommended to be 7.50 percent) over a five-year period*

At that meeting we also reviewed the NASRA Survey of other public sector plans and there return assumptions. The following was noted:

Figure 5: Distribution of investment return assumptions



We also noted that TFFR recently changed their return assumption from 8% to 7.75%.

At that meeting you requested from them projections on how a change in the assumptions would effect the projected long term funding position of PERS. Exhibit #2 is that information. You also requested that they should examine the effect of a change from 8% return assumption to 7.75%. The attached shows that changing the assumption to 7,5% changes our long term out look and actually puts us on a downward slope. It shows the 7.75% change is not as dramatic.

Staff Recommendation:

Accept the GRS recommendations except for the return assumption. Staff would recommend reducing the 8% to 7.75% instead of the GRS recommendation to 7.5%. This recommendation is based upon:

- Our long term rate of return.

Public Employees Retirement System (PERS)		
	Net of Fee Return	**Fair Value**
7 Months Ended 1/31/2017	5.81%	2,603,267,976
One Year Ended 6/30/2016	0.28%	2,459,388,086
One Year Ended 6/30/2015	3.53%	2,422,579,596
One Year Ended 6/30/2014	16.38%	2,332,744,038
One Year Ended 6/30/2013	13.44%	2,000,899,336
One Year Ended 6/30/2012	-0.12%	1,774,312,176
One Year Ended 6/30/2011	21.27%	1,802,349,991
One Year Ended 6/30/2010	13.67%	1,511,637,812
One Year Ended 6/30/2009	-24.50%	1,354,696,831
One Year Ended 6/30/2008	-5.60%	1,813,030,225
One Year Ended 6/30/2007	18.96%	1,937,349,889
One Year Ended 6/30/2006	12.00%	1,636,449,000
One Year Ended 6/30/2005	14.08%	1,476,824,288
One Year Ended 6/30/2004	16.63%	1,305,721,372
One Year Ended 6/30/2003	5.45%	1,126,816,757
One Year Ended 6/30/2002	-6.83%	1,080,731,343
3 Years Ending June 30, 2016	**6.51%**	
5 Years Ending June 30, 2016	**6.49%**	
10 Years Ending June 30, 2016	**4.81%**	
15 Years Ending June 30, 2016	**5.84%**	
20 Years Ending June 30, 2016	**6.88%**	
25 Years Ending June 30, 2016	**7.86%**	
30 Years Ending June 30, 2016	**7.89%**	

- That 55% of state retirement systems are above 7.5%

- This is consistent with TFFR's move on this assumption.

Assumptions for actuarial factors

In order to produce updated actuarial factors, we are looking for confirmation from the Board of the following underlying actuarial assumptions to be used:

- Interest rate – we recommend 7.50%
- Salary increase assumption – we recommend 5% (although we would like additional information on when members purchase service and sample calculations using the current factors)
- Unisex blend to use for the mortality assumption (we will use the same mortality assumptions that were used in the 2016 actuarial valuation) – we recommend a 50/50 blend of the male and female rates

Staff Recommendation

Accept the GRS recommendation (above) except for the Interest Rate and instead staff is recommending a 7.75%

Board Action Requested

Determine the economic assumptions for the retirement plan and assumption for the actuarial factors.

Exhibit # 1

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Memorandum

TO: PERS Board

FROM: Sparb

DATE: March 9, 2017

SUBJECT: Economic Assumptions

This last year we did an analysis of our economic and demographic assumptions with our former actuary Segal. Since we changed actuaries to GRS this last year as well as a result of a bid they indicated they would like the opportunity to review our assumptions as well (with no charge). Attachment #1 is the product of that review and GRS will be at the board meeting to review it with you as well. One of the assumptions they review in the attachment is our return assumption (which is 8%). For your reference Attachment #2 is paper recently done by NASRA on the return assumption used by other states.

The following is some background information from GRS:

> *As you are well aware, the actuarial assumptions used in the July 1, 2016, actuarial valuations of the North Dakota Public Employees Retirement System ("NDPERS") were provided to us by the NDPERS Board and were based on an experience review for the five-year period ending July 1, 2014, performed by the prior actuary (Segal). As a result, GRS was unable to judge the reasonableness of the actuarial assumptions and methods without performing a substantial amount of additional work beyond the scope of the annual actuarial valuation, and did not do so.*
>
> *However, in order to opine on the reasonableness of the actuarial assumptions to be used in conjunction with the upcoming July 1, 2017, actuarial valuations, we have reviewed the economic assumptions (rate of inflation, investment return, wage inflation and payroll growth assumption), along with the current asset valuation method. The primary purpose of this study is to review the key economic actuarial assumptions and the asset valuation method, in light of the relevant Actuarial Standards of Practice ("ASOPs"), in order to determine their continued appropriateness.*
>
> *The Actuarial Standards Board (ASB) promulgates ASOPs for use by actuaries when rendering actuarial services in the United States. The ASB is vested by the U.S.-based actuarial organizations with the responsibility for promulgating ASOPs for actuaries rendering actuarial services in the United States. Each of these actuarial organizations requires its members, through its Code of Professional Conduct (Code), to satisfy applicable ASOPs when rendering actuarial services in the United States.*

ASOP No. 27, in particular, provides guidance to actuaries in selecting (including giving advice on selecting) economic assumptions—primarily investment return, discount rate, postretirement benefit increases, inflation, and compensation increases—for measuring obligations under defined benefit pension plans. In a public retirement system like NDPERS, it is ultimately the Retirement Board's responsibility to approve the actuarial assumptions used in the actuarial valuations. It is the actuary's duty to provide the Board with information needed to make those decisions and to make recommendations to the Board. Although the Board is the ultimate decision-making body, as the actuary to NDPERS we are still bound by ASOP No. 27 in providing advice or making recommendations to the Board.

Board Action Requested:

To determine:

1. If we should maintain the existing assumptions.
2. Or should we explore these recommendations further by having GRS attend the April meeting to give us a presentation and develop estimates of the effect on contribution requirements and long term funded status.

Economic Assumptions
Attachment #1

NORTH DAKOTA PUBLIC EMPLOYEES RETIREMENT SYSTEM

2017 ECONOMIC ACTUARIAL ASSUMPTION REVIEW

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February 20, 2017

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

Subject: 2017 Economic Actuarial Assumption Review

Dear Members of the Board:

The actuarial assumptions used in the July 1, 2016, actuarial valuation of the North Dakota Public Employees Retirement System ("NDPERS") were provided to us by the NDPERS Board and were based on an experience review for the five-year period ending July 1, 2014, performed by the prior actuary (Segal).

As a result, GRS was unable to judge the reasonableness of the actuarial assumptions and methods without performing a substantial amount of additional work beyond the scope of the annual actuarial valuation, and did not do so.

However, in order to opine on the reasonableness of the actuarial assumptions to be used in conjunction with the July 1, 2017, actuarial valuations, we have reviewed the economic assumptions (rate of inflation, investment return, wage inflation and payroll growth assumption), along with the current asset valuation method.

The primary purpose of this study is to review the key economic actuarial assumptions and the asset valuation method to determine their continued appropriateness.

Our study includes a review of the experience and expectations associated with the following actuarial assumptions and methods:

- Price Inflation;
- Investment Return;
- Wage Inflation;
- Payroll Growth; and
- Asset Valuation Method.

Section I contains a summary of the actuarial assumption review. The results of this analysis are set forth in Section II of this report.

This assumption review is based on general economic data and target asset allocation information as provided by NDPERS Staff. All calculations have been made in conformity with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. Based on these items, we certify these results to be true and correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

This report should not be relied on for any purpose other than the purpose stated.

The signing actuaries are independent of the plan sponsor.

The actuaries submitting this report (Lance J. Weiss, Amy Williams and David Kausch) are all Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

Gabriel, Roeder, Smith & Company

Lance J. Weiss, E.A., M.A.A.A., F.C.A.
Senior Consultant and Team Leader

Amy Williams, A.S.A., M.A.A.A., F.C.A.
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Senior Consultant and GRS Chief Actuary

TABLE OF CONTENTS

SECTION I

SUMMARY

NORTH DAKOTA PUBLIC EMPLOYEES RETIREMENT SYSTEM
EXPERIENCE REVIEW SUMMARY

Background

For any pension plan, actuarial assumptions are selected that are intended to provide reasonable estimates of future expected events, such as System investment returns, interest crediting, and patterns of retirement, turnover and mortality. These assumptions, along with an actuarial cost method, an asset valuation method, the employee census data and the plan's provisions are used to determine the actuarial liabilities and overall actuarially determined funding requirements for the plan. The true cost to the plan over time will be the actual benefit payments and expenses required by the plan's provisions for the participant group under the plan. To the extent the actual experience deviates from the actuarial assumptions, experience gains and losses will occur. These gains (losses) then serve to reduce (increase) future actuarially determined contributions and increase (reduce) the funded ratio.

The actuarial assumptions should be individually reasonable and consistent in the aggregate. They should also be reviewed periodically to ensure that they remain appropriate.

The actuarial cost method, for plan sponsors that use actuarially based funding policies, automatically adjusts contributions over time for differences between what is assumed and the actual experience under the plan.

The Actuarial Standards Board ("ASB") provides guidance on measuring the costs of financing a retirement program through the following Actuarial Standards of Practices ("ASOPs"):

(1) ASOP No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*;
(2) ASOP No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*;
(3) ASOP No. 35, *Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations*; and
(4) ASOP No. 44, *Selection and Use of Asset Valuation Methods for Pension Valuations*.

The recommendations provided in this report are consistent with the preceding actuarial standards of practice.

ASOP No. 27 provides guidance related to selecting economic assumptions, including the investment return, discount rate, inflation, postemployment benefit increases, compensation increases and any other related economic assumptions.

In developing specific actuarial assumptions, ASOP No. 27 requires the actuary to follow a general process of:

(1) Identifying the components of the assumption;
(2) Evaluating relevant data;
(3) Considering specific and general factors related to the measurement; and
(4) Selecting a reasonable assumption.

In evaluating relevant data, the actuary should include appropriate recent and long-term historic data, but not give undue weight to recent experience.

Further, under ASOP No. 27, an assumption is considered reasonable if:

- It is appropriate for the purpose of the measurement;
- It reflects the actuary's professional judgment;
- It takes into account historical and current economic data that is relevant as of the measurement date;
- It reflects the actuary's estimate of future experience, the actuary's observation of the estimates inherent in market data, or a combination thereof; and
- It has no significant bias (i.e., it is not significantly optimistic or pessimistic).

Also according to the ASOP No. 27, the actuary should recognize the uncertain nature of the items for which assumptions are selected and, as a result, may consider several different assumptions reasonable for a given measurement. The actuary should also recognize that different actuaries will apply different professional judgment and may choose different reasonable assumptions. As a result, a narrow range of reasonable assumptions may develop both for an individual actuary and across actuarial practice.

Asset Valuation Method

The Asset valuation method is a method used by the actuary to determine the actuarial value of assets used in an annual actuarial valuation of a defined benefit pension plan. ASOP 44 "Selection and Use of Asset Valuation Methods for Pension Valuations" applies to actuaries when performing professional services with respect to selecting or using an asset valuation method for any defined benefit pension plan that is not a social insurance program. Throughout this standard, any reference to selecting an asset valuation method also includes giving advice on selecting an asset valuation method. For instance, the actuary may advise the plan sponsor on selecting an asset valuation method, where the plan sponsor is responsible for selecting the method.

Actuarial Assumptions

The actuarial assumptions are usually divided into two categories:

- Economic assumptions, which include:
  - Assumed rate of price inflation (as measured by the change in the Consumer Price Index for all urban consumers)
    - Underlies all other economic assumptions
  - Assumed long-term rate of return on investments
    - Rate at which projected benefits are reduced to present value
  - General wage increases
    - Reflects inflationary forces on increases in pay for all members
  - Rate of payroll growth
    - Reflects expectation of growth in total payroll and affects level percent of pay actuarially determined contribution

Recommendations for the economic assumptions are based on the actuary's expectations as to the effect of future economic conditions on the operation of the plan, with input from Staff, the Board and other investment advisors. The assumptions are adopted by the Board.

- Demographic assumptions, which include the following rates:

  - Mortality
  - Retirement
  - Disablement
  - Withdrawal (other termination of employment)

  Demographic assumptions are generally based on the plan's own experience, taking into account emerging trends. Rates of salary increase due to promotion and longevity are also related to the plan's experience.

This report includes a review of the following economic assumptions only:

- Price inflation
- Investment return assumption
- Payroll growth assumption

Current Assumptions/Methods Used in the July 1, 2016, Actuarial Valuations

The actuarial assumptions used in the July 1, 2016, actuarial valuation of the North Dakota Public Employees Retirement System ("NDPERS") were provided to us by the NDPERS Board and were based on an experience review for the five-year period ending July 1, 2014, performed by the prior actuary (Segal).

These assumptions are as follows:

Price inflation: The assumed rate of price inflation used was 3.50 percent.

Investment return: The assumed rate of investment return used was 8.00 percent, net of investment expenses, annually.

Payroll growth assumption: The assumed rate of payroll growth used in amortizing the unfunded liability as a level percent of pay was 4.50 percent for the Main System and Law Enforcement and 4.00 percent for Judges.

Asset Valuation Method: The current actuarial value of assets:

- Immediately recognizes interest and dividends; and
- Recognizes the total recognized and unrecognized appreciation or depreciation from the current year (net change in fair value of investments) over a five-year period.

Key Findings and Recommendations

Gabriel, Roeder, Smith & Company ("GRS") has performed a review of the economic actuarial assumptions of NDPERS. The primary purpose of the study was to compare the actual economic experience and future expectations with the current actuarial assumptions used in the actuarial valuations.

In a public retirement system like NDPERS, it is ultimately the Retirement Board's responsibility to approve the actuarial assumptions used in the actuarial valuations. It is the actuary's duty to provide the Board with information needed to make those decisions and to make recommendations to the Board.

Following is a summary of our key findings and recommendations:

- **Price inflation**: We recommend reducing the rate of price inflation from 3.50 percent to 2.50 percent.
- **Investment return**: The investment return assumption, net of investment expenses, compounded annually, is currently 8.00 percent for all Systems except Job Service. This reflects an underlying inflation assumption of 3.50 percent and a real return assumption of 4.50 percent. We recommend reducing the investment return assumption from 8.00 percent to 7.50 percent (based on a 2.50 percent inflation assumption and a real return assumption of 5.00 percent). The decrease in the investment return assumption of 0.50 percent reflects a decrease in the inflation assumption of 1.00 percent and an increase in the real return assumption of 0.50 percent. We also recommend monitoring the assumption for continued reasonableness in the future. This is based on NDPERS maintaining the same target asset allocation in the future.
- **Payroll growth assumption**: We recommend reducing the general payroll growth assumption from 4.50 percent (which reflects an underlying general or price inflation assumption of 3.50 percent) to 3.75 percent (based on an underlying price inflation assumption of 2.50 percent) for the Main System and Law Enforcement and from 4.00 percent to 3.25 percent for Judges.
- **Asset Valuation Method:** We recommend changing the current asset valuation method (which is biased toward the actuarial value of assets being lower than the market value of assets) to a method which smooths total investment gains or losses compared to the investment return assumption (recommended to be 7.50 percent) over a five-year period.

SECTION II

EXPERIENCE ANALYSIS

Economic assumptions reflect the effects of economic forces on the projections of retirement benefits payable from the plan and in the discounting of those benefits to present value.

These assumptions are based, at their core, on the assumed level of price inflation. Each economic assumption is then developed from expected spreads over price inflation.

The key economic assumptions are:

1. Assumed Rate of Inflation – The rate of price inflation (as measured by the Consumer Price Index for all Urban consumers) which underlies the remainder of the economic assumptions.
2. Assumed Rate of Investment Return – The rate at which projected future benefits under the pension plan are reduced to present value.
3. Rate of General Annual Pay Increases – This reflects inflationary forces on increases in pay for individual members.

Rate of Inflation

Historical Inflation Results

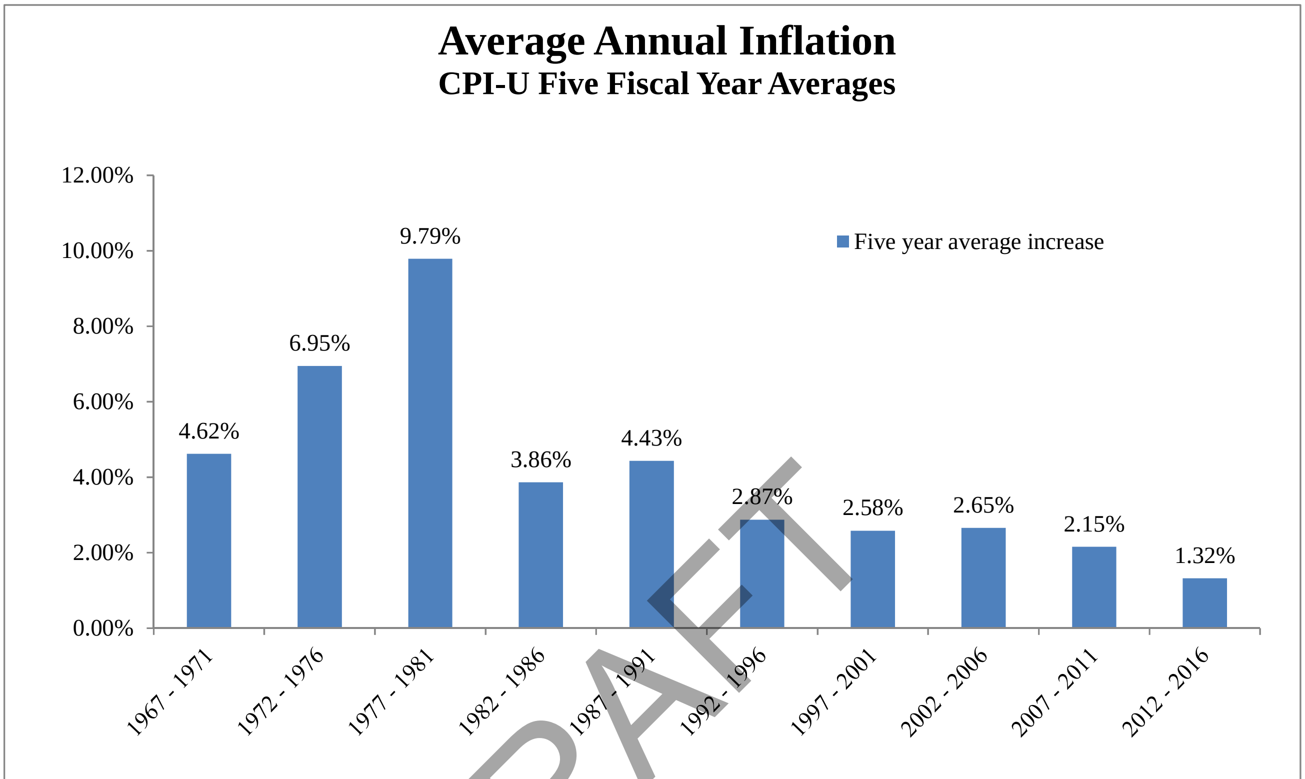
By "inflation," we mean price inflation, as measured by annual increases in the Consumer Price Index (CPI). This inflation assumption underlies all of the other economic assumptions we employ. It not only impacts investment return, but also salary increase rates and the payroll growth assumption. The current annual inflation assumption is 3.50 percent.

Over the latest five-year period from June 2011 through June 2016, the CPI-U has increased at an average rate of 1.32 percent. However, the assumed inflation rate is only weakly tied to past results.

The following table shows the average inflation over various periods, ending June 2016.

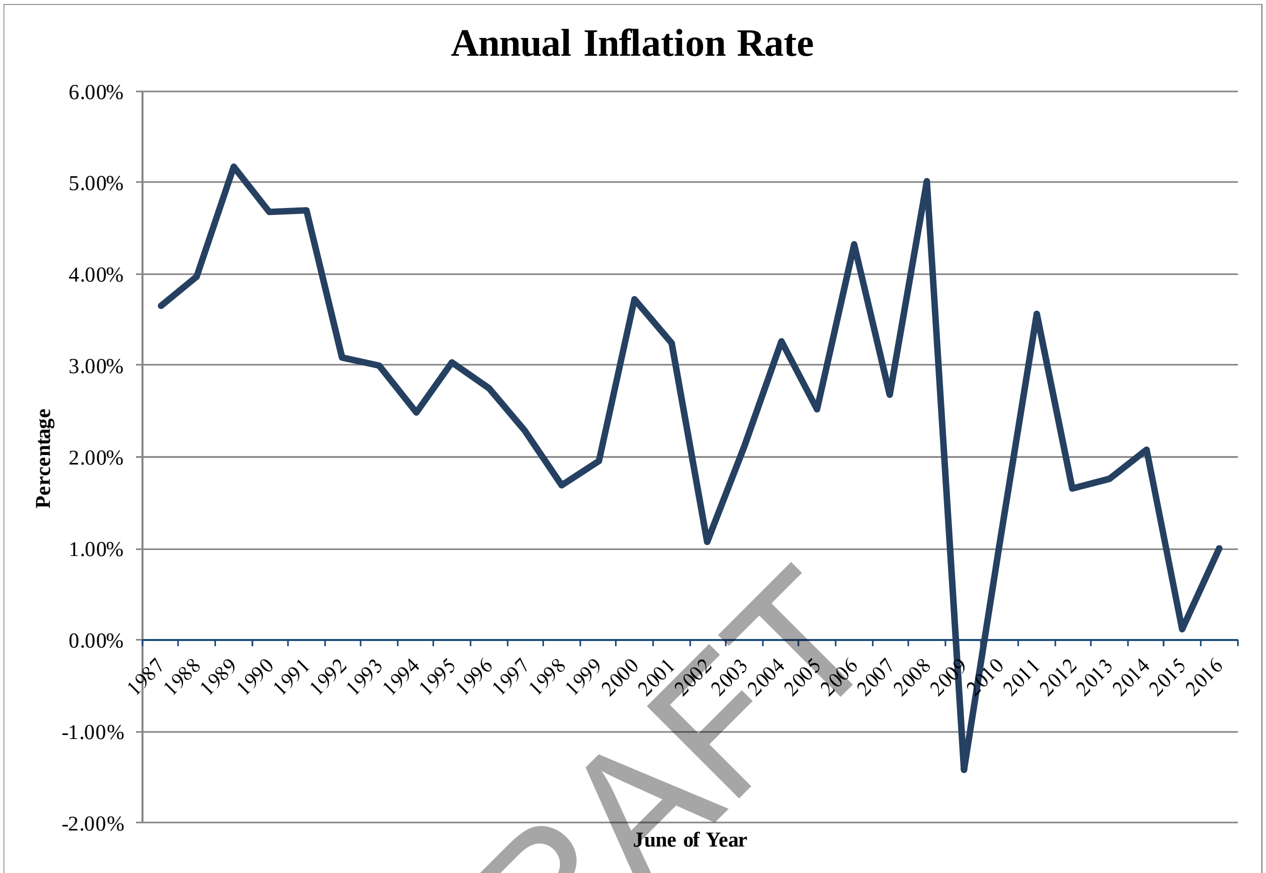
Fiscal Year	Annual Increase in CPI-U
2011-12	1.66%
2012-13	1.75%
2013-14	2.07%
2014-15	0.12%
2015-16	1.00%
3-Year Average	1.06%
5-Year Average	1.32%
10-Year Average	1.74%
20-Year Average	2.18%
25-Year Average	2.32%
30-Year Average	2.66%
40-Year Average	3.68%
50-Year Average	4.10%

The graph below shows the average inflation over 5-year periods over the last 50 years:



As the above chart illustrates, the high inflation of the 1970s and 1980s is well in the past. The geometric average price inflation was 2.66% per year over the last 30 years from June 1986 to June 2016, 2.18 percent over the last 20 years and 1.74 percent over the last 10 years.

The graph on the next page illustrates the rate of inflation on a year by year basis over the last 30 years.



Future Inflation Expectations

Since price inflation is relatively volatile and is subject to a number of influences not based on recent history, economic assumptions are less reliably based on recent past experience than are the demographic assumptions. Therefore, it is important not to give undue weight to recent experience. We must also consider future expectations as well.

One measure is the spread between yields on U.S. Treasuries and U.S. TIPS. This calculation varies depending on the maturity selected. Moreover, there may be other influences on the result such as a risk premium on Treasuries and a liquidity premium on TIPS.

The longest horizon we can use for this basis is 30 years. The yield on 30-year Treasuries as of December 30, 2016, was 3.06 percent and the yield on inflation index TIPS was 0.99 percent for a raw difference of 2.07 percent. This is close to the Federal Reserve's target inflation rate of 2.0 percent.

We also surveyed the inflation assumption used by investment consulting firms. In our sample of eight firms, the inflation assumption ranged from 1.56 percent to 2.75 percent, with an average of 2.22 percent. Based on the May 24, 2016, presentation titled "Overview of Callan's Asset Liability Study – RIO's Recommended Asset Allocation Framework," Callan's inflation assumption is 2.25 percent.

Another point of reference is the Social Security Administration's (SSA) 2016 Trustees Report, in which the Office of the Chief Actuary is projecting a long-term average ultimate annual inflation rate of 2.6 percent under the intermediate cost assumption. (The ultimate inflation assumption is 2.0 percent and 3.2 percent respectively in the low cost and high cost projection scenarios.) The Social Security Trustees report uses the ultimate rates for their 75-year projections, much longer than the longest horizon we can discern from Treasuries and TIPS.

The table on the following page presents a summary of inflation rate forecasts from various professional experts.

Summary of Forward-looking Compound Annual Price Inflation Forecasts (From Professional Experts in Forecasting Inflation)	
Investment Consultants and Forecasters Average of 8 in 2016 GRS Survey	**2.22%**
Excess Yield of Nominal Treasuries Over Inflation Indexed, December 2016	
30-Year Treasury Constant Maturity – Nominal	3.11%
30-Year Treasury Constant Maturity –Inflation Indexed	1.04%
Difference (30-Year Implied Price Inflation)	**2.07%**
20-Year Treasury Constant Maturity – Nominal	2.84%
20-Year Treasury Constant Maturity – Inflation Indexed	0.89%
Difference (20-Year Implied Price Inflation)	**1.95%**
10-Year Treasury Constant Maturity – Nominal	2.49%
10-Year Treasury Constant Maturity – Inflation Indexed	0.56%
Difference (10-Year Implied Price Inflation)	**1.93%**
Federal Reserve Bank of Cleveland	
30-Year Expectation on December 15, 2016	**2.22%**
20-Year Expectation on December 15, 2016	**2.09%**
10-Year Expectation on December 15, 2016	**1.93%**
Quarterly Survey of Professional Economic Forecasters 4Q2016 Federal Reserve Bank of Philadelphia 10-Year Forecast	**2.22%**
Federal Reserve Board's Federal Open Market Committee Long-run Price Inflation Objective (Since Jan 2012)	**2.00%**
Congressional Budget Office: *The Budget and Economic Outlook* Overall Inflation (Jan 2016)	**2.00%**
2016 Social Security Trustees Report	
GDP Deflator Ultimate Intermediate Assumption	**2.20%**
CPI-W Ultimate Intermediate Assumption	**2.60%**

Recommendation

Based on this information, our opinion is that it would be reasonable to lower the current price inflation assumption of 3.50 percent. However, we caution against lowering the price inflation assumption below 2.00 percent. (The Federal Reserve's target and the Social Security Trustees' ultimate high cost assumptions are both 2.00 percent.) We are recommending the inflation assumption be reduced from 3.50 percent to 2.50 percent. This reduction recognizes lower inflation expectations in both the near and longer term and is also consistent with the assumption used by the SSA Office of the Chief Actuary for the intermediate cost projections and closer to the inflation assumption of 2.25 percent used by NDPERS' investment consultant, Callan.

Investment Return

ASOP No. 27

Actuaries are required to comply with Actuarial Standard of Practice No. 27 (ASOP 27) in setting economic assumptions for retirement plans, including the assumed investment return rate.

In a public retirement system like NDPERS, it is ultimately the Retirement Board's responsibility to approve the actuarial assumptions used in the actuarial valuations. It is the actuary's duty to provide the Board with information needed to make those decisions and to make recommendations to the Board. Although the Board is the ultimate decision-making body, we are still bound by ASOP No. 27 in providing advice or recommendations to the Board.

According to the current ASOP No. 27 applicable to actuarial valuations with a measurement date on or after September 30, 2014, each economic assumption selected by the actuary should be reasonable. For this purpose, an assumption is reasonable if it has the following characteristics:

- It is appropriate for the purpose of the measurement;
- It reflects the actuary's professional judgment;
- It takes into account historical and current economic data that is relevant as of the measurement date;
- It reflects the actuary's estimate of future experience, the actuary's observation of the estimates inherent in market data, or a combination thereof; and
- It has no significant bias (i.e., it is not significantly optimistic or pessimistic).

Also according to ASOP No. 27, the actuary should recognize the uncertain nature of the items for which assumptions are selected and, as a result, may consider several different assumptions reasonable for a given measurement. The actuary should also recognize that different actuaries will apply different professional judgment and may choose different reasonable assumptions. As a result, a range of reasonable assumptions may develop both for an individual actuary and across actuarial practice.

Real Return

The allocation of assets within the universe of investment options will significantly impact the overall performance. Therefore, it is meaningful to identify the range of expected returns based on the fund's targeted allocation of investments and an overall set of capital market assumptions.

The following table illustrates the asset allocation framework recommended by the North Dakota Retirement & Investment Office (RIO), as shown in the presentation dated May 24, 2016.

Target Asset Allocation	
Asset Class	**RIO Proposed Mix 2B**
Global Equity - Public	51%
Global Equity - Private	7%
Global Fixed Income - Investment Grade	17%
Global Fixed Income - Non Investment Grade	5%
Global Real Assets - Real Estate	11%
Global Real Assets - Infrastructure & Timber	8%
Cash Equivalents	1%
Total	**100%**
Total Equity	**58%**
Total Fixed Income	**22%**
Total Global Real Assets	**19%**

We reviewed capital market assumptions developed and published by eight independent investment consulting firms, with varying time horizons. Four of the investment consulting firms have assumptions for longer time horizons (15 to 30 years). The remaining four firms have assumptions for shorter time horizons (10 years or less).

These investment consulting firms periodically issue reports that describe their capital market assumptions; that is, their estimates of expected returns, volatility and correlations among the different asset classes. The assumptions for most of the investment consultants are for 2016. While some of these assumptions may be based upon historical analysis, many of these firms also incorporate forward-looking adjustments to better reflect near-term and long-term expectations. The estimates for core investments (i.e., fixed income, equities and real estate) are generally based on anticipated returns produced by passive index funds.

Given NDPERS' current target asset allocation and the capital market assumptions from the investment consultants, the development of the average nominal return, net of investment expenses, is provided in the table on the following page.

NORTH DAKOTA PUBLIC EMPLOYEES RETIREMENT SYSTEM
ECONOMIC ASSUMPTIONS

Investment Consultant	Investment Consultant Expected Nominal Return	Investment Consultant Inflation Assumption	Expected Real Return (2)–(3)	Actuary Inflation Assumption	Expected Nominal Return (4)+(5)	Plan Incurred Administrative Expenses	Expected Nominal Return Net of Expenses (6)-(7)	Standard Deviation of Expected Return (1-Year)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	7.42%	2.50%	4.92%	2.50%	7.42%	0.00%	7.42%	15.26%
2	7.43%	2.25%	5.18%	2.50%	7.68%	0.00%	7.68%	12.92%
3	6.98%	1.56%	5.42%	2.50%	7.92%	0.00%	7.92%	12.33%
4	7.78%	2.20%	5.58%	2.50%	8.08%	0.00%	8.08%	13.62%
5	8.05%	2.26%	5.79%	2.50%	8.29%	0.00%	8.29%	12.33%
6	8.66%	2.75%	5.91%	2.50%	8.41%	0.00%	8.41%	13.21%
7	8.17%	2.01%	6.16%	2.50%	8.66%	0.00%	8.66%	13.89%
8	8.61%	2.20%	6.41%	2.50%	8.91%	0.00%	8.91%	14.07%
Average	**7.89%**	**2.22%**	**5.67%**	**2.50%**	**8.17%**	**0.00%**	**8.17%**	**13.45%**

Based on each investment consulting firm's assumptions, we estimated the expected real return of NDPERS' portfolio (col. (4)). Next, based on the actuary's recommended inflation and investment expense assumption, we estimated the nominal return net of expenses (col. (8)). As the table shows, the average one-year nominal return (net of expenses) of the eight firms is 8.17 percent, which is higher than the current investment return assumption of 8.00 percent.

However, in addition to examining the expected one-year return, it is important to review anticipated volatility of the investment portfolio and understand the range of long-term net returns that could be expected to be produced by the investment portfolio.

The following table provides the 40th, 50th and 60th percentiles of the 20-year geometric average of the expected nominal return, net of expenses. The table also shows the probability of exceeding the current 8.00 percent assumption and alternative lower assumptions.

Investment Consultant	Distribution of 20-Year Average Geometric Net Nominal Return			Probability of exceeding 8.00%	Probability of exceeding 7.50%	Probability of exceeding 7.25%	Probability of exceeding 7.00%	Time Horizon of Capital Market Assumptions
	40th	50th	60th					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
1	5.50%	6.35%	7.20%	31.31%	36.68%	39.48%	42.35%	Unknown
2	6.19%	6.91%	7.64%	35.26%	41.89%	45.32%	48.79%	10 Years
3	6.53%	7.22%	7.92%	38.83%	45.96%	49.60%	53.25%	10 Years
4	6.48%	7.24%	8.00%	40.01%	46.50%	49.81%	53.12%	10 Years
5	6.90%	7.59%	8.29%	44.11%	51.38%	55.02%	58.63%	10-15 Years
6	6.87%	7.61%	8.35%	44.73%	51.53%	54.94%	58.32%	30 Years
7	7.01%	7.78%	8.56%	47.17%	53.67%	56.90%	60.09%	30 Years
8	7.23%	8.02%	8.81%	50.22%	56.63%	59.79%	62.90%	20 Years
Average	**6.59%**	**7.34%**	**8.10%**	**41.45%**	**48.03%**	**51.36%**	**54.68%**	

As this table indicates, the expected rate of return based on (1) NDPERS' current target asset allocation, (2) the recommended inflation assumption of 2.50 percent and (3) the capital market assumptions from the eight investment consultants is 7.34 percent. In addition, the average results of all eight firms indicate there is only about a 41.45 percent probability that NDPERS will produce an average return that exceeds 8.00 percent over the next 20 years. The average results of all eight firms indicate there is about a 48.03 percent probability that NDPERS will produce an average return that exceeds 7.50 percent over the next 20 years. In addition, the 20-year expectation for investment consultants 6 and 7 is likely lower than what is shown (because their assumptions are based on a 30-year time horizon).

Peer Group Comparison

The National Association of State Retirement Administrators (NASRA) issued a publication in February 2016, entitled "NASRA Issue Brief: Public Pension Plan Investment Return Assumptions". As stated in the Issue Brief "Among the 127 plans measured, more than one-half have reduced their investment return assumption since fiscal year 2008. The average return assumption is 7.62 percent." The issue brief includes the assumption used (or announced for use) as of February 2016 for each of the 127 plans included in the survey. Of those, about 28 percent of the plans were using an investment return assumption of 8.0 percent (or higher). However, the assumptions included in the survey do not reflect subsequent changes that were made after February 2016.

North Dakota Teachers Fund for Retirement uses an assumption of 7.75 percent and South Dakota Retirement System was using an assumption of 7.25 percent which was expected to increase to 7.50 percent after fiscal year 2017.

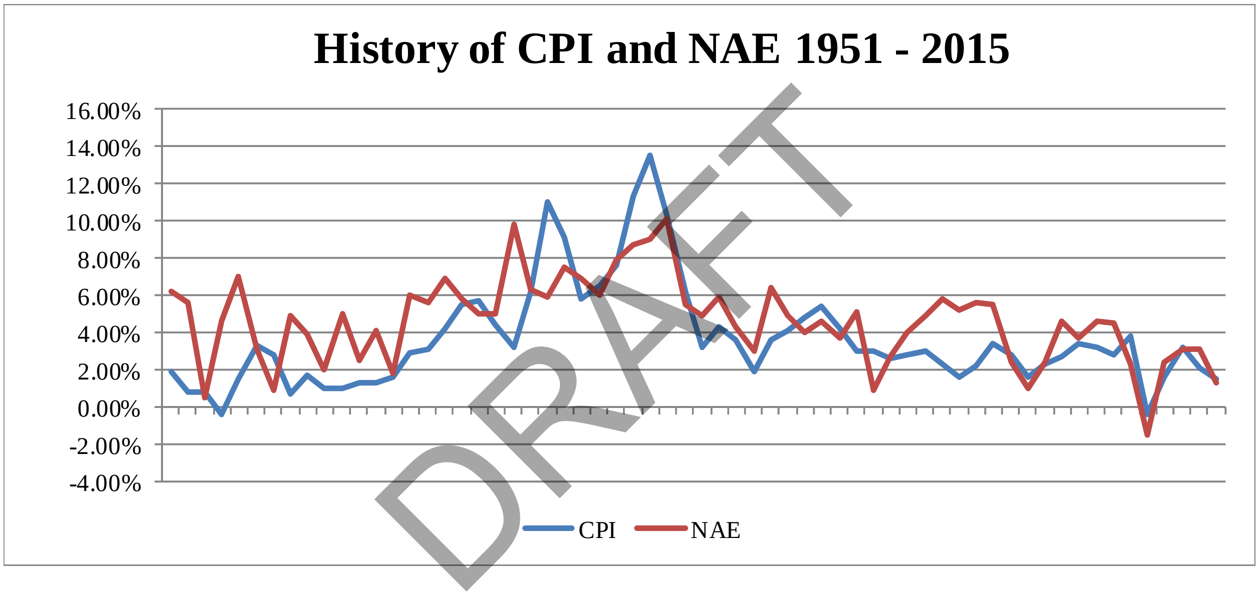
Recommendation

Based on our analysis of the expected investment return and the current target asset allocation, we recommend reducing the long-term investment return assumption to 7.50 percent for the actuarial valuation as of June 30, 2017, reflecting an inflation assumption of 2.50 percent and a real rate of return of 5.00 percent. We recommend that the assumed investment return be monitored for continued appropriateness between experience reviews. Also, any significant changes in the target asset allocation of NDPERS may warrant an additional review of the rate of return assumption. We believe that this assumption can be supported by the revised Actuarial Standard of Practice No. 27. Under the Standard, all economic assumptions must be selected to be consistent with the purpose of the measurement. The purpose of the measurement is to determine the contribution rate which will lead to the accumulation of assets to pay benefits when due. The recommended assumption of 7.50 percent is below the arithmetic mean as disclosed previously, to account for future volatility of future investment returns.

Callan's (NDPERS' current investment consultant) expected return is 7.00 percent for the next 10 years. ND RIO added 50 basis points to this return to convert their 10-year Capital Market Expectations to Long-Term Returns (of 30+ years), resulting in a return assumption of 7.50 percent. If the Board wishes to add additional conservatism to the actuarial valuation due to factors such as market volatility or liquidity concerns, they may consider decreasing the assumption below the recommended 7.50 percent assumption in a future valuation.

General Wage Increase and Payroll Growth Assumption

The NDPERS actuarial assumptions make a distinction between price inflation (currently assumed to be 3.50 percent) and the rate of payroll growth (currently assumed to be 4.00 percent for Judges and 4.50 percent for the other Systems). The National Average Earnings (NAE) series published in connection with the operation of the Social Security program is a useful proxy for measuring general changes in wage levels in the economy. Increases in NAE typically exceed increases in the Consumer Price Index (CPI), although there are periods where the patterns are reversed. The economic argument for wages exceeding prices in the long run is that CPI is based on the prices of a fixed basket of goods whereas wages reflect innovations, real productivity growth, labor supply and demand and other factors in addition to pure price inflation.



The following table shows the average inflation and increase in the NAE through 2015 (the last full year available).

Year	Annual Increase in CPI-U	Annual Increase in NAE	Excess Increase in NAE over CPI
5-Year Average	1.68%	2.91%	1.23%
10-Year Average	1.95%	2.67%	0.72%
20-Year Average	2.23%	3.39%	1.15%
25-Year Average	2.41%	3.36%	0.96%
30-Year Average	2.67%	3.56%	0.90%
40-Year Average	3.78%	4.39%	0.61%
50-Year Average	4.12%	4.78%	0.66%
60-Year Average	3.70%	4.57%	0.87%
64-Year Average	3.51%	4.54%	1.03%

Over the last 64 years, NAE has exceeded CPI 43 times and the averages over that period are 4.5 percent for NAE and 3.5 percent for CPI. The last 25 years has had fewer cases of high inflation, but the distinction between prices and wages still appears. Over the last 25 years, the average increase in NAE is 3.4 percent and the average increase in CPI is 2.4 percent.

As with the investment return assumption, past experience does not necessarily dictate future expectations. Current expectations are mixed on whether price and wage inflation will remain low in the short term, particularly due to the after effects of recent federal government spending. For a long term view, the 2016 Annual Report from the Trustees of the Social Security Administration (SSA) assumes an intermediate average ultimate CPI of 2.6 percent over the next 75 years and an ultimate intermediate growth assumption for average wages in covered employment of 3.8 percent. The SSA report provides alternate "High-cost" assumptions of 2.0 percent CPI/2.6 percent wages and "Low-cost" assumptions of 3.2 percent CPI/5.0 percent wages.

We have reviewed payroll growth history from the experience study performed by the prior actuary, Segal, for the period ending June 30, 2014. We have summarized the information from the experience study below and have estimated a total payroll increase based on no increase in the number of active members during the period.

		PERS Excluding Judges			Judges		
	Inflation	Total Covered Payroll	# Active Members	Implied Increase in Payroll (0% Member Growth)	Total Covered Payroll	# Active Members	Implied Increase in Payroll (0% Member Growth)
Average Change (5-Year)	2.02%	6.90%	2.20%	4.60%	5.10%	1.20%	3.85%
Average Change (10-Year)	2.31%	6.90%	2.40%	4.39%	4.70%	0.80%	3.87%
Average Change (15-Year)	2.43%	6.20%	2.10%	4.02%	4.00%	0.40%	3.59%
Average Change (19-Year)	2.38%	6.30%	2.10%	4.11%	4.30%	-0.20%	4.51%

Recommendation

Based on the increase in total payroll and the average inflation during the same periods of time, we concur with Segal that an increase in the productivity increase assumption is reasonable. ***We recommend increasing the assumption for productivity increases from the current assumptions by 0.25 percent.*** Combining a recommended 1.25 percent productivity increase for PERS (excluding Judges) and a 0.75 percent for Judges with a 2.50 percent inflation assumption, implies a wage growth assumption of 3.75 percent for PERS and 3.25 percent for Judges. These assumptions are summarized below:

	PERS Excluding Judges		**Judges**	
	Present Assumption	**Recommended Assumption**	**Present Assumption**	**Recommended Assumption**
Price Inflation	3.50%	2.50%	3.50%	2.50%
Productivity Increases	1.00%	1.25%	0.50%	0.75%
Total Wage Inflation	4.50%	3.75%	4.00%	3.25%

We recommend using the same assumption as the wage inflation assumption for the payroll growth assumption (which is used in amortizing the unfunded liability as a level percent of pay).

Salary Increase Assumption

Members' salaries are projected in the actuarial valuation using salary increase assumptions. For NDPERS, this assumption varies by years of service and age (and if the employer is state or non-state). The salary increase assumption is comprised of three components – price inflation, productivity increases and seniority/merit/promotion increases. Although we are recommending changes to the price inflation and productivity increase assumptions, we are not recommending a change to the current salary increase assumptions. We have reviewed the experience study performed by the prior actuary, Segal, and note that the GRS recommended inflation assumption is 0.25 percent lower than the Segal recommended assumption and the productivity increase recommendations are the same. Inflation during the experience study period was 2.0 percent (lower than both the GRS recommended assumption of 2.50 percent and the Segal recommended assumption of 2.75 percent for price inflation).

Following are the salary increase assumptions for PERS:

Service At Beginning of Year	**State Employee**	**Non-State Employee**	**Law Enforcement**	**Judges**
0	12.00%	15.00%	20.00%	
1	9.50%	10.00%	20.00%	
2	7.25%	8.00%	20.00%	
3			10.00%	
4			10.00%	
Age*				
Under 30	7.25%	10.00%	7.25%	4.00%
30-39	6.50%	7.50%	6.50%	4.00%
40-49	6.25%	6.75%	6.25%	4.00%
50-59	5.75%	6.50%	5.75%	4.00%
60+	5.00%	5.25%	5.00%	4.00%

Following are the assumptions for the Highway Patrolmen's Retirement System:

Service At Beginning of Year	Increase Rate
0	15.00%
1	10.00%
2	8.00%
Age*	
Under 36	8.00%
36 - 40	7.50%
41 - 49	6.00%
50+	5.00%

Recommendation

Based on (1) the level of salary increases during the period (given the relatively low inflation), (2) the small difference in recommendations by the two firms and (3) the fact that the seniority/merit/promotion increases recommended by Segal appear reasonable based on the data shown in the report, GRS does not believe that a change in this assumption is warranted.

Asset Valuation (i.e., Smoothing) Method

ASOP No. 44 covers the selection and use of asset valuation methods for pension valuations.

For the NDPERS actuarial valuations, the actuarial value of assets:

- Immediately recognizes interest and dividends; and
- Recognizes the total appreciation or depreciation from the current year (net change in fair value of investments) over a five-year period.

Under this method, 100 percent of the return from interest and dividends is recognized immediately and 20 percent of the return attributable to investments (net of interest and dividends and investment expenses) is recognized in the current year. Eighty (80) percent of the return attributable to investments is deferred and recognized over the next four years. As a result, there will be deferred gains from all years in which the net investment return from investments is greater than zero percent.

Because of the high probability that the return on investments will exceed interest and dividends in any individual year, the actuarial value of assets is more likely to be lower than the market value of assets (because recognition of investment returns is deferred to future years).

ASOP No. 44 Section 3.4 states "If the asset valuation method has significant systematic bias, the actuary should disclose such bias in accordance with section 4.1.". Section 3.4 provides an example of a method with a systematic bias (which is the exact method currently being used for the NDPERS valuations):

- "an asset valuation method that is designed to produce a value consistently below market value if, in all time periods relevant to the application of the asset valuation method, the actual return on market value of the assets subject to the asset valuation method were equal to the actuary's expected return on those assets (such as a method that immediately recognizes interest and dividends but defers recognition of realized and unrealized capital gains and losses)"

Based on the ASOP No. 44 guidance, GRS disclosed the asset method bias in the July 1, 2016, actuarial valuation report.

Recommendation

Although the current asset method provides some degree of conservatism by deferring a portion of all capital gains and losses (which would understate the funded ratio compared to a non-biased method), we would recommend that other economic actuarial assumptions be strengthened instead. Therefore, we recommend changing the current asset smoothing method (which is biased toward the actuarial value of assets being lower than the market value of assets) to a method which smooths total investment gains or losses compared to the investment return assumption over a five-year period.

NASRA Issue Brief:
Public Pension Plan Investment Return Assumptions

Updated February 2017

As of September 30, 2016, state and local government retirement systems held assets of $3.82 trillion.[1] These assets are held in trust and invested to pre-fund the cost of pension benefits. The investment return on these assets matters, as investment earnings account for a majority of public pension financing. A shortfall in long-term expected investment earnings must be made up by higher contributions or reduced benefits.

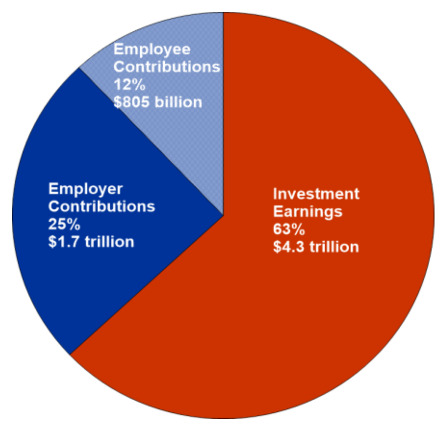
Funding a pension benefit requires the use of projections, known as actuarial assumptions, about future events. Actuarial assumptions fall into one of two broad categories: demographic and economic. Demographic assumptions are those pertaining to a pension plan's membership, such as changes in the number of working and retired plan participants; when participants will retire, and how long they'll live after they retire. Economic assumptions pertain to such factors as the rate of wage growth and the future expected investment return on the fund's assets.

As with other actuarial assumptions, projecting public pension fund investment returns requires a focus on the long-term. This brief discusses how investment return assumptions are established and evaluated, compares these assumptions with public funds' actual investment experience, and the challenging investment environment public retirement systems currently face.

Because investment earnings account for a majority of revenue for a typical public pension fund, the accuracy of the return assumption has a major effect on a plan's finances and actuarial funding level. An investment return assumption that is set too low will overstate liabilities and costs, causing current taxpayers to be overcharged and future taxpayers to be undercharged. A rate set too high will understate liabilities, undercharging current taxpayers, at the expense of future taxpayers. An assumption that is significantly wrong in either direction will cause a misallocation of resources and unfairly distribute costs among generations of taxpayers.

As shown in Figure 1, since 1986, public pension funds have accrued approximately $6.8 trillion in revenue, of which $4.3 trillion, or 63 percent, is from investment earnings. Employer contributions account for $1.7 trillion, or one-fourth of the total, and employee contributions total $805 billion, or 12 percent.[2]

Figure 1: Public Pension Sources of Revenue, 1986-2015



Source: Compiled by NASRA based on U.S. Census Bureau

[1] Federal Reserve, *Flow of Funds Accounts of the United States: Flows and Outstandings, Third Quarter 2016*, Table L.120
[2] US Census Bureau, Annual Survey of Public Pensions, State & Local Data

Most public retirement systems review their actuarial assumptions regularly, pursuant to state or local statute or system policy. The entity responsible for setting the return assumption, as identified in Appendix B, typically works with one or more professional actuaries, who follow guidelines set forth by the Actuarial Standards Board in Actuarial Standards of Practice No. 27 (Selection of Economic Assumptions for Measuring Pension Obligations) (ASOP 27), which prescribes the factors actuaries should consider in setting economic actuarial assumptions. ASOP 27 recommends that actuaries consider the context of the measurement they are making, as defined by such factors as the purpose of the measurement, the length of time the measurement period is intended to cover, and the projected pattern of the plan's cash flows.

ASOP 27 also advises that actuarial assumptions be reasonable, defined in subsection 3.6 as being consistent with five specified characteristics; and requires that actuaries consider relevant data, such as current and projected interest rates and rates of inflation; historic and projected returns for individual asset classes; and historic returns of the fund itself. For plans that remain open to new members, actuaries focus chiefly on a long investment horizon, i.e., 20 to 30 years, as this is the length of a typical public pension plan's funding period. One key purpose for relying on a long timeframe is to promote the key policy objectives of cost stability and predictability, and intergenerational equity among taxpayers.

The investment return assumption used by public pension plans typically contains two components: inflation and the real rate of return. The sum of these components is the nominal return rate, which is the rate that is most often used and cited. The system's inflation assumption typically is applied also to other actuarial assumptions, such as the level of wage growth and, where relevant, assumed rates of cost-of-living adjustments (COLAs). Achieving an investment return approximately commensurate with the inflation rate normally is attainable by investing in securities, such as US Treasury bonds, that are considered to be risk-free, i.e., that pay a guaranteed rate of return.

The second component of the investment return assumption is the real rate of return, which is the return on investment after adjusting for inflation. The real rate of return is intended to reflect the return produced as a result of the risk taken by investing the assets. Achieving a return higher than the risk-free rate requires taking some investment risk; for public pension funds, this risk takes the form of investments in assets such as public and private equities and real estate, which contain more risk than Treasury bonds.

Unlike public pension plans, corporate plans are required by federal regulations to make contributions on the basis of current interest rates. As Figure 2 shows, this funding method results in plan costs that can be volatile and uncertain, often changing dramatically from one year to the next. This volatility is due partly to fluctuations in interest rates and has been identified as a leading factor in the decision among corporations to abandon their pension plans. By contrast, by focusing on the long-term and relying on a stable investment return assumption, public plans experience less contribution volatility.

Figure 2: Annual change in contributions from prior year, corporate vs. public pensions

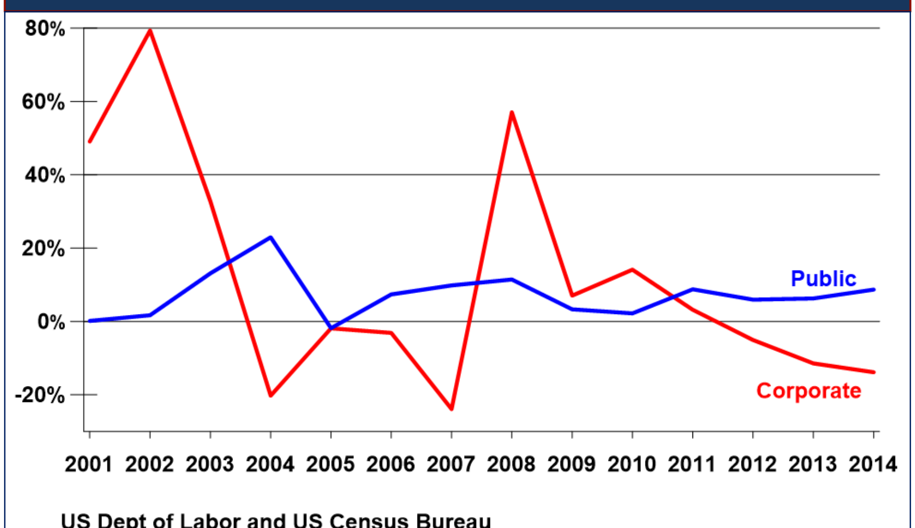


Figure 3: Median public pension annualized investment returns for period ended 12/31/2016

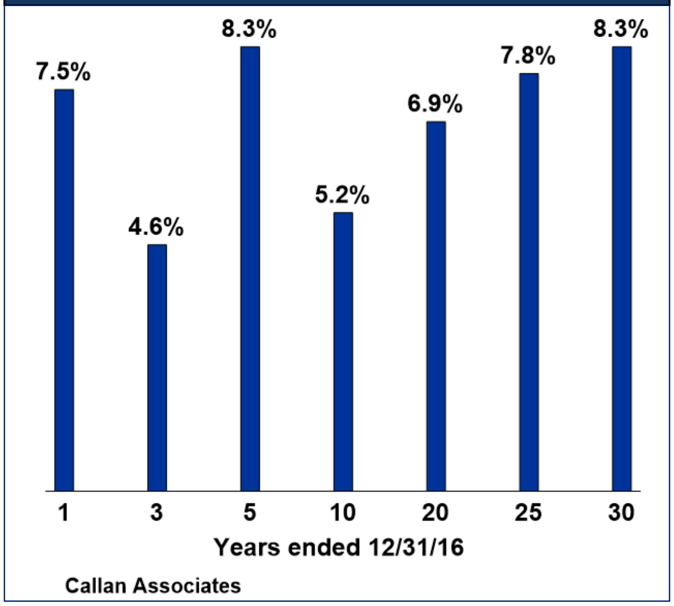
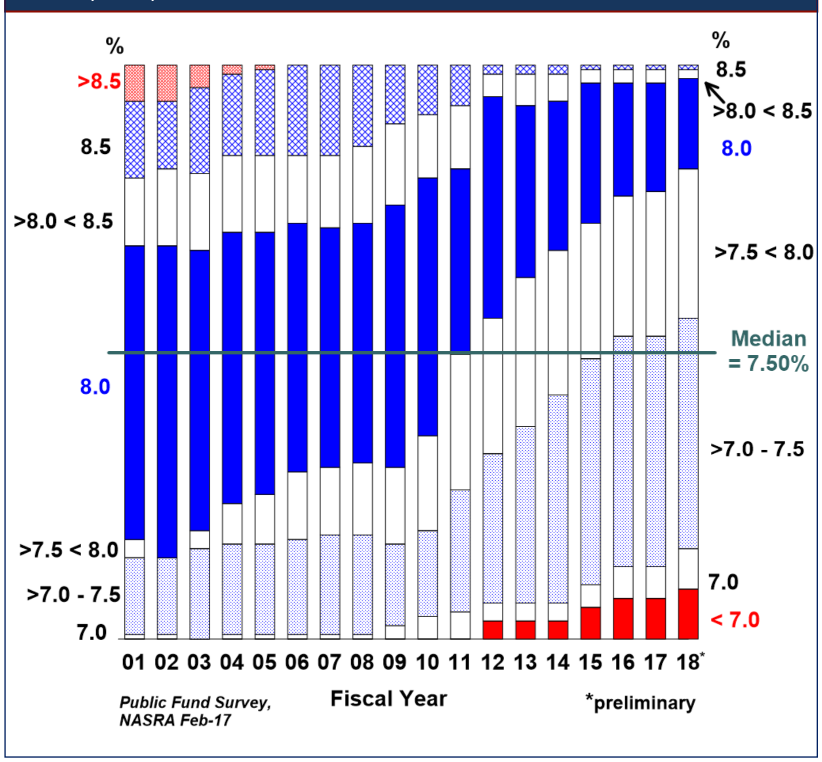


Figure 3 plots median public pension fund annualized investment returns for a range of periods ended December 31, 2016. As the higher investment returns achieved in the 1980s and the 1990s are replaced by lower returns in more recent years, average annualized returns for longer periods, such as 20 and 25 years, have begun to decline gradually. The steep market declines of 2000-02 and 2008-09 have imposed a particularly negative effect for measurement periods that incorporate those events.

In the wake of the 2008-09 decline in capital markets, and Great Recession, global interest rates and inflation have remained low by historic standards, due partly to so-called quantitative easing of central banks in many industrialized economies, including the U.S. Now in their eighth year, these low interest rates, along with low rates of projected global economic growth, have led to reductions in projected returns for most asset classes, which, in turn, have resulted in an unprecedented number of reductions in the investment return assumption used by public pension plans. This trend is illustrated by Figure 4, which plots the distribution of investment return assumptions among a representative group of plans since 2001. Among the 127 plans measured, nearly three-fourths have reduced their investment return assumption since fiscal year 2010, resulting in a decline in the average return assumption from 7.91 percent to 7.52 percent. If projected returns continue to decline, investment return assumptions are likely to also to continue their downward trend. Appendix A lists the assumptions in use or adopted for future use by the 127 plans in this dataset.

Figure 4: Change in Distribution of Public Pension Investment Return Assumptions, FY 01 to FY 18



One challenging facet of setting the investment return assumption that has emerged more recently is a divergence between expected returns over the near term, i.e., the next five to 10 years, and over the longer term, i.e., 20 to 30 years[3]. A growing number of investment return projections are concluding that near-term returns will be materially lower than both historic norms as well as projected returns over longer timeframes. Because many near-term projections calculated recently are well below the long-term assumption most plans are using, some plans face the difficult choice of either maintaining a return assumption that is higher than near-term expectations, or lowering their return assumption to reflect near-term expectations.

[3] Horizon Actuarial Services, "Survey of Capital Market Assumptions, 2016 Edition (July 2016) p4

If near-term rates indeed prove to be lower than historic norms, plans that maintain their long-term return assumption are likely to experience a steady increase in unfunded pension liabilities and corresponding costs. Alternatively, plans that reduce their assumption in the face of diminished near-term projections will experience an immediate increase unfunded liabilities and required costs. As a rule of thumb, a 25 basis point reduction in the return assumption, such as from 8.0 percent to 7.75 percent, will increase the cost of a plan that has a COLA, by three percent of pay (such as from 10 percent to 13 percent), and a plan that does not have a COLA, by two percent of pay.

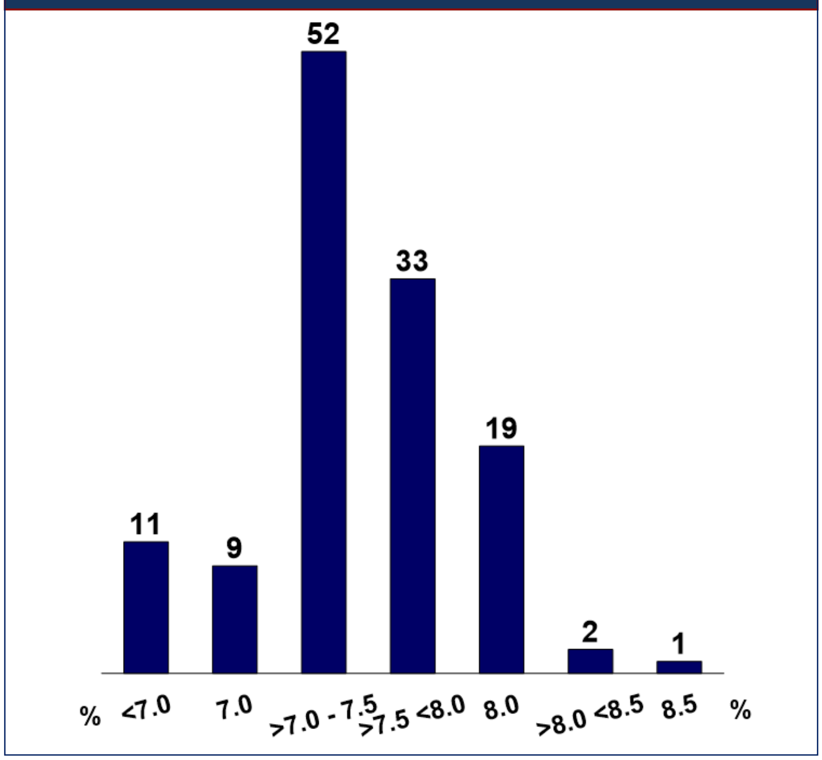
Conclusion

The investment return assumption is the single most consequential of all actuarial assumptions in terms of its effect on a pension plan's finances. The sustained period of low interest rates since 2009 has caused many public pension plans to re-evaluate their long-term expected investment returns, leading to an uprecedented number of reductions in plan investment return assumptions. Absent other changes, a lower investment return assumption increases both the plan's unfunded liabilities and cost. The process for evaluating a pension plan's investment return assumption should include abundant input and feedback from professional experts and actuaries, and should reflect consideration of the factors prescribed in actuarial standards of practice.

See Also:

- Actuarial Standards of Practice No. 27, Actuarial Standards Board
- The Liability Side of the Equation Revisited, Missouri SERS, September 2006

Figure 5: Distribution of investment return assumptions



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National Association of State Retirement Administrators

Appendix A: Investment Return Assumption by Plan

(Figures reflect the nominal assumption in use, or announced for use, as of February 2017)

Plan	Rate (%)
Alabama ERS[1]	7.875
Alabama Teachers[1]	7.875
Alaska PERS	8.0
Alaska Teachers	8.0
Arizona Public Safety Personnel	7.40
Arizona SRS	8.0
Arkansas PERS	7.5
Arkansas Teachers	8.0
California PERF[2]	7.375
California Teachers[3]	7.250
Chicago Teachers	7.750
City of Austin ERS	7.50
Colorado Affiliated Local	7.50
Colorado Fire & Police Statewide	7.50
Colorado Municipal	7.25
Colorado School	7.25
Colorado State	7.25
Connecticut SERS	6.9
Connecticut Teachers	8.0
Contra Costa County	7.25
DC Police & Fire	6.5
DC Teachers	6.5
Delaware State Employees	7.2
Denver Employees	7.75
Denver Public Schools	7.25
Duluth Teachers	8.0
Fairfax County Schools	7.5
Florida RS	7.6
Georgia ERS	7.5
Georgia Teachers	7.5
Hawaii ERS	7.0
Houston Firefighters[4]	8.5
Idaho PERS	7.0
Illinois Municipal	7.50
Illinois SERS	7.25
Illinois Teachers	7.0
Illinois Universities	7.25
Indiana PERF	6.75
Indiana Teachers	6.75
Iowa PERS	7.50
Kansas PERS	7.75
Kentucky County	6.75
Kentucky ERS	6.75

Kentucky Teachers	7.50
LA County ERS	7.50
Louisiana Parochial Employees	7.0
Louisiana SERS[5]	7.70
Louisiana Teachers[5]	7.70
Maine Local	6.875
Maine State and Teacher	6.875
Maryland PERS	7.55
Maryland Teachers	7.55
Massachusetts SERS	7.50
Massachusetts Teachers	7.50
Michigan Municipal	7.75
Michigan Public Schools	8.0
Michigan SERS	8.0
Minnesota PERF	8.0
Minnesota State Employees	8.0
Minnesota Teachers[6]	8.40
Mississippi PERS	7.75
Missouri DOT and Highway Patrol	7.75
Missouri Local	7.25
Missouri PEERS	7.75
Missouri State Employees	7.65
Missouri Teachers	7.75
Montana PERS	7.75
Montana Teachers	7.75
Nebraska Schools	7.5
Nevada Police Officer and Firefighter	8.0
Nevada Regular Employees	8.0
New Hampshire Retirement System	7.25
New Jersey PERS	7.90
New Jersey Police & Fire	7.90
New Jersey Teachers	7.90
New Mexico PERA	7.25
New Mexico Teachers	7.75
New York City ERS	7.0
New York City Teachers	7.0
New York State Teachers	7.50
North Carolina Local Government	7.25
North Carolina Teachers and State Employees	7.25
North Dakota PERS	8.0
North Dakota Teachers	7.75
NY State & Local ERS	7.0
NY State & Local Police & Fire	7.0

Ohio PERS	7.50
Ohio Police & Fire	8.25
Ohio School Employees	7.50
Ohio Teachers	7.75
Oklahoma PERS	7.25
Oklahoma Teachers	7.50
Oregon PERS	7.50
Pennsylvania School Employees	7.25
Pennsylvania State ERS	7.50
Phoenix ERS	7.50
Rhode Island ERS	7.50
Rhode Island Municipal	7.50
San Diego County	7.50
San Francisco City & County	7.46
South Carolina Police	7.50
South Carolina RS	7.50
South Dakota PERS	6.50
St. Louis School Employees	8.0
St. Paul Teachers	8.0
Texas County & District	8.0
Texas ERS	8.0
Texas LECOS	8.0

Texas Municipal	6.75
Texas Teachers	8.0
TN Political Subdivisions	7.50
TN State and Teachers	7.50
Utah Noncontributory	7.20
Vermont State Employees	7.95
Vermont Teachers	7.90
Virginia Retirement System	7.00
Washington LEOFF Plan 1[7]	7.70
Washington LEOFF Plan 2	7.50
Washington PERS 1[7]	7.70
Washington PERS 2/3[7]	7.70
Washington School Employees Plan 2/3[7]	7.70
Washington Teachers Plan 1[7]	7.70
Washington Teachers Plan 2/3[7]	7.70
West Virginia PERS	7.50
West Virginia Teachers	7.50
Wisconsin Retirement System	7.20
Wyoming Public Employees	7.75

1. The Retirement Systems of Alabama is reducing its plans' return assumptions from 8.0 percent to 7.75 percent over a two-year period.

2. CalPERS is reducing its investment return assumption from 7.50 percent to 7.0 percent over three years. In February 2017 the CalPERS Board adopted a risk mitigation policy, effective beginning FY 2021, that calls for a reduction in the system's investment return assumption commensurate with the pension fund achieving a specified level of investment return. Details are available online: https://www.calpers.ca.gov/docs/board-agendas/201702/financeadmin/item-9a-02.pdf.

3. CalSTRS is reducing its investment return assumption from 7.50 percent to 7.0 percent over two years.

4. A proposal to reform pension plans sponsored by the City of Houston includes a reduction to the investment return assumption of the Houston Firefighters plan from its current level of 8.5 percent to 7.0 percent. This lower rate is pending approval of other elements of this proposal by the Texas Legislature during its 2017 Regular Session.

5. The Louisiana State Employees' Retirement System and Teachers' Retirement System are reducing their investment return assumption from 7.75 percent to 7.50 percent by 2021 in annual increments of 0.05 percent.

6. Legislation approved by the Minnesota Legislature in 2016 would have reduced the return assumption of the Teachers' Retirement Association to 8.0 percent, but was vetoed by the governor for reasons extraneous to the assumption.

7. For all Washington State plans except LEOFF Plan 2, the assumed rate of return is being reduced gradually, from 8.0 percent to 7.50 percent, over a 10-year period.

Appendix B: Entity Responsible for Setting Investment Return Assumption for Selected State Plans

State	System	Investment Return Assumption Set By
AK	Alaska Public Employees Retirement System	Alaska Retirement Management Board
AK	Alaska Teachers Retirement System	Alaska Retirement Management Board
AL	Retirement Systems of Alabama	Retirement board
AR	Arkansas Public Employees Retirement System	Retirement board
AR	Arkansas Teachers Retirement System	Retirement board
AZ	Arizona Public Safety Personnel Retirement System	Retirement board
AZ	Arizona State Retirement System	Retirement board
CA	California Public Employees Retirement System	Retirement board
CA	California State Teachers Retirement System	Retirement board
CO	Colorado Public Employees Retirement Association	Retirement board
CO	Fire & Police Pension Association of Colorado	Retirement board
CT	Connecticut State Employees Retirement System	State Employees Retirement Commission
CT	Connecticut Teachers Retirement Board	Retirement board
DC	District of Columbia Retirement Board	Retirement board
DE	Delaware Public Employees Retirement System	Retirement board
FL	Florida Retirement System	FRS Actuarial Assumption Estimating Conference[1]
GA	Georgia Employees Retirement System	Retirement board
GA	Georgia Teachers Retirement System	Retirement board
HI	Hawaii Employees Retirement System	Retirement board
IA	Iowa Public Employees Retirement System	IPERS Investment Board
ID	Idaho Public Employees Retirement System	Retirement board
IL	Illinois State Universities Retirement System	Retirement board
IL	Illinois State Employees Retirement System	Retirement board
IL	Illinois Municipal Retirement Fund	Retirement board
IL	Illinois Teachers Retirement System	Retirement board
IN	Indiana Public Retirement System	Retirement board
KS	Kansas Public Employees Retirement System	Retirement board
KY	Kentucky Retirement Systems	Retirement board
KY	Kentucky Teachers Retirement System	Retirement board
LA	Louisiana State Employees Retirement System	Retirement board
LA	Louisiana Parochial Employees' Retirement System	Retirement board
LA	Louisiana Teachers Retirement System	Retirement board
MA	Massachusetts State Employees Retirement System	Collaborative between the legislature, state treasurer, governor, and the Massachusetts Public Employee Retirement Administration Commission
MA	Massachusetts Teachers Retirement Board	Collaborative between the legislature, state treasurer, governor, and the Massachusetts Public Employee Retirement Administration Commission
MD	Maryland State Retirement and Pension System	Retirement board
ME	Maine Public Employees Retirement System	Retirement board
MI	Michigan Public School Employees Retirement System	Retirement board
MI	Michigan State Employees Retirement System	Retirement board
MI	Municipal Employees' Retirement System of Michigan	Retirement board
MN	Minnesota Public Employees Retirement Association	Legislature
MN	Minnesota State Retirement System	Legislature
MN	Minnesota Teachers Retirement Association	Legislature
MO	Missouri Local Government Employees Retirement System	Retirement board

MO	Missouri Public Schools Retirement System	Retirement board
MO	Missouri State Employees Retirement System	Retirement board
MO	MoDOT & Patrol Employees' Retirement System	Retirement board
MS	Mississippi Public Employees Retirement System	Retirement board
MT	Montana Public Employees Retirement Board	Retirement board
MT	Montana Teachers Retirement System	Retirement board
NC	North Carolina Retirement Systems	Retirement board
ND	North Dakota Public Employees Retirement System	Retirement board
ND	North Dakota Teachers Fund for Retirement	Retirement board
NE	Nebraska Public Employees Retirement System	Retirement board
NH	New Hampshire Retirement System	Retirement board
NJ	New Jersey Division of Pension and Benefits	Retirement board and state treasurer
NM	New Mexico Educational Retirement Board	Retirement board
NM	New Mexico Public Employees Retirement Association	Retirement board
NV	Nevada Public Employees Retirement System	Retirement board
NY	New York State & Local Retirement Systems	State comptroller
NY	New York State Teachers Retirement System	Retirement board
OH	Ohio Police and Fire Pension Fund	Retirement board
OH	Ohio Public Employees Retirement System	Retirement board
OH	Ohio School Employees Retirement System	Retirement board
OH	Ohio State Teachers Retirement System	Retirement board
OK	Oklahoma Public Employees Retirement System	Retirement board
OK	Oklahoma Teachers Retirement System	Retirement board
OR	Oregon Public Employees Retirement System	Retirement board
PA	Pennsylvania Public School Employees Retirement System	Retirement board
PA	Pennsylvania State Employees Retirement System	Retirement board
RI	Rhode Island Employees Retirement System	Retirement board
SC	South Carolina Retirement Systems	Legislature
SD	South Dakota Retirement System	Retirement board
TN	Tennessee Consolidated Retirement System	Retirement board
TX	Teacher Retirement System of Texas	Retirement board
TX	Texas County & District Retirement System	Retirement board
TX	Texas Employees Retirement System	Retirement board
TX	Texas Municipal Retirement System	Retirement board
UT	Utah Retirement Systems	Retirement board
VA	Virginia Retirement System	Retirement board
VT	Vermont State Employees Retirement System	Retirement board
VT	Vermont Teachers Retirement System	Retirement board
WA	Washington Department of Retirement Systems	Legislature
WI	Wisconsin Retirement System	Retirement board
WV	West Virginia Consolidated Public Retirement Board	Retirement board
WY	Wyoming Retirement System	Retirement board

1. The Conference consists of staff from the Florida House, Senate, and Governor’s office

Exhibit # 2

GRS

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www.gabrielroeder.com

April 10, 2017

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

Re: Projections Under Proposed and Alternate Economic Actuarial Assumptions (Based on PERS Actuarial Valuation Results for the Main System as of July 1, 2016)

Dear Members of the Board:

In accordance with your request, we have prepared projections of the actuarial valuation results for the Main System of the North Dakota Public Employees Retirement System (NDPERS) under current and alternate economic actuarial assumptions (including the recommended actuarial assumptions from the recent Economic Actuarial Assumption Review dated February 20, 2017). We have prepared these projections based on both the current contribution rates and the increased contribution rates from Bill No. 17.0119.01000 (with a later effective date of January 2021) as shown in our letter as of January 9, 2017.

Recommended Actuarial Assumptions

GRS recommends a discount rate/investment return assumption of 7.50 percent and a payroll growth assumption for amortization of the unfunded liability of 3.75 percent. Please see the Economic Actuarial Assumption Review Report for additional information and rationale for the recommended economic assumptions and methods. All other assumptions and methods used are the same as those used in the actuarial valuation as of July 1, 2016, which are summarized in Appendix I.

Note that the actuarial assumptions do not determine the ultimate cost of the plan to the employers. The ultimate employer cost of the plan will equal total benefits and expenses paid less employee contributions and investment income. The actuarial assumptions determine the calculation of the liabilities (and the annual budgeting of contributions based on an actuarially determined funding policy).

In order to maintain the fiscal health of the System, it is important to select actuarial assumptions that reflect realistic estimates of future investment returns and not be unnecessarily swayed by alternative actuarial assumptions that result in the more favorable funded ratio trends.

Alternative Actuarial Assumptions

In accordance with the request of the Board, we also analyzed the impact of a discount rate/investment return assumption of 7.75 percent and a payroll growth assumption for amortization of the unfunded liability of 3.75 percent.

For illustrative purposes, we have also included Scenarios 6 through 9, under which we assume varying discount rates to calculate the plan liabilities, but a constant 7.50 percent return on assets (which is consistent with our recommended assumption). *(This makes the projection sets more comparable because there will only be one future set of returns on assets regardless of the assumption used for liability calculations in the actuarial valuation.)*

Contributions

Under the current plan provisions, the full time employee contribution rate is 7.00 percent of salary and the employer contribution rate is 7.12 percent of salary. Under the increased contribution rate scenarios, the full time employee contribution rate is 8.00 percent of salary and the employer contribution rate is 8.12 percent of salary beginning January 2021 (the same as shown in our January 9, 2017, letter).

Please see our letter from January 9, 2017, for additional information on this proposed change and Bill No. 17.0119.01000.

Projection Scenarios

GRS has prepared projections under the current and increased contribution rate scenarios, combined with the following alternate actuarial assumption sets:

Current Contribution Rates	Increased Contribution Rates	Discount Rate (Liabilities)	Investment Return (Assets)	Price Inflation	Payroll Growth (Amortization)	Asset Smoothing**
Baseline	Scenario 1	8.00%	8.00%	3.50%	4.50%	Current
Scenario 2*	Scenario 3	7.50%	7.50%	2.50%	3.75%	Proposed
Scenario 4	Scenario 5	7.75%	7.75%	2.50%	3.75%	Proposed
Scenario 6	Scenario 7	8.00%	7.50%	2.50%	4.50%	Current
Scenario 8	Scenario 9	7.75%	7.50%	2.50%	3.75%	Proposed

*Recommended assumptions

**The current asset valuation (or smoothing) method:

- Immediately recognizes interest and dividends;
- Recognizes the total recognized and unrecognized appreciation or depreciation from the current year (net change in fair value of investments) over a five-year period;
- Is biased toward the actuarial value of assets being lower than the market value of assets

The proposed asset method:

- Smooths total investment gains or losses compared to the investment return assumption (recommended to be 7.50 percent) over a five-year period
- Contains no bias
- No gain or loss will be generated if investment return assumption is earned and actuarial value of assets will equal market value of assets

Projection Results

The following table presents a summary of the projected funded ratio on an actuarial value of assets basis under (1) current and alternate actuarial assumption scenarios and (2) current and increased contribution rates, with an effective date of January 2021 for the Main System of the North Dakota Public Employees Retirement System.

Under the proposed asset valuation method, we have assumed that the actuarial value of assets would be set equal to the market value of assets as of the measurement date (July 1, 2016) and future gains and losses would be recognized in the actuarial value of assets using the proposed asset smoothing method.

	Funded Ratio (AVA) Under Current Contributions								
Discount Rate	8.00%	7.50%		7.75%		8.00%		7.75%	
Return on Assets	8.00%	7.50%		7.75%		7.50%		7.50%	
Year	Baseline	Scenario 2	Difference	Scenario 4	Difference	Scenario 6	Difference	Scenario 8	Difference
2016	66.1%	66.5%	0.4%	68.5%	2.4%	66.1%	0.0%	68.5%	2.4%
2021	66.2%	68.2%	2.0%	70.9%	4.7%	65.2%	-1.0%	70.4%	4.2%
2026	68.4%	68.8%	0.4%	72.4%	4.0%	65.7%	-2.7%	71.0%	2.6%
2031	70.2%	68.5%	-1.6%	73.2%	3.0%	65.4%	-4.7%	70.6%	0.5%
2036	71.9%	67.7%	-4.2%	73.5%	1.6%	64.8%	-7.1%	69.7%	-2.2%
2041	73.6%	66.3%	-7.4%	73.4%	-0.3%	63.8%	-9.8%	68.1%	-5.5%
2046	75.4%	64.1%	-11.3%	72.8%	-2.7%	62.4%	-13.0%	65.8%	-9.6%

	Funded Ratio (AVA) With Increased Contributions								
Discount Rate	8.00%	7.50%		7.75%		8.00%		7.75%	
Investment Return	8.00%	7.50%		7.75%		7.50%		7.50%	
Year	Scenario 1	Scenario 3	Difference	Scenario 5	Difference	Scenario 7	Difference	Scenario 9	Difference
2016	66.0%	66.4%	0.4%	68.4%	2.4%	66.0%	0.0%	68.4%	2.4%
2021	66.4%	68.4%	2.0%	71.1%	4.7%	65.5%	-1.0%	70.6%	4.2%
2026	71.3%	71.7%	0.4%	75.5%	4.2%	68.6%	-2.7%	74.0%	2.7%
2031	75.8%	74.2%	-1.6%	79.1%	3.3%	71.0%	-4.8%	76.5%	0.7%
2036	80.6%	76.4%	-4.2%	82.6%	2.0%	73.3%	-7.3%	78.7%	-1.9%
2046	91.5%	80.1%	-11.4%	89.6%	-1.9%	77.7%	-13.8%	82.2%	-9.3%

Results Under Current Contribution Rates Scenarios

Under the current contribution rates, the actuarial accrued liabilities are projected to increase faster than the assets, which results in an eventual decrease in the funded ratio. Under the baseline scenario, the funded ratio is projected to increase slowly. However, this assumes that the System will achieve an average annualized return of 8.00 percent over the entire 30-year projection period.

Scenarios 2, 6 and 8 are most comparable because they compare the projected actuarial valuation results using the same rate of return on assets (7.50 percent) across all scenarios. If the actual return exceeds 7.50 percent, then the funded ratio for each of the scenarios would be higher. Similarly, if the actual return is lower than 7.50 percent, then the funded ratio for each of the scenarios would be lower.

Although the liabilities are lower under Scenario 6 than Scenario 8 (using a discount rate of 8.00 percent versus 7.75 percent), the actuarial value of assets is also lower using the current asset smoothing method, which results in a lower projected funded ratio under Scenario 6 than Scenario 8.

Results Under Increased Contribution Rates Scenarios

Under the projection scenarios with a one percent increase in both the employee and employer contribution rates, there is projected to be an increase in the funded ratio under all scenarios. Scenarios 3, 7 and 9 are most comparable because they compare the projected actuarial valuation results using the same return on assets (7.50 percent) across all scenarios. The projected funded ratio in 2046 ranges from about 78 percent to 82 percent among these scenarios.

We recommend an increase in the current contribution rates (under any set of actuarial assumptions that is adopted) in order to adequately fund the System and pay down the unfunded actuarial accrued liability.

As you review the projection results, please note that there is approximately a 48 percent probability that NDPERS will produce an average annual return on assets that exceeds 7.50 percent over the next 20 years. There is approximately a 45 percent probability that NDPERS will produce an average annual return on assets that exceeds 7.75 percent over the next 20 years, and approximately a 41 percent probability that NDPERS will produce an average annual return on assets that exceeds 8.00 percent over the next 20 years.

Therefore, while the funded ratio results look better under a 7.75 percent investment return assumption than under a 7.50 percent investment return assumption, remember that the probability of achieving a 7.75 percent assumption, based on the current NDPERS asset allocation, is lower than the probability of achieving a 7.50 percent assumption.

Exhibits Provided

The following graphs and exhibits provide additional information on the impact on the actuarial valuation results under the different assumption sets based on both the current and increased sets of employee and statutory employer contribution rates:

- Graph I: Comparison of Projected Funded Ratios for the Main System With the Current Contribution Rates and Alternate Assumption Sets

- Graph II: Comparison of Projected Funded Ratios for the Main System With Increased Contribution Rates and Alternate Assumption Sets

Scenario	Contribution Rates	Discount Rate (Liabilities)	Investment Return (Assets)
Baseline	Current	8.00%	8.00%
Scenario 1	Increased	8.00%	8.00%
Scenario 2	Current	7.50%	7.50%
Scenario 3	Increased	7.50%	7.50%
Scenario 4	Current	7.75%	7.75%
Scenario 5	Increased	7.75%	7.75%
Scenario 6	Current	8.00%	7.50%
Scenario 7	Increased	8.00%	7.50%
Scenario 8	Current	7.75%	7.50%
Scenario 9	Increased	7.75%	7.50%

Projection Assumptions

Following is a summary of the assumptions made for new hires used in the projections. The average new hire information is based on the average of members with at least one year and less than five years of service. The average assumed new hire salary is based on projecting the valuation salary from the 2016 valuation back to hire age using the assumed salary increase assumption and then projecting back to the 2016 valuation using the current assumed wage inflation assumption of 4.50 percent per year. The projections assume that the number of active members remains the same in each future year as the number as of the most recent valuation of July 1, 2016. Future assumed new hire salary is assumed to increase from the year 2016 by the wage inflation assumption (4.50 percent under the current assumptions and 3.75 percent under the proposed assumptions).

	Main System	
	Current Members	Assumed New Hires
Average Age	46.5	38.4
Average Benefit Service	9.6	0.0
Average Salary	$44,274	$37,229
Normal Cost Rate -- Current Contribution Rate		
8.00% Discount Rate	10.00%	10.20%
7.75% Discount Rate	10.56%	10.76%
7.50% Discount Rate	11.15%	11.36%
Normal Cost Rate -- Increased Contribution Rate		
8.00% Discount Rate	10.06%	10.43%
7.75% Discount Rate	10.62%	11.00%
7.50% Discount Rate	11.22%	11.61%

Although new hires in the Main System are subject to later retirement eligibility conditions (must meet the Rule of 90 instead of the Rule of 85), they are assumed to be hired at slightly older ages (on average) than the current members in NDPERS.

Disclosures and Additional Information

The actuarial assumptions used in this analysis are the same assumptions used in the actuarial valuation as of July 1, 2016, except for the certain changes in economic actuarial assumptions as noted. A summary of the current actuarial assumptions can be found in Appendix I of this letter.

A summary of the current benefit provisions can be found in Appendix II of this letter.

Future actuarial measurements may differ significantly from the current measurements presented in this cost analysis, due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and changes in plan provisions, contribution amounts or applicable law.
If any of the provisions, underlying data or assumptions used in this analysis appear to be incorrect or unreasonable, please let us know as soon as possible so we can update the analysis.

The signing actuaries are independent of the plan sponsor.

Lance J. Weiss and Amy Williams are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

Please let us know if you have any questions or would like to discuss the results of this analysis further.

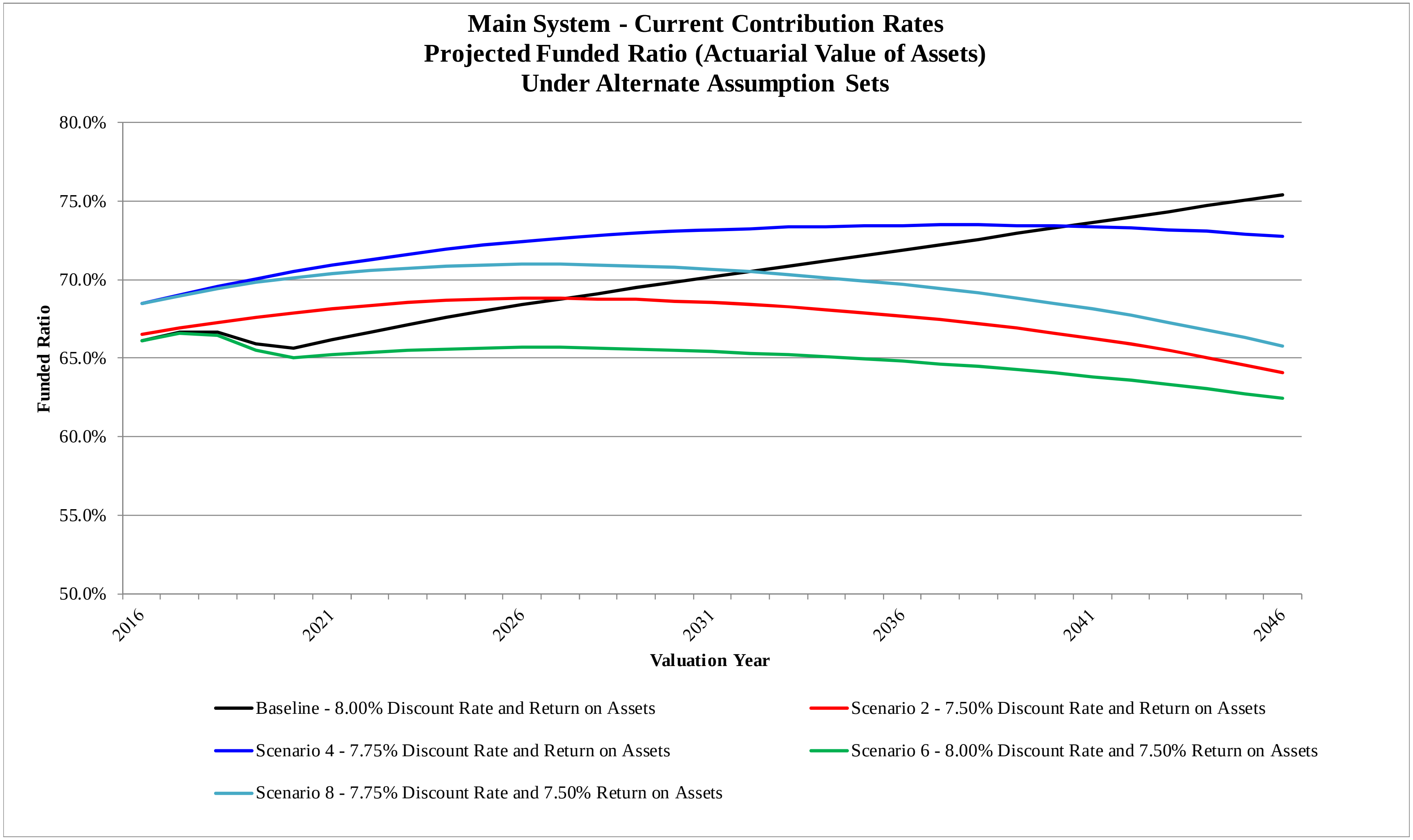
Sincerely,

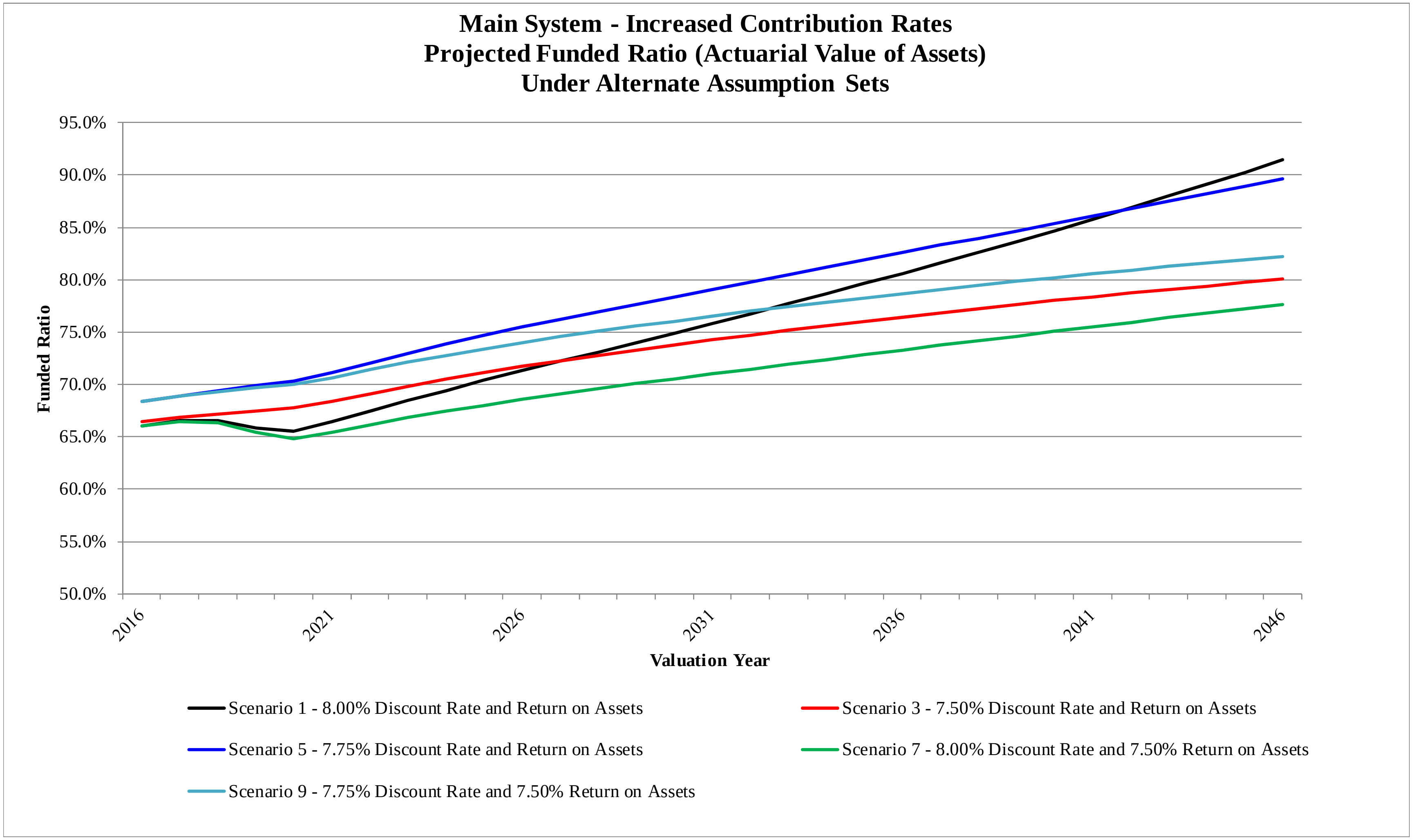
Lance J. Weiss — Amy Williams

Lance J. Weiss, EA, MAAA, FCA	Amy Williams, ASA, MAAA, FCA
Senior Consultant and Team Leader	Consultant

AW:rl

cc: Mr. Sparb Collins, NDPERS
Mr. Bryan Reinhardt, NDPERS
Ms. Sharon Schiermeister, NDPERS
Mr. Alex Rivera, Gabriel, Roeder, Smith & Company
Ms. Kristen Brundirks, Gabriel, Roeder, Smith & Company
Mr. Neil Nguyen, Gabriel, Roeder, Smith & Company


Main System - Current Contribution Rates
Projected Funded Ratio (Actuarial Value of Assets)
Under Alternate Assumption Sets
80.0%
75.0%
70.0%
65.0%
60.0%
55.0%
50.0%
Funded Ratio
2016
2021
2026
2031
2036
2041
2046
Valuation Year
Baseline - 8.00% Discount Rate and Return on Assets
Scenario 2 - 7.50% Discount Rate and Return on Assets
Scenario 4 - 7.75% Discount Rate and Return on Assets
Scenario 6 - 8.00% Discount Rate and 7.50% Return on Assets
Scenario 8 - 7.75% Discount Rate and 7.50% Return on Assets


Main System - Increased Contribution Rates
Projected Funded Ratio (Actuarial Value of Assets)
Under Alternate Assumption Sets
95.0%
90.0%
85.0%
80.0%
75.0%
70.0%
65.0%
60.0%
55.0%
50.0%
Funded Ratio
2016
2021
2026
2031
2036
2041
2046
Valuation Year
Scenario 1 - 8.00% Discount Rate and Return on Assets
Scenario 3 - 7.50% Discount Rate and Return on Assets
Scenario 5 - 7.75% Discount Rate and Return on Assets
Scenario 7 - 8.00% Discount Rate and 7.50% Return on Assets
Scenario 9 - 7.75% Discount Rate and 7.50% Return on Assets

North Dakota Public Employees Retirement System - Main System
Baseline - 8.00% Discount Rate, 8.00% Assumed Return on Assets, Current Asset Smoothing Method
Projection Results Based on the Actuarial Valuation as of July 1, 2016
Current Contribution Rates
($ in thousands)

			Results Based on Actuarial Value of Assets				Employer Actuarial Rate (%)			Statutory Contribution Amount ($)				Results Based on Market Value of Assets				
Year	Present Value Future Benefits	Actuarial Accrued Liability	Assets	Unfunded Accrued Liability	Funded Ratio	Projected Payroll	Normal Cost	Amortization of UAL	Total	Employer (7.12%)	Employee (7.00%)	Total	Benefit Payments and Expenses	Assets	Funded Ratio	Employer Actuarial Rate	Member Counts Active	Ben Recip.
2016	$ 4,418,264	$ 3,299,381	$ 2,180,749	$ 1,118,632	66.1%	$ 1,078,313	3.24%	7.24%	10.48%	$ 72,960	$ 71,997	$ 144,957	$ 148,346	$ 2,324,784	70.5%	9.55%	22,762	10,394
2017	4,690,061	3,515,754	2,342,737	1,173,017	66.6%	1,132,443	3.24%	7.23%	10.47%	76,776	75,482	152,258	160,403	2,502,301	71.2%	9.49%	22,762	10,981
2018	4,973,004	3,743,748	2,496,454	1,247,294	66.7%	1,188,841	3.25%	7.32%	10.57%	80,630	79,271	159,901	171,713	2,690,210	71.9%	9.43%	22,762	11,566
2019	5,269,525	3,984,267	2,626,972	1,357,296	65.9%	1,247,288	3.26%	7.59%	10.85%	84,646	83,219	167,864	183,283	2,889,403	72.5%	9.39%	22,762	12,190
2020	5,580,020	4,236,983	2,782,107	1,454,877	65.7%	1,308,158	3.26%	7.76%	11.02%	88,807	87,310	176,117	196,362	3,099,516	73.2%	9.33%	22,762	12,844
2021	5,903,938	4,501,486	2,979,498	1,521,988	66.2%	1,371,251	3.26%	7.75%	11.01%	93,141	91,571	184,712	211,020	3,320,137	73.8%	9.27%	22,762	13,539
2022	6,243,144	4,777,382	3,185,792	1,591,590	66.7%	1,436,063	3.27%	7.73%	11.00%	97,633	95,988	193,621	227,182	3,550,870	74.3%	9.23%	22,762	14,275
2023	6,597,583	5,064,948	3,401,243	1,663,705	67.2%	1,503,842	3.27%	7.72%	10.99%	102,248	100,524	202,772	244,141	3,791,947	74.9%	9.18%	22,762	15,031
2024	6,966,819	5,364,022	3,625,727	1,738,295	67.6%	1,574,124	3.27%	7.71%	10.98%	107,074	105,269	212,342	262,451	4,043,229	75.4%	9.13%	22,762	15,826
2025	7,351,250	5,674,589	3,859,224	1,815,365	68.0%	1,646,921	3.27%	7.69%	10.96%	112,078	110,189	222,266	281,926	4,304,688	75.9%	9.08%	22,762	16,625
2026	7,751,298	5,997,093	4,102,178	1,894,915	68.4%	1,723,004	3.27%	7.68%	10.95%	117,261	115,284	232,545	302,107	4,576,772	76.3%	9.02%	22,762	17,446
2027	8,167,103	6,331,750	4,354,809	1,976,941	68.8%	1,802,441	3.26%	7.65%	10.91%	122,678	120,610	243,288	323,336	4,859,726	76.8%	8.96%	22,762	18,265
2028	8,599,598	6,679,261	4,617,800	2,061,460	69.1%	1,885,516	3.26%	7.63%	10.89%	128,334	126,171	254,505	345,183	5,154,269	77.2%	8.90%	22,762	19,077
2029	9,049,370	7,041,005	4,892,496	2,148,509	69.5%	1,972,457	3.26%	7.60%	10.86%	134,249	131,986	266,235	367,071	5,461,819	77.6%	8.85%	22,762	19,869
2030	9,517,473	7,418,247	5,180,102	2,238,145	69.8%	2,063,741	3.26%	7.57%	10.83%	140,439	138,072	278,511	389,235	5,783,696	78.0%	8.79%	22,762	20,653
2031	10,005,493	7,812,288	5,481,848	2,330,440	70.2%	2,159,348	3.25%	7.53%	10.78%	146,938	144,462	291,400	411,802	6,121,266	78.4%	8.72%	22,762	21,438
2032	10,518,661	8,227,868	5,802,317	2,425,551	70.5%	2,259,097	3.25%	7.49%	10.74%	153,746	151,154	304,900	431,558	6,479,341	78.7%	8.65%	22,762	22,223
2033	11,054,852	8,662,709	6,139,110	2,523,599	70.9%	2,363,499	3.25%	7.45%	10.70%	160,848	158,137	318,985	455,580	6,855,734	79.1%	8.59%	22,762	23,006
2034	11,614,920	9,117,588	6,492,999	2,624,588	71.2%	2,472,249	3.24%	7.41%	10.65%	168,281	165,445	333,726	480,830	7,251,318	79.5%	8.51%	22,762	23,779
2035	12,200,054	9,593,073	6,864,580	2,728,493	71.6%	2,585,551	3.24%	7.36%	10.60%	176,024	173,057	349,082	507,522	7,666,767	79.9%	8.44%	22,762	24,572
2036	12,811,528	10,090,406	7,255,143	2,835,262	71.9%	2,704,109	3.23%	7.32%	10.55%	184,091	180,989	365,080	535,074	8,103,445	80.3%	8.36%	22,762	25,365
2037	13,450,501	10,610,716	7,665,871	2,944,844	72.2%	2,827,697	3.23%	7.27%	10.50%	192,533	189,288	381,820	563,765	8,562,638	80.7%	8.28%	22,762	26,135
2038	14,118,406	11,154,669	8,097,457	3,057,212	72.6%	2,956,168	3.22%	7.22%	10.44%	201,332	197,939	399,271	594,113	9,045,164	81.1%	8.20%	22,762	26,885
2039	14,816,360	11,723,769	8,551,426	3,172,343	72.9%	3,090,495	3.22%	7.16%	10.38%	210,479	206,932	417,411	625,348	9,552,683	81.5%	8.12%	22,762	27,641
2040	15,545,668	12,318,341	9,028,177	3,290,164	73.3%	3,230,650	3.21%	7.11%	10.32%	220,043	216,335	436,378	658,826	10,085,723	81.9%	8.03%	22,762	28,420
2041	16,307,300	12,939,076	9,528,500	3,410,576	73.6%	3,376,260	3.21%	7.05%	10.26%	230,022	226,146	456,168	694,223	10,645,186	82.3%	7.95%	22,762	29,167
2042	17,102,841	13,586,588	10,053,121	3,533,467	74.0%	3,527,522	3.21%	6.99%	10.20%	240,390	236,338	476,728	731,629	11,231,900	82.7%	7.87%	22,762	29,903
2043	17,933,265	14,261,830	10,603,125	3,658,705	74.3%	3,685,106	3.20%	6.93%	10.13%	251,160	246,927	498,086	770,786	11,847,053	83.1%	7.77%	22,762	30,614
2044	18,800,293	14,966,131	11,179,987	3,786,143	74.7%	3,849,388	3.20%	6.86%	10.06%	262,380	257,957	520,337	811,485	12,492,248	83.5%	7.69%	22,762	31,295
2045	19,705,224	15,700,522	11,784,907	3,915,615	75.1%	4,020,712	3.19%	6.80%	9.99%	274,076	269,457	543,534	854,147	13,168,829	83.9%	7.58%	22,762	31,982
2046	20,649,646	16,466,073	12,419,139	4,046,934	75.4%	4,199,485	3.19%	6.73%	9.92%	286,275	281,450	567,725	898,861	13,878,208	84.3%	7.49%	22,762	32,632

North Dakota Public Employees Retirement System - Main System
Scenario 1 - 8.00% Discount Rate, 8.00% Assumed Return on Assets, Current Asset Smoothing Method
Projection Results Based on the Actuarial Valuation as of July 1, 2016
Effective January 2021, the employee contribtion rate and the statutory employer contribution rate are both increased by 1.00 percent of pay
($ in thousands)

			Results Based on Actuarial Value of Assets											Results Based on Market Value of Assets				
							Employer Actuarial Rate (%)			Statutory Contribution Amount ($)			Benefit			Employer		
	Present Value	Actuarial		Unfunded		Projected	Normal	Amortization		Employer	Employee		Payments			Actuarial	Member Counts	
Year	Future Benefits	Accrued Liability	Assets	Accrued Liability	Funded Ratio	Payroll	Cost	of UAL	Total	(8.12%)	(8.00%)	Total	and Expenses	Assets	Funded Ratio	Rate	Active	Ben Recip.
2016	$ 4,431,386	$ 3,303,846	$ 2,180,749	$ 1,123,098	66.0%	$ 1,078,313	3.30%	7.27%	10.57%	$ 72,960	$ 71,997	$ 144,957	$ 148,346	$ 2,324,784	70.4%	9.64%	22,762	10,394
2017	4,706,199	3,521,348	2,342,737	1,178,611	66.5%	1,132,443	3.32%	7.26%	10.58%	76,776	75,482	152,258	160,403	2,502,301	71.1%	9.60%	22,762	10,981
2018	4,992,299	3,750,589	2,496,454	1,254,134	66.6%	1,188,841	3.33%	7.36%	10.69%	80,630	79,271	159,901	171,713	2,690,210	71.7%	9.55%	22,762	11,566
2019	5,292,186	3,992,506	2,626,972	1,365,534	65.8%	1,247,288	3.35%	7.64%	10.99%	84,646	83,219	167,864	183,283	2,889,403	72.4%	9.52%	22,762	12,190
2020	5,606,356	4,246,846	2,782,107	1,464,739	65.5%	1,308,158	2.86%	7.82%	10.68%	88,807	87,310	176,117	196,362	3,099,516	73.0%	8.98%	22,762	12,844
2021	5,934,280	4,513,212	2,998,396	1,514,816	66.4%	1,371,251	2.37%	7.71%	10.08%	106,222	98,112	204,334	211,359	3,339,421	74.0%	8.34%	22,762	13,539
2022	6,277,893	4,791,241	3,232,875	1,558,366	67.5%	1,436,063	2.38%	7.57%	9.95%	111,346	109,700	221,046	227,585	3,599,779	75.1%	8.17%	22,762	14,275
2023	6,637,155	5,081,227	3,479,114	1,602,113	68.5%	1,503,842	2.39%	7.44%	9.83%	116,608	114,885	231,493	244,613	3,874,127	76.2%	7.99%	22,762	15,031
2024	7,011,645	5,383,040	3,737,514	1,645,525	69.4%	1,574,124	2.40%	7.30%	9.70%	122,112	120,307	242,419	263,003	4,162,666	77.3%	7.81%	22,762	15,826
2025	7,401,798	5,696,685	4,008,633	1,688,052	70.4%	1,646,921	2.40%	7.15%	9.55%	127,819	125,930	253,749	282,567	4,465,731	78.4%	7.62%	22,762	16,625
2026	7,808,064	6,022,649	4,293,438	1,729,211	71.3%	1,723,004	2.41%	7.00%	9.41%	133,730	131,754	265,484	302,844	4,784,163	79.4%	7.43%	22,762	17,446
2027	8,230,609	6,361,169	4,592,579	1,768,590	72.2%	1,802,441	2.42%	6.85%	9.27%	139,908	137,840	277,748	324,182	5,118,641	80.5%	7.23%	22,762	18,265
2028	8,670,404	6,712,983	4,907,161	1,805,822	73.1%	1,885,516	2.42%	6.68%	9.10%	146,358	144,195	290,553	346,150	5,470,354	81.5%	7.02%	22,762	19,077
2029	9,128,053	7,079,511	5,238,997	1,840,513	74.0%	1,972,457	2.42%	6.51%	8.93%	153,104	150,841	303,945	368,168	5,841,241	82.5%	6.80%	22,762	19,869
2030	9,604,643	7,462,055	5,589,796	1,872,260	74.9%	2,063,741	2.43%	6.33%	8.76%	160,163	157,797	317,960	390,476	6,233,179	83.5%	6.59%	22,762	20,653
2031	10,101,797	7,861,944	5,961,326	1,900,618	75.8%	2,159,348	2.43%	6.14%	8.57%	167,576	165,099	332,675	413,212	6,648,136	84.6%	6.35%	22,762	21,438
2032	10,624,779	8,283,940	6,358,749	1,925,191	76.8%	2,259,097	2.43%	5.95%	8.38%	175,339	172,748	348,087	433,168	7,091,568	85.6%	6.11%	22,762	22,223
2033	11,171,505	8,725,805	6,780,294	1,945,511	77.7%	2,363,499	2.43%	5.74%	8.17%	183,439	180,728	364,166	457,415	7,561,988	86.7%	5.87%	22,762	23,006
2034	11,742,861	9,188,347	7,227,414	1,960,933	78.7%	2,472,249	2.43%	5.54%	7.97%	191,916	189,080	380,996	482,920	8,061,024	87.7%	5.61%	22,762	23,779
2035	12,340,076	9,672,168	7,701,427	1,970,741	79.6%	2,585,551	2.43%	5.32%	7.75%	200,747	197,780	398,527	509,905	8,590,158	88.8%	5.35%	22,762	24,572
2036	12,964,462	10,178,544	8,204,418	1,974,127	80.6%	2,704,109	2.43%	5.10%	7.53%	209,947	206,844	416,791	537,781	9,151,635	89.9%	5.08%	22,762	25,365
2037	13,617,208	10,708,640	8,738,425	1,970,215	81.6%	2,827,697	2.43%	4.86%	7.29%	219,574	216,329	435,902	566,838	9,747,694	91.0%	4.80%	22,762	26,135
2038	14,299,798	11,263,158	9,305,064	1,958,094	82.6%	2,956,168	2.43%	4.62%	7.05%	229,609	226,216	455,825	597,591	10,380,181	92.2%	4.51%	22,762	26,885
2039	15,013,389	11,843,654	9,906,871	1,936,783	83.6%	3,090,495	2.43%	4.37%	6.80%	240,041	236,493	476,534	629,261	11,051,878	93.3%	4.22%	22,762	27,641
2040	15,759,304	12,450,449	10,545,290	1,905,159	84.7%	3,230,650	2.43%	4.12%	6.55%	250,948	247,240	498,188	663,259	11,764,481	94.5%	3.91%	22,762	28,420
2041	16,538,542	13,084,259	11,222,272	1,861,988	85.8%	3,376,260	2.43%	3.85%	6.28%	262,329	258,452	520,781	699,237	12,520,182	95.7%	3.60%	22,762	29,167
2042	17,352,743	13,745,739	11,939,795	1,805,944	86.9%	3,527,522	2.43%	3.57%	6.00%	274,152	270,101	544,253	737,273	13,321,204	96.9%	3.27%	22,762	29,903
2043	18,202,929	14,435,888	12,700,312	1,735,576	88.0%	3,685,106	2.43%	3.29%	5.72%	286,435	282,202	568,637	777,102	14,170,257	98.2%	2.93%	22,762	30,614
2044	19,090,879	15,156,086	13,506,784	1,649,302	89.1%	3,849,388	2.43%	2.99%	5.42%	299,231	294,808	594,039	818,519	15,070,591	99.4%	2.59%	22,762	31,295
2045	20,017,918	15,907,391	14,361,989	1,545,402	90.3%	4,020,712	2.43%	2.68%	5.11%	312,570	307,951	620,521	861,975	16,025,312	100.7%	2.23%	22,762	31,982
2046	20,985,667	16,690,890	15,268,890	1,422,000	91.5%	4,199,485	2.43%	2.36%	4.79%	326,482	321,657	648,139	907,565	17,037,733	102.1%	1.85%	22,762	32,632

North Dakota Public Employees Retirement System - Main System
Scenario 2 - 7.50% Discount Rate, 7.50% Assumed Return on Assets, Proposed Asset Smoothing Method
Projection Results Based on the Actuarial Valuation as of July 1, 2016
Current Contribution Rates
($ in thousands)

	Results Based on Actuarial Value of Assets													Results Based on Market Value of Assets				
							Employer Actuarial Rate (%)			Statutory Contribution Amount ($)								
Year	Present Value Future Benefits	Actuarial Accrued Liability	Assets	Unfunded Accrued Liability	Funded Ratio	Projected Payroll	Normal Cost	Amortization of UAL	Total	Employer (7.12%)	Employee (7.00%)	Total	Benefit Payments and Expenses	Assets	Funded Ratio	Employer Actuarial Rate	Member Counts Active	Member Counts Ben Recip.
2016	$ 4,796,364	$ 3,494,450	$ 2,324,784	$ 1,169,667	66.5%	$ 1,078,313	4.38%	7.72%	12.10%	$ 72,960	$ 71,997	$ 144,957	$ 148,346	$ 2,324,784	66.5%	12.10%	22,762	10,394
2017	5,088,023	3,722,134	2,490,749	1,231,386	66.9%	1,131,870	4.39%	7.74%	12.13%	76,776	75,482	152,258	160,353	2,490,749	66.9%	12.13%	22,762	10,981
2018	5,390,532	3,961,902	2,665,374	1,296,529	67.3%	1,187,154	4.40%	7.77%	12.17%	80,589	79,231	159,820	171,569	2,665,374	67.3%	12.17%	22,762	11,566
2019	5,706,461	4,214,563	2,849,261	1,365,303	67.6%	1,243,936	4.40%	7.81%	12.21%	84,525	83,101	167,626	183,073	2,849,261	67.6%	12.21%	22,762	12,190
2020	6,036,209	4,479,715	3,041,766	1,437,949	67.9%	1,302,565	4.40%	7.85%	12.25%	88,568	87,075	175,644	196,081	3,041,766	67.9%	12.25%	22,762	12,844
2021	6,379,098	4,756,876	3,242,176	1,514,700	68.2%	1,362,824	4.41%	7.91%	12.32%	92,743	91,180	183,922	210,660	3,242,176	68.2%	12.32%	22,762	13,539
2022	6,737,141	5,045,603	3,449,778	1,595,825	68.4%	1,424,094	4.41%	7.97%	12.38%	97,033	95,398	192,431	226,729	3,449,778	68.4%	12.38%	22,762	14,275
2023	7,110,064	5,346,057	3,664,441	1,681,616	68.5%	1,487,583	4.41%	8.04%	12.45%	101,396	99,687	201,082	243,587	3,664,441	68.5%	12.45%	22,762	15,031
2024	7,497,237	5,657,998	3,885,637	1,772,361	68.7%	1,552,788	4.41%	8.12%	12.53%	105,916	104,131	210,047	261,779	3,885,637	68.7%	12.53%	22,762	15,826
2025	7,898,920	5,981,305	4,112,915	1,868,390	68.8%	1,619,639	4.41%	8.21%	12.62%	110,558	108,695	219,254	281,120	4,112,915	68.8%	12.62%	22,762	16,625
2026	8,315,339	6,316,296	4,346,260	1,970,036	68.8%	1,688,860	4.41%	8.30%	12.71%	115,318	113,375	228,693	301,149	4,346,260	68.8%	12.71%	22,762	17,446
2027	8,746,430	6,663,071	4,585,414	2,077,658	68.8%	1,760,468	4.41%	8.40%	12.81%	120,247	118,220	238,467	322,200	4,585,414	68.8%	12.81%	22,762	18,265
2028	9,192,929	7,022,183	4,830,544	2,191,639	68.8%	1,834,665	4.41%	8.50%	12.91%	125,345	123,233	248,578	343,846	4,830,544	68.8%	12.91%	22,762	19,077
2029	9,655,137	7,394,850	5,082,463	2,312,387	68.7%	1,911,684	4.41%	8.60%	13.01%	130,628	128,427	259,055	365,507	5,082,463	68.7%	13.01%	22,762	19,869
2030	10,133,861	7,782,179	5,341,840	2,440,339	68.6%	1,991,957	4.41%	8.72%	13.13%	136,112	133,818	269,930	387,411	5,341,840	68.6%	13.13%	22,762	20,653
2031	10,630,447	8,185,283	5,609,331	2,575,952	68.5%	2,075,363	4.40%	8.83%	13.23%	141,827	139,437	281,264	409,683	5,609,331	68.5%	13.23%	22,762	21,438
2032	11,149,585	8,608,401	5,888,691	2,719,709	68.4%	2,161,594	4.40%	8.95%	13.35%	147,766	145,275	293,041	429,361	5,888,691	68.4%	13.35%	22,762	22,223
2033	11,689,047	9,049,234	6,177,089	2,872,145	68.3%	2,251,076	4.40%	9.08%	13.48%	153,906	151,312	305,217	453,029	6,177,089	68.3%	13.48%	22,762	23,006
2034	12,249,342	9,508,282	6,474,463	3,033,819	68.1%	2,343,417	4.39%	9.21%	13.60%	160,277	157,575	317,852	477,867	6,474,463	68.1%	13.60%	22,762	23,779
2035	12,831,294	9,985,823	6,780,475	3,205,348	67.9%	2,438,673	4.39%	9.35%	13.74%	166,851	164,039	330,890	504,086	6,780,475	67.9%	13.74%	22,762	24,572
2036	13,435,769	10,482,765	7,095,386	3,387,379	67.7%	2,537,477	4.39%	9.50%	13.89%	173,634	170,707	344,341	531,089	7,095,386	67.7%	13.89%	22,762	25,365
2037	14,063,482	10,999,884	7,419,281	3,580,603	67.4%	2,639,511	4.38%	9.65%	14.03%	180,668	177,623	358,292	559,154	7,419,281	67.4%	14.03%	22,762	26,135
2038	14,715,380	11,537,451	7,751,677	3,785,774	67.2%	2,744,435	4.38%	9.81%	14.19%	187,933	184,766	372,699	588,793	7,751,677	67.2%	14.19%	22,762	26,885
2039	15,392,072	12,096,534	8,092,821	4,003,713	66.9%	2,853,209	4.37%	9.98%	14.35%	195,404	192,110	387,514	619,214	8,092,821	66.9%	14.35%	22,762	27,641
2040	16,094,315	12,677,025	8,441,744	4,235,280	66.6%	2,965,552	4.37%	10.16%	14.53%	203,149	199,725	402,873	651,748	8,441,744	66.6%	14.53%	22,762	28,420
2041	16,822,480	13,279,116	8,797,699	4,481,417	66.3%	3,080,959	4.36%	10.35%	14.71%	211,147	207,589	418,736	686,068	8,797,699	66.3%	14.71%	22,762	29,167
2042	17,577,488	13,902,876	9,159,724	4,743,151	65.9%	3,199,392	4.36%	10.55%	14.91%	219,364	215,667	435,031	722,257	9,159,724	65.9%	14.91%	22,762	29,903
2043	18,359,631	14,548,656	9,527,076	5,021,580	65.5%	3,321,435	4.35%	10.76%	15.11%	227,797	223,957	451,754	760,031	9,527,076	65.5%	15.11%	22,762	30,614
2044	19,169,887	15,217,152	9,899,270	5,317,881	65.1%	3,447,306	4.35%	10.97%	15.32%	236,486	232,500	468,987	799,165	9,899,270	65.1%	15.32%	22,762	31,295
2045	20,008,791	15,908,741	10,275,427	5,633,313	64.6%	3,577,226	4.35%	11.20%	15.55%	245,448	241,311	486,760	840,039	10,275,427	64.6%	15.55%	22,762	31,982
2046	20,877,109	16,623,793	10,654,573	5,969,220	64.1%	3,711,407	4.34%	11.44%	15.78%	254,698	250,406	505,104	882,711	10,654,573	64.1%	15.78%	22,762	32,632

North Dakota Public Employees Retirement System - Main System
Scenario 3 - 7.50% Discount Rate, 7.50% Assumed Return on Assets, Poposed Asset Smoothing Method
Projection Results Based on the Actuarial Valuation as of July 1, 2016
Effective January 2021, the employee contribtion rate and the statutory employer contribution rate are both increased by 1.00 percent of pay
($ in thousands)

			Results Based on Actuarial Value of Assets											Results Based on Market Value of Assets				
							Employer Actuarial Rate (%)			Statutory Contribution Amount ($)								
Year	Present Value Future Benefits	Actuarial Accrued Liability	Assets	Unfunded Accrued Liability	Funded Ratio	Projected Payroll	Normal Cost	Amortization of UAL	Total	Employer (8.12%)	Employee (8.00%)	Total	Benefit Payments and Expenses	Assets	Funded Ratio	Employer Actuarial Rate	Member Counts Active	Member Counts Ben Recip.
2016	$ 4,810,453	$ 3,499,027	$ 2,324,784	$ 1,174,243	66.4%	$ 1,078,313	4.45%	7.75%	12.20%	$ 72,960	$ 71,997	$ 144,957	$ 148,346	$ 2,324,784	66.4%	12.20%	22,762	10,394
2017	5,105,328	3,727,855	2,490,749	1,237,107	66.8%	1,131,870	4.47%	7.78%	12.25%	76,776	75,482	152,258	160,353	2,490,749	66.8%	12.25%	22,762	10,981
2018	5,411,184	3,968,892	2,665,374	1,303,518	67.2%	1,187,154	4.48%	7.81%	12.29%	80,589	79,231	159,820	171,569	2,665,374	67.2%	12.29%	22,762	11,566
2019	5,730,657	4,222,969	2,849,261	1,373,708	67.5%	1,243,936	4.50%	7.86%	12.36%	84,525	83,101	167,626	183,073	2,849,261	67.5%	12.36%	22,762	12,190
2020	6,064,250	4,489,762	3,041,766	1,447,996	67.7%	1,302,565	4.01%	7.91%	11.92%	88,568	87,075	175,644	196,081	3,041,766	67.7%	11.92%	22,762	12,844
2021	6,411,300	4,768,814	3,261,347	1,507,468	68.4%	1,362,824	3.52%	7.87%	11.39%	105,768	97,692	203,461	210,993	3,261,347	68.4%	11.39%	22,762	13,539
2022	6,773,891	5,059,683	3,498,237	1,561,446	69.1%	1,424,094	3.53%	7.80%	11.33%	110,661	109,026	219,687	227,124	3,498,237	69.1%	11.33%	22,762	14,275
2023	7,151,761	5,362,568	3,745,588	1,616,980	69.8%	1,487,583	3.54%	7.73%	11.27%	115,636	113,928	229,564	244,047	3,745,588	69.8%	11.27%	22,762	15,031
2024	7,544,287	5,677,246	4,003,163	1,674,083	70.5%	1,552,788	3.55%	7.67%	11.22%	120,792	119,007	239,798	262,314	4,003,163	70.5%	11.22%	22,762	15,826
2025	7,951,766	6,003,622	4,270,814	1,732,808	71.1%	1,619,639	3.56%	7.61%	11.17%	126,086	124,223	250,309	281,738	4,270,814	71.1%	11.17%	22,762	16,625
2026	8,374,443	6,342,048	4,548,854	1,793,195	71.7%	1,688,860	3.56%	7.55%	11.11%	131,515	129,571	261,086	301,856	4,548,854	71.7%	11.11%	22,762	17,446
2027	8,812,277	6,692,641	4,837,386	1,855,255	72.3%	1,760,468	3.57%	7.50%	11.07%	137,135	135,109	272,244	323,007	4,837,386	72.3%	11.07%	22,762	18,265
2028	9,266,036	7,055,995	5,136,969	1,919,026	72.8%	1,834,665	3.57%	7.44%	11.01%	142,950	140,837	283,787	344,763	5,136,969	72.8%	11.01%	22,762	19,077
2029	9,736,033	7,433,361	5,448,841	1,984,520	73.3%	1,911,684	3.58%	7.38%	10.96%	148,975	146,773	295,748	366,541	5,448,841	73.3%	10.96%	22,762	19,869
2030	10,223,100	7,825,872	5,774,131	2,051,742	73.8%	1,991,957	3.58%	7.33%	10.91%	155,229	152,935	308,163	388,576	5,774,131	73.8%	10.91%	22,762	20,653
2031	10,728,611	8,234,669	6,113,983	2,120,685	74.2%	2,075,363	3.59%	7.27%	10.86%	161,747	159,357	321,103	411,000	6,113,983	74.2%	10.86%	22,762	21,438
2032	11,257,288	8,664,012	6,472,674	2,191,339	74.7%	2,161,594	3.59%	7.21%	10.80%	168,519	166,029	334,548	430,860	6,472,674	74.7%	10.80%	22,762	22,223
2033	11,806,930	9,111,632	6,847,929	2,263,704	75.2%	2,251,076	3.59%	7.15%	10.74%	175,521	172,928	348,449	454,731	6,847,929	75.2%	10.74%	22,762	23,006
2034	12,378,070	9,578,055	7,240,289	2,337,766	75.6%	2,343,417	3.59%	7.10%	10.69%	182,787	180,086	362,874	479,802	7,240,289	75.6%	10.69%	22,762	23,779
2035	12,971,565	10,063,580	7,650,051	2,413,530	76.0%	2,438,673	3.59%	7.04%	10.63%	190,285	187,473	377,759	506,286	7,650,051	76.0%	10.63%	22,762	24,572
2036	13,588,304	10,569,152	8,078,163	2,490,989	76.4%	2,537,477	3.59%	6.98%	10.57%	198,020	195,094	393,114	533,584	8,078,163	76.4%	10.57%	22,762	25,365
2037	14,229,022	11,095,565	8,525,452	2,570,113	76.8%	2,639,511	3.59%	6.93%	10.52%	206,043	202,998	409,041	561,982	8,525,452	76.8%	10.52%	22,762	26,135
2038	14,894,706	11,643,117	8,992,230	2,650,887	77.2%	2,744,435	3.59%	6.87%	10.46%	214,328	211,161	425,489	591,990	8,992,230	77.2%	10.46%	22,762	26,885
2039	15,585,989	12,212,922	9,479,604	2,733,318	77.6%	2,853,209	3.59%	6.81%	10.40%	222,848	219,555	442,403	622,804	9,479,604	77.6%	10.40%	22,762	27,641
2040	16,303,634	12,804,859	9,987,489	2,817,370	78.0%	2,965,552	3.59%	6.76%	10.35%	231,681	228,257	459,937	655,810	9,987,489	78.0%	10.35%	22,762	28,420
2041	17,048,028	13,419,133	10,516,112	2,903,022	78.4%	3,080,959	3.59%	6.70%	10.29%	240,803	237,244	478,047	690,657	10,516,112	78.4%	10.29%	22,762	29,167
2042	17,820,125	14,055,836	11,065,555	2,990,280	78.7%	3,199,392	3.59%	6.65%	10.24%	250,174	246,477	496,651	727,418	11,065,555	78.7%	10.24%	22,762	29,903
2043	18,620,252	14,715,357	11,636,209	3,079,148	79.1%	3,321,435	3.59%	6.59%	10.18%	259,791	255,951	515,742	765,798	11,636,209	79.1%	10.18%	22,762	30,614
2044	19,449,423	15,398,426	12,228,814	3,169,613	79.4%	3,447,306	3.59%	6.54%	10.13%	269,700	265,715	535,415	805,578	12,228,814	79.4%	10.13%	22,762	31,295
2045	20,308,181	16,105,430	12,843,783	3,261,647	79.7%	3,577,226	3.59%	6.49%	10.08%	279,921	275,784	555,706	847,165	12,843,783	79.7%	10.08%	22,762	31,982
2046	21,197,308	16,836,746	13,481,533	3,355,212	80.1%	3,711,407	3.59%	6.43%	10.02%	290,471	286,178	576,649	890,621	13,481,533	80.1%	10.02%	22,762	32,632

North Dakota Public Employees Retirement System - Main System
Scenario 4 - 7.75% Discount Rate, 7.75% Assumed Return on Assets, Proposed Asset Smoothing Method
Projection Results Based on the Actuarial Valuation as of July 1, 2016
Current Contribution Rates
($ in thousands)

	Results Based on Actuarial Value of Assets													Results Based on Market Value of Assets				
							Employer Actuarial Rate (%)			Statutory Contribution Amount ($)			Benefit			Employer		
	Present Value	Actuarial		Unfunded		Projected	Normal	Amortization		Employer	Employee		Payments			Actuarial	Member Counts	
Year	Future Benefits	Accrued Liability	Assets	Accrued Liability	Funded Ratio	Payroll	Cost	of UAL	Total	(7.12%)	(7.00%)	Total	and Expenses	Assets	Funded Ratio	Rate	Active	Ben Recip.
2016	$ 4,601,166	$ 3,394,810	$ 2,324,784	$ 1,070,026	68.5%	$ 1,078,313	3.79%	7.20%	10.99%	$ 72,960	$ 71,997	$ 144,957	$ 148,346	$ 2,324,784	68.5%	10.99%	22,762	10,394
2017	4,882,277	3,616,721	2,496,538	1,120,183	69.0%	1,131,870	3.80%	7.19%	10.99%	76,776	75,482	152,258	160,366	2,496,538	69.0%	10.99%	22,762	10,981
2018	5,174,063	3,850,446	2,677,779	1,172,668	69.5%	1,187,154	3.80%	7.17%	10.97%	80,589	79,231	159,820	171,613	2,677,779	69.5%	10.97%	22,762	11,566
2019	5,478,971	4,096,824	2,869,213	1,227,612	70.0%	1,243,936	3.81%	7.17%	10.98%	84,525	83,101	167,626	183,130	2,869,213	70.0%	10.98%	22,762	12,190
2020	5,797,335	4,355,442	3,070,288	1,285,155	70.5%	1,302,565	3.81%	7.16%	10.97%	88,568	87,075	175,644	196,153	3,070,288	70.5%	10.97%	22,762	12,844
2021	6,128,486	4,625,825	3,280,388	1,345,437	70.9%	1,362,824	3.81%	7.17%	10.98%	92,743	91,180	183,922	210,749	3,280,388	70.9%	10.98%	22,762	13,539
2022	6,474,243	4,907,511	3,498,900	1,408,611	71.3%	1,424,094	3.81%	7.18%	10.99%	97,033	95,398	192,431	226,840	3,498,900	71.3%	10.99%	22,762	14,275
2023	6,834,369	5,200,662	3,725,804	1,474,857	71.6%	1,487,583	3.81%	7.20%	11.01%	101,396	99,687	201,082	243,721	3,725,804	71.6%	11.01%	22,762	15,031
2024	7,208,252	5,505,024	3,960,687	1,544,337	71.9%	1,552,788	3.81%	7.22%	11.03%	105,916	104,131	210,047	261,941	3,960,687	71.9%	11.03%	22,762	15,826
2025	7,596,118	5,820,466	4,203,220	1,617,246	72.2%	1,619,639	3.81%	7.25%	11.06%	110,558	108,695	219,254	281,314	4,203,220	72.2%	11.06%	22,762	16,625
2026	7,998,190	6,147,300	4,453,519	1,693,781	72.4%	1,688,860	3.81%	7.28%	11.09%	115,318	113,375	228,693	301,379	4,453,519	72.4%	11.09%	22,762	17,446
2027	8,414,402	6,485,599	4,711,464	1,774,135	72.6%	1,760,468	3.81%	7.32%	11.13%	120,247	118,220	238,467	322,475	4,711,464	72.6%	11.13%	22,762	18,265
2028	8,845,463	6,835,906	4,977,376	1,858,529	72.8%	1,834,665	3.81%	7.36%	11.17%	125,345	123,233	248,578	344,169	4,977,376	72.8%	11.17%	22,762	19,077
2029	9,291,725	7,199,420	5,252,232	1,947,188	73.0%	1,911,684	3.80%	7.40%	11.20%	130,628	128,427	259,055	365,883	5,252,232	73.0%	11.20%	22,762	19,869
2030	9,753,999	7,577,225	5,536,878	2,040,347	73.1%	1,991,957	3.80%	7.44%	11.24%	136,112	133,818	269,930	387,848	5,536,878	73.1%	11.24%	22,762	20,653
2031	10,233,590	7,970,419	5,832,163	2,138,256	73.2%	2,075,363	3.80%	7.48%	11.28%	141,827	139,437	281,264	410,185	5,832,163	73.2%	11.28%	22,762	21,438
2032	10,735,270	8,383,361	6,142,187	2,241,174	73.3%	2,161,594	3.79%	7.53%	11.32%	147,766	145,275	293,041	429,808	6,142,187	73.3%	11.32%	22,762	22,223
2033	11,256,687	8,813,629	6,464,244	2,349,384	73.3%	2,251,076	3.79%	7.58%	11.37%	153,906	151,312	305,217	453,539	6,464,244	73.3%	11.37%	22,762	23,006
2034	11,798,335	9,261,710	6,798,520	2,463,190	73.4%	2,343,417	3.78%	7.63%	11.41%	160,277	157,575	317,852	478,448	6,798,520	73.4%	11.41%	22,762	23,779
2035	12,360,980	9,727,866	7,144,941	2,582,925	73.4%	2,438,673	3.78%	7.69%	11.47%	166,851	164,039	330,890	504,744	7,144,941	73.4%	11.47%	22,762	24,572
2036	12,945,482	10,212,994	7,504,052	2,708,942	73.5%	2,537,477	3.77%	7.75%	11.52%	173,634	170,707	344,341	531,832	7,504,052	73.5%	11.52%	22,762	25,365
2037	13,552,544	10,717,858	7,876,252	2,841,606	73.5%	2,639,511	3.77%	7.82%	11.59%	180,668	177,623	358,292	559,987	7,876,252	73.5%	11.59%	22,762	26,135
2038	14,183,054	11,242,719	8,261,391	2,981,327	73.5%	2,744,435	3.76%	7.89%	11.65%	187,933	184,766	372,699	589,716	8,261,391	73.5%	11.65%	22,762	26,885
2039	14,837,648	11,788,634	8,660,079	3,128,555	73.5%	2,853,209	3.76%	7.96%	11.72%	195,404	192,110	387,514	620,235	8,660,079	73.5%	11.72%	22,762	27,641
2040	15,516,993	12,355,477	9,071,723	3,283,754	73.4%	2,965,552	3.75%	8.04%	11.79%	203,149	199,725	402,873	652,878	9,071,723	73.4%	11.79%	22,762	28,420
2041	16,221,435	12,943,425	9,495,992	3,447,434	73.4%	3,080,959	3.75%	8.12%	11.87%	211,147	207,589	418,736	687,313	9,495,992	73.4%	11.87%	22,762	29,167
2042	16,951,826	13,552,542	9,932,373	3,620,169	73.3%	3,199,392	3.74%	8.22%	11.96%	219,364	215,667	435,031	723,616	9,932,373	73.3%	11.96%	22,762	29,903
2043	17,708,458	14,183,170	10,380,601	3,802,569	73.2%	3,321,435	3.74%	8.31%	12.05%	227,797	223,957	451,754	761,506	10,380,601	73.2%	12.05%	22,762	30,614
2044	18,492,284	14,836,002	10,840,711	3,995,290	73.1%	3,447,306	3.73%	8.41%	12.14%	236,486	232,500	468,987	800,756	10,840,711	73.1%	12.14%	22,762	31,295
2045	19,303,812	15,511,396	11,312,373	4,199,023	72.9%	3,577,226	3.73%	8.52%	12.25%	245,448	241,311	486,760	841,754	11,312,373	72.9%	12.25%	22,762	31,982
2046	20,143,765	16,209,710	11,795,202	4,414,509	72.8%	3,711,407	3.72%	8.64%	12.36%	254,698	250,406	505,104	884,555	11,795,202	72.8%	12.36%	22,762	32,632

North Dakota Public Employees Retirement System - Main System
Scenario 5 - 7.75% Discount Rate, 7.75% Assumed Return on Assets, Proposed Asset Smoothing Method
Projection Results Based on the Actuarial Valuation as of July 1, 2016
Effective January 2021, the employee contribtion rate and the statutory employer contribution rate are both increased by 1.00 percent of pay
($ in thousands)

	Results Based on Actuarial Value of Assets													Results Based on Market Value of Assets				
							Employer Actuarial Rate (%)			Statutory Contribution Amount ($)			Benefit			Employer		
	Present Value	Actuarial		Unfunded		Projected	Normal	Amortization		Employer	Employee		Payments			Actuarial	Member Counts	
Year	**Future Benefits**	**Accrued Liability**	**Assets**	**Accrued Liability**	**Funded Ratio**	**Payroll**	**Cost**	**of UAL**	**Total**	**(8.12%)**	**(8.00%)**	**Total**	**and Expenses**	**Assets**	**Funded Ratio**	**Rate**	**Active**	**Ben Recip.**
2016	$ 4,614,759	$ 3,399,334	$ 2,324,784	$ 1,074,550	68.4%	$ 1,078,313	3.86%	7.24%	11.10%	$ 72,960	$ 71,997	$ 144,957	$ 148,346	$ 2,324,784	68.4%	11.10%	22,762	10,394
2017	4,898,978	3,622,381	2,496,538	1,125,843	68.9%	1,131,870	3.87%	7.22%	11.09%	76,776	75,482	152,258	160,366	2,496,538	68.9%	11.09%	22,762	10,981
2018	5,193,999	3,857,364	2,677,779	1,179,585	69.4%	1,187,154	3.89%	7.21%	11.10%	80,589	79,231	159,820	171,613	2,677,779	69.4%	11.10%	22,762	11,566
2019	5,502,338	4,105,147	2,869,213	1,235,935	69.9%	1,243,936	3.90%	7.21%	11.11%	84,525	83,101	167,626	183,130	2,869,213	69.9%	11.11%	22,762	12,190
2020	5,824,430	4,365,396	3,070,288	1,295,108	70.3%	1,302,565	3.41%	7.22%	10.63%	88,568	87,075	175,644	196,153	3,070,288	70.3%	10.63%	22,762	12,844
2021	6,159,620	4,637,650	3,299,578	1,338,073	71.1%	1,362,824	2.92%	7.13%	10.05%	105,768	97,692	203,461	211,083	3,299,578	71.1%	10.05%	22,762	13,539
2022	6,509,797	4,921,464	3,547,460	1,374,004	72.1%	1,424,094	2.93%	7.01%	9.94%	110,661	109,026	219,687	227,235	3,547,460	72.1%	9.94%	22,762	14,275
2023	6,874,736	5,217,032	3,807,214	1,409,818	73.0%	1,487,583	2.94%	6.88%	9.82%	115,636	113,928	229,564	244,182	3,807,214	73.0%	9.82%	22,762	15,031
2024	7,253,835	5,524,120	4,078,732	1,445,388	73.8%	1,552,788	2.95%	6.76%	9.71%	120,792	119,007	239,798	262,477	4,078,732	73.8%	9.71%	22,762	15,826
2025	7,647,353	5,842,615	4,362,005	1,480,610	74.7%	1,619,639	2.95%	6.64%	9.59%	126,086	124,223	250,309	281,936	4,362,005	74.7%	9.59%	22,762	16,625
2026	8,055,537	6,172,866	4,657,494	1,515,371	75.5%	1,688,860	2.96%	6.51%	9.47%	131,515	129,571	261,086	302,092	4,657,494	75.5%	9.47%	22,762	17,446
2027	8,478,341	6,514,976	4,965,464	1,549,512	76.2%	1,760,468	2.96%	6.39%	9.35%	137,135	135,109	272,244	323,290	4,965,464	76.2%	9.35%	22,762	18,265
2028	8,916,505	6,869,510	5,286,645	1,582,864	77.0%	1,834,665	2.97%	6.26%	9.23%	142,950	140,837	283,787	345,098	5,286,645	77.0%	9.23%	22,762	19,077
2029	9,370,397	7,237,704	5,622,468	1,615,236	77.7%	1,911,684	2.97%	6.13%	9.10%	148,975	146,773	295,748	366,933	5,622,468	77.7%	9.10%	22,762	19,869
2030	9,840,853	7,620,681	5,974,266	1,646,414	78.4%	1,991,957	2.97%	6.00%	8.97%	155,229	152,935	308,163	389,032	5,974,266	78.4%	8.97%	22,762	20,653
2031	10,329,206	8,019,553	6,343,409	1,676,144	79.1%	2,075,363	2.97%	5.86%	8.83%	161,747	159,357	321,103	411,527	6,343,409	79.1%	8.83%	22,762	21,438
2032	10,840,258	8,438,709	6,734,554	1,704,155	79.8%	2,161,594	2.98%	5.72%	8.70%	168,519	166,029	334,548	431,338	6,734,554	79.8%	8.70%	22,762	22,223
2033	11,371,686	8,875,753	7,145,589	1,730,164	80.5%	2,251,076	2.98%	5.58%	8.56%	175,521	172,928	348,449	455,279	7,145,589	80.5%	8.56%	22,762	23,006
2034	11,924,006	9,331,201	7,577,347	1,753,854	81.2%	2,343,417	2.98%	5.43%	8.41%	182,787	180,086	362,874	480,428	7,577,347	81.2%	8.41%	22,762	23,779
2035	12,498,020	9,805,335	8,030,438	1,774,897	81.9%	2,438,673	2.98%	5.28%	8.26%	190,285	187,473	377,759	506,998	8,030,438	81.9%	8.26%	22,762	24,572
2036	13,094,610	10,299,089	8,506,149	1,792,940	82.6%	2,537,477	2.98%	5.13%	8.11%	198,020	195,094	393,114	534,390	8,506,149	82.6%	8.11%	22,762	25,365
2037	13,714,500	10,813,246	9,005,679	1,807,567	83.3%	2,639,511	2.97%	4.97%	7.94%	206,043	202,998	409,041	562,887	9,005,679	83.3%	7.94%	22,762	26,135
2038	14,358,617	11,348,094	9,529,741	1,818,353	84.0%	2,744,435	2.97%	4.81%	7.78%	214,328	211,161	425,489	592,998	9,529,741	84.0%	7.78%	22,762	26,885
2039	15,027,622	11,904,738	10,079,874	1,824,863	84.7%	2,853,209	2.97%	4.64%	7.61%	222,848	219,555	442,403	623,922	10,079,874	84.7%	7.61%	22,762	27,641
2040	15,722,189	12,483,032	10,656,454	1,826,578	85.4%	2,965,552	2.97%	4.47%	7.44%	231,681	228,257	459,937	657,052	10,656,454	85.4%	7.44%	22,762	28,420
2041	16,442,676	13,083,173	11,260,210	1,822,963	86.1%	3,080,959	2.97%	4.30%	7.27%	240,803	237,244	478,047	692,029	11,260,210	86.1%	7.27%	22,762	29,167
2042	17,189,972	13,705,247	11,891,773	1,813,473	86.8%	3,199,392	2.97%	4.12%	7.09%	250,174	246,477	496,651	728,921	11,891,773	86.8%	7.09%	22,762	29,903
2043	17,964,402	14,349,634	12,552,120	1,797,514	87.5%	3,321,435	2.97%	3.93%	6.90%	259,791	255,951	515,742	767,436	12,552,120	87.5%	6.90%	22,762	30,614
2044	18,766,955	15,017,059	13,242,631	1,774,429	88.2%	3,447,306	2.97%	3.74%	6.71%	269,700	265,715	535,415	807,353	13,242,631	88.2%	6.71%	22,762	31,295
2045	19,598,148	15,707,894	13,964,398	1,743,495	88.9%	3,577,226	2.97%	3.54%	6.51%	279,921	275,784	555,706	849,085	13,964,398	88.9%	6.51%	22,762	31,982
2046	20,458,719	16,422,499	14,718,575	1,703,924	89.6%	3,711,407	2.96%	3.33%	6.29%	290,471	286,178	576,649	892,695	14,718,575	89.6%	6.29%	22,762	32,632

North Dakota Public Employees Retirement System - Main System
Scenario 6 - 8.00% Discount Rate, 7.50% Assumed Return on Assets, Current Asset Smoothing Method
Projection Results Based on the Actuarial Valuation as of July 1, 2016
Current Contribution Rates
($ in thousands)

	Results Based on Actuarial Value of Assets						Employer Actuarial Rate (%)			Statutory Contribution Amount ($)				Results Based on Market Value of Assets				
Year	Present Value Future Benefits	Actuarial Accrued Liability	Assets	Unfunded Accrued Liability	Funded Ratio	Projected Payroll	Normal Cost	Amortization of UAL	Total	Employer (7.12%)	Employee (7.00%)	Total	Benefit Payments and Expenses	Assets	Funded Ratio	Employer Actuarial Rate	Member Counts Active	Member Counts Ben Recip.
2016	$ 4,418,264	$ 3,299,381	$ 2,180,749	$ 1,118,632	66.1%	$ 1,078,313	3.24%	7.24%	10.48%	$ 72,960	$ 71,997	$ 144,957	$ 148,346	$ 2,324,784	70.5%	9.55%	22,762	10,394
2017	4,690,061	3,515,754	2,340,416	1,175,338	66.6%	1,132,443	3.24%	7.24%	10.48%	76,776	75,482	152,258	160,403	2,490,697	70.8%	9.56%	22,762	10,981
2018	4,973,004	3,743,748	2,488,947	1,254,801	66.5%	1,188,841	3.25%	7.37%	10.62%	80,630	79,271	159,901	171,713	2,665,252	71.2%	9.58%	22,762	11,566
2019	5,269,525	3,984,267	2,611,046	1,373,221	65.5%	1,247,288	3.26%	7.68%	10.94%	84,646	83,219	167,864	183,283	2,849,160	71.5%	9.61%	22,762	12,190
2020	5,580,020	4,236,983	2,754,128	1,482,856	65.0%	1,308,158	3.26%	7.91%	11.17%	88,807	87,310	176,117	196,362	3,041,856	71.8%	9.64%	22,762	12,844
2021	5,903,938	4,501,486	2,935,390	1,566,095	65.2%	1,371,251	3.26%	7.97%	11.23%	93,141	91,571	184,712	211,020	3,242,718	72.0%	9.67%	22,762	13,539
2022	6,243,144	4,777,382	3,123,322	1,654,060	65.4%	1,436,063	3.27%	8.04%	11.31%	97,633	95,988	193,621	227,182	3,451,125	72.2%	9.72%	22,762	14,275
2023	6,597,583	5,064,948	3,317,956	1,746,993	65.5%	1,503,842	3.27%	8.11%	11.38%	102,248	100,524	202,772	244,141	3,667,067	72.4%	9.76%	22,762	15,031
2024	6,966,819	5,364,022	3,518,930	1,845,092	65.6%	1,574,124	3.27%	8.18%	11.45%	107,074	105,269	212,342	262,451	3,890,143	72.5%	9.80%	22,762	15,826
2025	7,351,250	5,674,589	3,725,973	1,948,617	65.7%	1,646,921	3.27%	8.26%	11.53%	112,078	110,189	222,266	281,926	4,120,048	72.6%	9.86%	22,762	16,625
2026	7,751,298	5,997,093	3,939,253	2,057,840	65.7%	1,723,004	3.27%	8.34%	11.61%	117,261	115,284	232,545	302,107	4,356,929	72.7%	9.91%	22,762	17,446
2027	8,167,103	6,331,750	4,158,700	2,173,050	65.7%	1,802,441	3.26%	8.41%	11.67%	122,678	120,610	243,288	323,336	4,600,704	72.7%	9.96%	22,762	18,265
2028	8,599,598	6,679,261	4,384,679	2,294,582	65.6%	1,885,516	3.26%	8.49%	11.75%	128,334	126,171	254,505	345,183	4,851,739	72.6%	10.02%	22,762	19,077
2029	9,049,370	7,041,005	4,618,193	2,422,812	65.6%	1,972,457	3.26%	8.57%	11.83%	134,249	131,986	266,235	367,071	5,111,071	72.6%	10.09%	22,762	19,869
2030	9,517,473	7,418,247	4,860,076	2,558,171	65.5%	2,063,741	3.26%	8.65%	11.91%	140,439	138,072	278,511	389,235	5,379,600	72.5%	10.15%	22,762	20,653
2031	10,005,493	7,812,288	5,111,155	2,701,133	65.4%	2,159,348	3.25%	8.73%	11.98%	146,938	144,462	291,400	411,802	5,658,234	72.4%	10.21%	22,762	21,438
2032	10,518,661	8,227,868	5,375,570	2,852,298	65.3%	2,259,097	3.25%	8.81%	12.06%	153,746	151,154	304,900	431,558	5,951,280	72.3%	10.28%	22,762	22,223
2033	11,054,852	8,662,709	5,650,442	3,012,267	65.2%	2,363,499	3.25%	8.89%	12.14%	160,848	158,137	318,985	455,580	6,256,001	72.2%	10.36%	22,762	23,006
2034	11,614,920	9,117,588	5,936,016	3,181,572	65.1%	2,472,249	3.24%	8.98%	12.22%	168,281	165,445	333,726	480,830	6,572,681	72.1%	10.42%	22,762	23,779
2035	12,200,054	9,593,073	6,232,317	3,360,756	65.0%	2,585,551	3.24%	9.07%	12.31%	176,024	173,057	349,082	507,522	6,901,357	71.9%	10.51%	22,762	24,572
2036	12,811,528	10,090,406	6,540,018	3,550,387	64.8%	2,704,109	3.23%	9.16%	12.39%	184,091	180,989	365,080	535,074	7,242,705	71.8%	10.58%	22,762	25,365
2037	13,450,501	10,610,716	6,859,632	3,751,083	64.6%	2,827,697	3.23%	9.26%	12.49%	192,533	189,288	381,820	563,765	7,597,264	71.6%	10.67%	22,762	26,135
2038	14,118,406	11,154,669	7,191,128	3,963,541	64.5%	2,956,168	3.22%	9.36%	12.58%	201,332	197,939	399,271	594,113	7,965,042	71.4%	10.75%	22,762	26,885
2039	14,816,360	11,723,769	7,535,252	4,188,517	64.3%	3,090,495	3.22%	9.46%	12.68%	210,479	206,932	417,411	625,348	8,346,827	71.2%	10.85%	22,762	27,641
2040	15,545,668	12,318,341	7,891,551	4,426,789	64.1%	3,230,650	3.21%	9.56%	12.77%	220,043	216,335	436,378	658,826	8,742,200	71.0%	10.94%	22,762	28,420
2041	16,307,300	12,939,076	8,259,905	4,679,172	63.8%	3,376,260	3.21%	9.67%	12.88%	230,022	226,146	456,168	694,223	9,151,044	70.7%	11.04%	22,762	29,167
2042	17,102,841	13,586,588	8,640,046	4,946,542	63.6%	3,527,522	3.21%	9.79%	13.00%	240,390	236,338	476,728	731,629	9,573,085	70.5%	11.15%	22,762	29,903
2043	17,933,265	14,261,830	9,031,992	5,229,838	63.3%	3,685,106	3.20%	9.90%	13.10%	251,160	246,927	498,086	770,786	10,008,324	70.2%	11.26%	22,762	30,614
2044	18,800,293	14,966,131	9,436,065	5,530,066	63.0%	3,849,388	3.20%	10.03%	13.23%	262,380	257,957	520,337	811,485	10,457,080	69.9%	11.38%	22,762	31,295
2045	19,705,224	15,700,522	9,852,218	5,848,305	62.8%	4,020,712	3.19%	10.15%	13.34%	274,076	269,457	543,534	854,147	10,919,310	69.5%	11.49%	22,762	31,982
2046	20,649,646	16,466,073	10,280,360	6,185,713	62.4%	4,199,485	3.19%	10.28%	13.47%	286,275	281,450	567,725	898,861	11,394,929	69.2%	11.62%	22,762	32,632

North Dakota Public Employees Retirement System - Main System
Scenario 7 - 8.00% Discount Rate, 7.50% Assumed Return on Assets, Current Asset Smoothing Method
Projection Results Based on the Actuarial Valuation as of July 1, 2016
Effective January 2021, the employee contribtion rate and the statutory employer contribution rate are both increased by 1.00 percent of pay
($ in thousands)

	Results Based on Actuarial Value of Assets														Results Based on Market Value of Assets			
							Employer Actuarial Rate (%)			Statutory Contribution Amount ($)			Benefit				Employer	Member Counts
Year	Present Value Future Benefits	Actuarial Accrued Liability	Assets	Unfunded Accrued Liability	Funded Ratio	Projected Payroll	Normal Cost	Amortization of UAL	Total	Employer (8.12%)	Employee (8.00%)	Total	Payments and Expenses	Assets	Funded Ratio	Actuarial Rate	Active	Ben Recip.
2016	$ 4,431,386	$ 3,303,846	$ 2,180,749	$ 1,123,098	66.0%	$ 1,078,313	3.30%	7.27%	10.57%	$ 72,960	$ 71,997	$ 144,957	$ 148,346	$ 2,324,784	70.4%	9.64%	22,762	10,394
2017	4,706,199	3,521,348	2,340,422	1,180,926	66.5%	1,132,443	3.32%	7.28%	10.60%	76,776	75,482	152,258	160,403	2,490,697	70.7%	9.67%	22,762	10,981
2018	4,992,299	3,750,589	2,488,831	1,261,758	66.4%	1,188,841	3.33%	7.41%	10.74%	80,630	79,271	159,901	171,713	2,665,252	71.1%	9.70%	22,762	11,566
2019	5,292,186	3,992,506	2,610,686	1,381,821	65.4%	1,247,288	3.35%	7.73%	11.08%	84,646	83,219	167,864	183,283	2,849,160	71.4%	9.75%	22,762	12,190
2020	5,606,356	4,246,846	2,753,463	1,493,383	64.8%	1,308,158	2.86%	7.97%	10.83%	88,807	87,310	176,117	196,362	3,041,856	71.6%	9.29%	22,762	12,844
2021	5,934,280	4,513,212	2,954,282	1,558,930	65.5%	1,371,251	2.37%	7.93%	10.30%	106,222	98,112	204,334	211,359	3,261,964	72.3%	8.74%	22,762	13,539
2022	6,277,893	4,791,241	3,170,357	1,620,884	66.2%	1,436,063	2.38%	7.88%	10.26%	111,346	109,700	221,046	227,585	3,499,831	73.0%	8.66%	22,762	14,275
2023	6,637,155	5,081,227	3,395,669	1,685,558	66.8%	1,503,842	2.39%	7.82%	10.21%	116,608	114,885	231,493	244,613	3,748,715	73.8%	8.57%	22,762	15,031
2024	7,011,645	5,383,040	3,630,342	1,752,698	67.4%	1,574,124	2.40%	7.77%	10.17%	122,112	120,307	242,419	263,003	4,008,528	74.5%	8.49%	22,762	15,826
2025	7,401,798	5,696,685	3,874,630	1,822,055	68.0%	1,646,921	2.40%	7.72%	10.12%	127,819	125,930	253,749	282,567	4,279,288	75.1%	8.41%	22,762	16,625
2026	7,808,064	6,022,649	4,129,182	1,893,467	68.6%	1,723,004	2.41%	7.67%	10.08%	133,730	131,754	265,484	302,844	4,561,499	75.7%	8.33%	22,762	17,446
2027	8,230,609	6,361,169	4,394,317	1,966,852	69.1%	1,802,441	2.42%	7.62%	10.04%	139,908	137,840	277,748	324,182	4,855,468	76.3%	8.25%	22,762	18,265
2028	8,670,404	6,712,983	4,670,782	2,042,201	69.6%	1,885,516	2.42%	7.56%	9.98%	146,358	144,195	290,553	346,150	5,161,984	76.9%	8.16%	22,762	19,077
2029	9,128,053	7,079,511	4,960,000	2,119,510	70.1%	1,972,457	2.42%	7.50%	9.92%	153,104	150,841	303,945	368,168	5,482,545	77.4%	8.07%	22,762	19,869
2030	9,604,643	7,462,055	5,263,258	2,198,798	70.5%	2,063,741	2.43%	7.44%	9.87%	160,163	157,797	317,960	390,476	5,818,550	78.0%	7.99%	22,762	20,653
2031	10,101,797	7,861,944	5,581,862	2,280,082	71.0%	2,159,348	2.43%	7.37%	9.80%	167,576	165,099	332,675	413,212	6,171,438	78.5%	7.89%	22,762	21,438
2032	10,624,779	8,283,940	5,920,467	2,363,473	71.5%	2,259,097	2.43%	7.30%	9.73%	175,339	172,748	348,087	433,168	6,546,082	79.0%	7.80%	22,762	22,223
2033	11,171,505	8,725,805	6,276,746	2,449,059	71.9%	2,363,499	2.43%	7.23%	9.66%	183,439	180,728	364,166	457,415	6,940,357	79.5%	7.70%	22,762	23,006
2034	11,742,861	9,188,347	6,651,545	2,536,802	72.4%	2,472,249	2.43%	7.16%	9.59%	191,916	189,080	380,996	482,920	7,355,206	80.0%	7.60%	22,762	23,779
2035	12,340,076	9,672,168	7,045,520	2,626,648	72.8%	2,585,551	2.43%	7.09%	9.52%	200,747	197,780	398,527	509,905	7,791,368	80.6%	7.51%	22,762	24,572
2036	12,964,462	10,178,544	7,460,034	2,718,510	73.3%	2,704,109	2.43%	7.02%	9.45%	209,947	206,844	416,791	537,781	8,250,275	81.1%	7.41%	22,762	25,365
2037	13,617,208	10,708,640	7,896,343	2,812,297	73.7%	2,827,697	2.43%	6.94%	9.37%	219,574	216,329	435,902	566,838	8,733,289	81.6%	7.31%	22,762	26,135
2038	14,299,798	11,263,158	8,355,215	2,907,943	74.2%	2,956,168	2.43%	6.87%	9.30%	229,609	226,216	455,825	597,591	9,241,299	82.0%	7.20%	22,762	26,885
2039	15,013,389	11,843,654	8,838,262	3,005,393	74.6%	3,090,495	2.43%	6.79%	9.22%	240,041	236,493	476,534	629,261	9,776,047	82.5%	7.10%	22,762	27,641
2040	15,759,304	12,450,449	9,345,923	3,104,526	75.1%	3,230,650	2.43%	6.71%	9.14%	250,948	247,240	498,188	663,259	10,338,101	83.0%	6.99%	22,762	28,420
2041	16,538,542	13,084,259	9,879,063	3,205,197	75.5%	3,376,260	2.43%	6.63%	9.06%	262,329	258,452	520,781	699,237	10,928,431	83.5%	6.89%	22,762	29,167
2042	17,352,743	13,745,739	10,438,477	3,307,262	75.9%	3,527,522	2.43%	6.54%	8.97%	274,152	270,101	544,253	737,273	11,547,936	84.0%	6.78%	22,762	29,903
2043	18,202,929	14,435,888	11,025,338	3,410,550	76.4%	3,685,106	2.43%	6.46%	8.89%	286,435	282,202	568,637	777,102	12,197,889	84.5%	6.67%	22,762	30,614
2044	19,090,879	15,156,086	11,641,217	3,514,870	76.8%	3,849,388	2.43%	6.37%	8.80%	299,231	294,808	594,039	818,519	12,879,985	85.0%	6.56%	22,762	31,295
2045	20,017,918	15,907,391	12,287,385	3,620,006	77.2%	4,020,712	2.43%	6.28%	8.71%	312,570	307,951	620,521	861,975	13,595,639	85.5%	6.44%	22,762	31,982
2046	20,985,667	16,690,890	12,965,174	3,725,716	77.7%	4,199,485	2.43%	6.19%	8.62%	326,482	321,657	648,139	907,565	14,346,333	86.0%	6.33%	22,762	32,632

North Dakota Public Employees Retirement System - Main System
Scenario 8 - 7.75% Discount Rate, 7.50% Assumed Return on Assets, Proposed Asset Smoothing Method
Projection Results Based on the Actuarial Valuation as of July 1, 2016
Current Contribution Rates
($ in thousands)

			Results Based on Actuarial Value of Assets											Results Based on Market Value of Assets				
							Employer Actuarial Rate (%)			Statutory Contribution Amount ($)			Benefit			Employer		
	Present Value	Actuarial		Unfunded		Projected	Normal	Amortization		Employer	Employee		Payments			Actuarial	Member Counts	
Year	Future Benefits	Accrued Liability	Assets	Accrued Liability	Funded Ratio	Payroll	Cost	of UAL	Total	(7.12%)	(7.00%)	Total	and Expenses	Assets	Funded Ratio	Rate	Active	Ben Recip.
2016	$ 4,601,166	$ 3,394,810	$ 2,324,784	$ 1,070,026	68.5%	$ 1,078,313	3.79%	7.20%	10.99%	$ 72,960	$ 71,997	$ 144,957	$ 148,346	$ 2,324,784	68.5%	10.99%	22,762	10,394
2017	4,882,277	3,616,721	2,495,378	1,121,343	69.0%	1,131,870	3.80%	7.19%	10.99%	76,776	75,482	152,258	160,366	2,490,736	68.9%	11.02%	22,762	10,981
2018	5,174,063	3,850,446	2,673,765	1,176,681	69.4%	1,187,154	3.80%	7.20%	11.00%	80,589	79,231	159,820	171,613	2,665,314	69.2%	11.05%	22,762	11,566
2019	5,478,971	4,096,824	2,860,502	1,236,323	69.8%	1,243,936	3.81%	7.22%	11.03%	84,525	83,101	167,626	183,130	2,849,137	69.5%	11.09%	22,762	12,190
2020	5,797,335	4,355,442	3,054,869	1,300,573	70.1%	1,302,565	3.81%	7.25%	11.06%	88,568	87,075	175,644	196,153	3,041,559	69.8%	11.13%	22,762	12,844
2021	6,128,486	4,625,825	3,256,077	1,369,748	70.4%	1,362,824	3.81%	7.30%	11.11%	92,743	91,180	183,922	210,749	3,241,861	70.1%	11.18%	22,762	13,539
2022	6,474,243	4,907,511	3,464,486	1,443,025	70.6%	1,424,094	3.81%	7.36%	11.17%	97,033	95,398	192,431	226,840	3,449,324	70.3%	11.24%	22,762	14,275
2023	6,834,369	5,200,662	3,679,958	1,520,704	70.8%	1,487,583	3.81%	7.42%	11.23%	101,396	99,687	201,082	243,721	3,663,814	70.4%	11.31%	22,762	15,031
2024	7,208,252	5,505,024	3,901,956	1,603,068	70.9%	1,552,788	3.81%	7.50%	11.31%	105,916	104,131	210,047	261,941	3,884,795	70.6%	11.39%	22,762	15,826
2025	7,596,118	5,820,466	4,130,019	1,690,447	71.0%	1,619,639	3.81%	7.58%	11.39%	110,558	108,695	219,254	281,314	4,111,809	70.6%	11.47%	22,762	16,625
2026	7,998,190	6,147,300	4,364,121	1,783,178	71.0%	1,688,860	3.81%	7.67%	11.48%	115,318	113,375	228,693	301,379	4,344,832	70.7%	11.56%	22,762	17,446
2027	8,414,402	6,485,599	4,603,992	1,881,608	71.0%	1,760,468	3.81%	7.76%	11.57%	120,247	118,220	238,467	322,475	4,583,594	70.7%	11.65%	22,762	18,265
2028	8,845,463	6,835,906	4,849,788	1,986,118	70.9%	1,834,665	3.81%	7.86%	11.67%	125,345	123,233	248,578	344,169	4,828,252	70.6%	11.76%	22,762	19,077
2029	9,291,725	7,199,420	5,102,311	2,097,109	70.9%	1,911,684	3.80%	7.96%	11.76%	130,628	128,427	259,055	365,883	5,079,609	70.6%	11.85%	22,762	19,869
2030	9,753,999	7,577,225	5,362,220	2,215,005	70.8%	1,991,957	3.80%	8.07%	11.87%	136,112	133,818	269,930	387,848	5,338,319	70.5%	11.96%	22,762	20,653
2031	10,233,590	7,970,419	5,630,157	2,340,261	70.6%	2,075,363	3.80%	8.19%	11.99%	141,827	139,437	281,264	410,185	5,605,025	70.3%	12.08%	22,762	21,438
2032	10,735,270	8,383,361	5,910,003	2,473,358	70.5%	2,161,594	3.79%	8.31%	12.10%	147,766	145,275	293,041	429,808	5,883,599	70.2%	12.19%	22,762	22,223
2033	11,256,687	8,813,629	6,198,806	2,614,823	70.3%	2,251,076	3.79%	8.43%	12.22%	153,906	151,312	305,217	453,539	6,171,085	70.0%	12.31%	22,762	23,006
2034	11,798,335	9,261,710	6,496,489	2,765,221	70.1%	2,343,417	3.78%	8.57%	12.35%	160,277	157,575	317,852	478,448	6,467,407	69.8%	12.44%	22,762	23,779
2035	12,360,980	9,727,866	6,802,697	2,925,170	69.9%	2,438,673	3.78%	8.71%	12.49%	166,851	164,039	330,890	504,744	6,772,207	69.6%	12.58%	22,762	24,572
2036	12,945,482	10,212,994	7,117,666	3,095,328	69.7%	2,537,477	3.77%	8.86%	12.63%	173,634	170,707	344,341	531,832	7,085,727	69.4%	12.72%	22,762	25,365
2037	13,552,544	10,717,858	7,441,466	3,276,393	69.4%	2,639,511	3.77%	9.01%	12.78%	180,668	177,623	358,292	559,987	7,408,035	69.1%	12.87%	22,762	26,135
2038	14,183,054	11,242,719	7,773,593	3,469,126	69.1%	2,744,435	3.76%	9.18%	12.94%	187,933	184,766	372,699	589,716	7,738,630	68.8%	13.03%	22,762	26,885
2039	14,837,648	11,788,634	8,114,274	3,674,360	68.8%	2,853,209	3.76%	9.35%	13.11%	195,404	192,110	387,514	620,235	8,077,737	68.5%	13.20%	22,762	27,641
2040	15,516,993	12,355,477	8,462,508	3,892,968	68.5%	2,965,552	3.75%	9.53%	13.28%	203,149	199,725	402,873	652,878	8,424,356	68.2%	13.37%	22,762	28,420
2041	16,221,435	12,943,425	8,817,520	4,125,905	68.1%	3,080,959	3.75%	9.72%	13.47%	211,147	207,589	418,736	687,313	8,777,716	67.8%	13.57%	22,762	29,167
2042	16,951,826	13,552,542	9,178,325	4,374,217	67.7%	3,199,392	3.74%	9.93%	13.67%	219,364	215,667	435,031	723,616	9,136,835	67.4%	13.76%	22,762	29,903
2043	17,708,458	14,183,170	9,544,146	4,639,024	67.3%	3,321,435	3.74%	10.14%	13.88%	227,797	223,957	451,754	761,506	9,500,940	67.0%	13.98%	22,762	30,614
2044	18,492,284	14,836,002	9,914,474	4,921,528	66.8%	3,447,306	3.73%	10.37%	14.10%	236,486	232,500	468,987	800,756	9,869,524	66.5%	14.19%	22,762	31,295
2045	19,303,812	15,511,396	10,288,388	5,223,009	66.3%	3,577,226	3.73%	10.60%	14.33%	245,448	241,311	486,760	841,754	10,241,673	66.0%	14.43%	22,762	31,982
2046	20,143,765	16,209,710	10,664,875	5,544,835	65.8%	3,711,407	3.72%	10.85%	14.57%	254,698	250,406	505,104	884,555	10,616,375	65.5%	14.66%	22,762	32,632

North Dakota Public Employees Retirement System - Main System
Scenario 9 - 7.75% Discount Rate, 7.50% Assumed Return on Assets, Proposed Asset Smoothing Method
Projection Results Based on the Actuarial Valuation as of July 1, 2016
Effective January 2021, the employee contribtion rate and the statutory employer contribution rate are both increased by 1.00 percent of pay
($ in thousands)

			Results Based on Actuarial Value of Assets				Employer Actuarial Rate (%)			Statutory Contribution Amount ($)				Results Based on Market Value of Assets				
Year	Present Value Future Benefits	Actuarial Accrued Liability	Assets	Unfunded Accrued Liability	Funded Ratio	Projected Payroll	Normal Cost	Amortization of UAL	Total	Employer (8.12%)	Employee (8.00%)	Total	Benefit Payments and Expenses	Assets	Funded Ratio	Employer Actuarial Rate	Member Counts Active	Member Counts Ben Recip.
2016	$ 4,614,759	$ 3,399,334	$ 2,324,784	$ 1,074,550	68.4%	$ 1,078,313	3.86%	7.24%	11.10%	$ 72,960	$ 71,997	$ 144,957	$ 148,346	$ 2,324,784	68.4%	11.10%	22,762	10,394
2017	4,898,978	3,622,381	2,495,384	1,126,997	68.9%	1,131,870	3.87%	7.23%	11.10%	76,776	75,482	152,258	160,366	2,490,736	68.8%	11.13%	22,762	10,981
2018	5,193,999	3,857,364	2,673,647	1,183,717	69.3%	1,187,154	3.89%	7.24%	11.13%	80,589	79,231	159,820	171,613	2,665,314	69.1%	11.18%	22,762	11,566
2019	5,502,338	4,105,147	2,860,130	1,245,017	69.7%	1,243,936	3.90%	7.27%	11.17%	84,525	83,101	167,626	183,130	2,849,137	69.4%	11.23%	22,762	12,190
2020	5,824,430	4,365,396	3,054,178	1,311,218	70.0%	1,302,565	3.41%	7.31%	10.72%	88,568	87,075	175,644	196,153	3,041,559	69.7%	10.79%	22,762	12,844
2021	6,159,620	4,637,650	3,275,264	1,362,386	70.6%	1,362,824	2.92%	7.26%	10.18%	105,768	97,692	203,461	211,083	3,261,032	70.3%	10.25%	22,762	13,539
2022	6,509,797	4,921,464	3,513,021	1,408,443	71.4%	1,424,094	2.93%	7.18%	10.11%	110,661	109,026	219,687	227,235	3,497,783	71.1%	10.19%	22,762	14,275
2023	6,874,736	5,217,032	3,761,284	1,455,748	72.1%	1,487,583	2.94%	7.11%	10.05%	115,636	113,928	229,564	244,182	3,744,960	71.8%	10.12%	22,762	15,031
2024	7,253,835	5,524,120	4,019,798	1,504,322	72.8%	1,552,788	2.95%	7.03%	9.98%	120,792	119,007	239,798	262,477	4,002,318	72.5%	10.07%	22,762	15,826
2025	7,647,353	5,842,615	4,288,396	1,554,219	73.4%	1,619,639	2.95%	6.97%	9.92%	126,086	124,223	250,309	281,936	4,269,701	73.1%	10.00%	22,762	16,625
2026	8,055,537	6,172,866	4,567,372	1,605,493	74.0%	1,688,860	2.96%	6.90%	9.86%	131,515	129,571	261,086	302,092	4,547,413	73.7%	9.95%	22,762	17,446
2027	8,478,341	6,514,976	4,856,818	1,658,158	74.5%	1,760,468	2.96%	6.84%	9.80%	137,135	135,109	272,244	323,290	4,835,544	74.2%	9.89%	22,762	18,265
2028	8,916,505	6,869,510	5,157,281	1,712,229	75.1%	1,834,665	2.97%	6.78%	9.75%	142,950	140,837	283,787	345,098	5,134,641	74.7%	9.84%	22,762	19,077
2029	9,370,397	7,237,704	5,469,991	1,767,714	75.6%	1,911,684	2.97%	6.71%	9.68%	148,975	146,773	295,748	366,933	5,445,933	75.2%	9.78%	22,762	19,869
2030	9,840,853	7,620,681	5,796,064	1,824,617	76.1%	1,991,957	2.97%	6.65%	9.62%	155,229	152,935	308,163	389,032	5,770,532	75.7%	9.71%	22,762	20,653
2031	10,329,206	8,019,553	6,136,636	1,882,917	76.5%	2,075,363	2.97%	6.59%	9.56%	161,747	159,357	321,103	411,527	6,109,569	76.2%	9.65%	22,762	21,438
2032	10,840,258	8,438,709	6,496,106	1,942,603	77.0%	2,161,594	2.98%	6.53%	9.51%	168,519	166,029	334,548	431,338	6,467,433	76.6%	9.60%	22,762	22,223
2033	11,371,686	8,875,753	6,872,083	2,003,670	77.4%	2,251,076	2.98%	6.46%	9.44%	175,521	172,928	348,449	455,279	6,841,726	77.1%	9.54%	22,762	23,006
2034	11,924,006	9,331,201	7,265,093	2,066,109	77.9%	2,343,417	2.98%	6.40%	9.38%	182,787	180,086	362,874	480,428	7,232,972	77.5%	9.48%	22,762	23,779
2035	12,498,020	9,805,335	7,675,414	2,129,921	78.3%	2,438,673	2.98%	6.34%	9.32%	190,285	187,473	377,759	506,998	7,641,448	77.9%	9.42%	22,762	24,572
2036	13,094,610	10,299,089	8,103,974	2,195,114	78.7%	2,537,477	2.98%	6.28%	9.26%	198,020	195,094	393,114	534,390	8,068,078	78.3%	9.36%	22,762	25,365
2037	13,714,500	10,813,246	8,551,584	2,261,662	79.1%	2,639,511	2.97%	6.22%	9.19%	206,043	202,998	409,041	562,887	8,513,673	78.7%	9.30%	22,762	26,135
2038	14,358,617	11,348,094	9,018,538	2,329,556	79.5%	2,744,435	2.97%	6.16%	9.13%	214,328	211,161	425,489	592,998	8,978,522	79.1%	9.24%	22,762	26,885
2039	15,027,622	11,904,738	9,505,921	2,398,817	79.8%	2,853,209	2.97%	6.10%	9.07%	222,848	219,555	442,403	623,922	9,463,709	79.5%	9.18%	22,762	27,641
2040	15,722,189	12,483,032	10,013,618	2,469,414	80.2%	2,965,552	2.97%	6.05%	9.02%	231,681	228,257	459,937	657,052	9,969,114	79.9%	9.12%	22,762	28,420
2041	16,442,676	13,083,173	10,541,829	2,541,345	80.6%	3,080,959	2.97%	5.99%	8.96%	240,803	237,244	478,047	692,029	10,494,936	80.2%	9.07%	22,762	29,167
2042	17,189,972	13,705,247	11,090,612	2,614,634	80.9%	3,199,392	2.97%	5.93%	8.90%	250,174	246,477	496,651	728,921	11,041,233	80.6%	9.02%	22,762	29,903
2043	17,964,402	14,349,634	11,660,328	2,689,306	81.3%	3,321,435	2.97%	5.88%	8.85%	259,791	255,951	515,742	767,436	11,608,363	80.9%	8.96%	22,762	30,614
2044	18,766,955	15,017,059	12,251,690	2,765,369	81.6%	3,447,306	2.97%	5.82%	8.79%	269,700	265,715	535,415	807,353	12,197,039	81.2%	8.91%	22,762	31,295
2045	19,598,148	15,707,894	12,865,073	2,842,820	81.9%	3,577,226	2.97%	5.77%	8.74%	279,921	275,784	555,706	849,085	12,807,635	81.5%	8.86%	22,762	31,982
2046	20,458,719	16,422,499	13,500,855	2,921,644	82.2%	3,711,407	2.96%	5.72%	8.68%	290,471	286,178	576,649	892,695	13,440,524	81.8%	8.79%	22,762	32,632

ACTUARIAL ASSUMPTIONS

Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using the ***Individual Entry Age Normal*** actuarial cost method having the following characteristics:

- The normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement; and
- Each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Financing of Unfunded Actuarial Accrued Liabilities. The unfunded actuarial accrued liability is amortized using 20-year open level-percentage of pay amortization of the unfunded liability as of the valuation date.

Actuarial Value of Pension Plan Assets. The asset value is the actuarial value of assets which is calculated by recognizing 100 percent of the current year's interest and dividends and 20 percent of the current year and previous four years' total appreciation/(depreciation). The total appreciation/(depreciation) for a given year is fully recognized after a five-year period.

Valuation Assumptions

The contribution and benefit values of the System are calculated by applying actuarial assumptions to the benefit provisions and census information furnished, using the actuarial cost method described above.

The principal areas of financial risk which require assumptions about future experiences are:

- Long-term rates of investment return to be generated by the assets of the Plan;
- Patterns of pay increases to members;
- Rates of mortality among members, retirees and beneficiaries;
- Rates of withdrawal of active members;
- Rates of disability among members; and
- The age patterns of actual retirement.

In a valuation, the monetary effect of each assumption is calculated for as long as a present covered person survives; a period of time which can be as long as a century.

Actual experience of the Plan will not coincide exactly with assumed experience. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments (usually small) to the computed contribution rate.

From time-to-time it becomes appropriate to modify one or more of the assumptions, to reflect experience trends (but not random year-to-year fluctuations). Thus, an experience review of the North Dakota Public Employees Retirement System for the period July 1, 2009, to July 1, 2014, was performed to compare the demographic and economic experience against the actuarial assumptions used in the valuations. The actuarial assumptions described in this section were adopted by the Board for use beginning with the July 1, 2015, valuation. Additional information

regarding the rationale for the assumptions may be found in the 2015 experience review report. **The experience review was performed by the prior actuary.** All actuarial assumptions are expectations of future experience, not current market measures.

The assumptions were provided by, and are the responsibility of, the NDPERS Board. GRS was unable to judge the reasonableness of the assumptions and methods without performing a substantial amount of additional work beyond the scope of the assignment, and did not do so.

Current Valuation Assumptions and Methods

The assumed rate of investment return used was 8.00 percent, net of expenses, annually.

The assumed rate of price inflation is 3.50 percent.

No Cost of Living Adjustments (COLA) are provided to benefits recipients. Therefore, there is no assumption for this valuation.

The rates of annual salary increase used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which benefit amounts will be based.

Service At Beginning of Year	State Employee	Non-State Employee	Law Enforcement	Judges
0	12.00%	15.00%	20.00%	
1	9.50%	10.00%	20.00%	
2	7.25%	8.00%	20.00%	
3			10.00%	
4			10.00%	
Age*				
Under 30	7.25%	10.00%	7.25%	4.00%
30-39	6.50%	7.50%	6.50%	4.00%
40-49	6.25%	6.75%	6.25%	4.00%
50-59	5.75%	6.50%	5.75%	4.00%
60+	5.00%	5.25%	5.00%	4.00%

The assumed rate of total payroll growth used in amortizing the unfunded liability as a level percentage of pay is:

Main System and Law Enforcement: 4.50 percent
Judges: 4.00 percent

ACTUARIAL ASSUMPTIONS

The mortality assumptions are as follows:

	Male Setback	Female Setback
RP-2000 Combined Healthy Mortality Table (healthy mortality)	2 years	3 years
RP-2000 Disabled Retiree Mortality Table (disabled post retirement)*	1 year	0 years

*Rates multiplied by 125 percent.

To provide a margin for future mortality improvements, generational mortality improvements from the year 2014 using the Social Security Administration (SSA) 2014 Intermediate Cost scale were assumed.

Following is a table with the life expectancies by age as of the valuation date.

	Healthy Mortality		Disabled Mortality	
	Future Life Expectancy (years) in 2016		Future Life Expectancy (years) in 2016	
Age	Men	Women	Men	Women
20	67.65	72.06	32.27	49.75
25	62.25	66.64	30.36	45.90
30	56.86	61.22	28.35	41.98
35	51.49	55.82	26.21	37.97
40	46.17	50.44	23.85	33.83
45	40.91	45.11	21.15	29.52
50	35.70	39.83	18.27	25.27
55	30.58	34.64	15.76	21.51
60	25.63	29.56	13.57	18.22
65	20.97	24.71	11.54	15.22
70	16.74	20.23	9.58	12.45
75	12.92	16.11	7.73	9.95
80	9.60	12.46	6.12	7.79
85	6.86	9.28	4.81	5.97
90	4.78	6.69	3.63	4.49
95	3.40	4.89	2.55	3.40
100	2.59	3.85	1.92	2.76
105	2.15	3.13	1.60	2.14

ACTUARIAL ASSUMPTIONS

Rates of separation from active membership are represented by the following table (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members terminating employment.

Service Beginning of Year	Service and Age-Based Rates For First Five Years of Service					
	Main System			Law Enforcement		
	Age					
	Under 30	30-39	40+	Under 30	30-39	40+
0	22.00%	16.00%	12.00%	25.00%	20.00%	17.00%
1	18.00%	14.00%	10.00%	23.00%	17.00%	15.00%
2	16.00%	12.00%	10.00%	20.00%	15.00%	12.00%
3	14.00%	12.00%	8.00%	17.00%	13.00%	10.00%
4	14.00%	11.00%	7.00%	15.00%	11.00%	7.00%

Age	Age-Based Rates Only After First Five Years of Service	
	Main System	Law Enforcement
20-24	8.80%	8.80%
25-29	8.80%	8.80%
30-34	5.50%	5.50%
35-39	4.70%	4.70%
40-44	3.90%	3.90%
45-49	3.70%	3.70%
50-54	3.40%	3.40%
55-59	0.10%	0.10%
60+	0.20%	0.20%

No pre-retirement termination is assumed for Judges.

Vested participants that terminate are assumed to elect the option with the greater present value:

1) *A refund of their accumulated contributions with interest or*
2) *A deferred benefit.*

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.
Law Enforcement: Age 50 and 3 years of service.

Account Balance Due to Vested Employer Contribution (PEP): Participation Under Chapter 54-52.2: If not elected: None. If elected: 100% of active members of the Main System and Law Enforcement. Contribution: Maximum allowed, based on service at the beginning of the Plan year.

ACTUARIAL ASSUMPTIONS

Rates of disability:

Before age 65: Males: 20% of OASDI disability incidence rates.
Females: 10% of OASDI disability incidence rates.
Age 65 and later: 0.25% per year.

Rates of disability were as follows:

	All Plans	
Age	**Male**	**Female**
20	0.0120%	0.0060%
25	0.0171%	0.0085%
30	0.0220%	0.0110%
35	0.0295%	0.0147%
40	0.0440%	0.0220%
45	0.0719%	0.0360%
50	0.1212%	0.0606%
55	0.2018%	0.1009%
60	0.3254%	0.1627%
65	0.2500%	0.2500%

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

Workers' Compensation (for Judges' disability benefit offset):
None assumed.

ACTUARIAL ASSUMPTIONS

Rates of retirement for members eligible to retire during the next year were as follows:

	Main System		Law Enforcement	Judges
Age	Reduced	Unreduced	Unreduced	Unreduced
50		30.00%	25.00%	
51		10.00%	25.00%	
52		10.00%	25.00%	
53		10.00%	25.00%	
54		10.00%	25.00%	
55	1.00%	10.00%	10.00%	10.00%
56	1.00%	8.00%	10.00%	10.00%
57	1.00%	8.00%	10.00%	10.00%
58	1.00%	8.00%	10.00%	10.00%
59	1.00%	8.00%	10.00%	10.00%
60	2.00%	8.00%	10.00%	10.00%
61	5.00%	15.00%	10.00%	10.00%
62	10.00%	30.00%	50.00%	10.00%
63	10.00%	30.00%	50.00%	10.00%
64	10.00%	20.00%	50.00%	10.00%
65		30.00%	50.00%	20.00%
66		20.00%	20.00%	20.00%
67		15.00%	20.00%	20.00%
68		15.00%	20.00%	20.00%
69		15.00%	20.00%	20.00%
70		15.00%	20.00%	20.00%
71		15.00%	20.00%	20.00%
72		15.00%	20.00%	20.00%
73		15.00%	20.00%	20.00%
74		15.00%	20.00%	20.00%
75+		100.00%	100.00%	100.00%

ACTUARIAL ASSUMPTIONS

Assumed Service Credit: All active members (full time and part time) are assumed to earn one full year of service for each assumed future year of service.

Marital Status: It is assumed that 75 percent of participants in the Main System and Law Enforcement and 100 percent of Judges have an eligible spouse at the time of retirement or pre-retirement death. The male spouse is assumed to be three years older than the female spouse.

Form of Payment Election Assumption:

Form of Payment	Main System and Law Enforcement	Judges
Life Annuity	50%	0%
50% Joint and Survivor	45%	100%
Refund of Member Contributions	5%	0%

Benefit Service: Exact fractional years of service are used to determine the amount of benefit payable.

Decrement Timing: All decrements are assumed to occur at the middle of the year.

Decrement Operation: Turnover decrements do not operate after the member reaches retirement eligibility (early or normal).

Eligibility Testing: Eligibility for benefits is determined based upon the age nearest birthday and service on the date the decrement is assumed to occur.

Pay Increase Timing: End of (fiscal) year.

Expenses: Assumed administrative expenses were added to the Normal Cost and are based on the prior year's expenses, adjusted for inflation. The assumed amount added to the Normal Cost is:

			Law Enforcement		
Expenses	**Main System**	**Judges**	**With Prior**	**Without Prior**	**Total**
Assumed FY 2016	$ 2,400,044	$ 11,559	$ 29,842	$ 7,402	$ 2,448,847
Actual FY 2016	2,481,187	11,685	37,211	7,716	2,537,799
Assumed FY 2017	2,568,029	12,094	38,513	7,986	2,626,622

ACTUARIAL ASSUMPTIONS

Assumptions for Missing or Incomplete Data: Annual compensation for members with no pay or equal to $100 or less was assumed to be $44,831.

BENEFIT PROVISIONS

This section summarizes the major benefit provisions of the North Dakota Public Employees Retirement System as included in the valuation. It is not intended to be, nor should it be, interpreted as a complete statement of all plan provisions.

1. Normal Service Retirement:

- Eligibility:

  Main System and Judges:

  Attainment of age 65, or at any age with age plus service equal to at least 85 (Rule of 85).

  For members enrolled after December 31, 2015, into the Main System, attainment of age 65, or at age 60 with age plus service equal to at least 90 (Rule of 90).

  Law Enforcement:

  Attainment of age 55 and three consecutive years of service, or if not former National Guard, at any age with age plus service equal to at least 85 (Rule of 85). Former National Guard is eligible for Rule of 85 on August 1, 2015.

- Benefit:

  Main System and Law Enforcement:

  2.00% of final average salary multiplied by service.

  Judges:

  3.50% of final average salary for each of the first ten years of service, 2.80% for each of the next ten years of service and 1.25% for service in excess of twenty years.

2. Early Retirement:

- Eligibility:

  Main System:

  Attainment of age 55 with three years of service.

  Judges:

  Attainment of age 55 with five years of service.

Law Enforcement:

Attainment of age 50 with three years of service.

- Benefit:

Main System:

The Normal Service Retirement Benefit as determined above. A benefit that begins before age 65 (or Rule of 85, if earlier) is reduced by one-half of one percent for each month before the earlier of age 65 or the age at which the Rule of 85 is met.

For members enrolled after December 31, 2015, into the Main System, a benefit that begins before age 65 (or Rule of 90, if earlier) is reduced by 2/3% of one percent for each month before the earlier of age 65 or the age at which the Rule of 90 is met.

Judges:

The Normal Service Retirement Benefit as determined above. A benefit that begins before age 65 (or Rule of 85, if earlier) is reduced by one-half of one percent for each month before age 65 or the age at which the Rule of 85 is met.

Law Enforcement:

The Normal Service Retirement Benefit as determined above. A benefit that begins before age 55 (or Rule of 85, if earlier) is reduced by one-half of one percent for each month before age 55 or the age at which the Rule of 85 is met.

3. Disability Benefit:

- Eligibility:

Six months of service and inability to engage in any substantial gainful activity.

- Benefit:

Main System and Law Enforcement:

25% of the member’s final average salary at disability minus workers’ compensation benefits, with a minimum of $100 per month.

Judges:

70% of the member’s final average salary at disability minus Social Security and Workers’ Compensation benefits paid.

4. Deferred Vested Retirement:

- Eligibility:

Main System and Law Enforcement:

Three years of service.

Judges:

Five years of service.

- Benefit:

Main System and Judges:

The Normal Service Retirement Benefit payable at age 65 or the Rule of 85, if earlier. Reduced early retirement benefits can be elected upon attainment of age 55.

Law Enforcement:

The Normal Service Retirement Benefit payable at age 55 or the Rule of 85, if earlier. Reduced early retirement benefit can be selected upon attainment of age 50.

5. Pre-Retirement Death Benefits:

(a) Vested participants with a surviving spouse

- Eligibility:

Main System and Law Enforcement:

Three years of service.

Judges:

Five years of service.

- Benefit:

Main System and Law Enforcement:

One of the following options:

- Lump sum payment of member's accumulated contributions with interest.

- 50% of the member's accrued benefit (not reduced on account of age) payable for the surviving spouse's lifetime.

- Continuation portion of 100% joint and survivor annuity (only if participant was eligible for normal retirement).

- A partial lump sum payment in addition to the one of the annuity options above.

Judges:

One of the following options:

- Lump sum payment of member's accumulated contributions with interest.

- 100% of the member's accrued benefit (not reduced on account of age) payable for the spouse's lifetime.

(b) Non-vested members or vested members without a surviving spouse

➢ Eligibility:

Main System, Judges and Law Enforcement:

Non-vested or no surviving spouse.

➢ Benefit:

Main System, Judges and Law Enforcement:

Lump sum payment of member's accumulated contributions with interest.

6. Refund of Member Contributions:

Paid to terminated non-vested members and terminated vested members who choose a refund of employee contributions in lieu of a monthly retirement benefit.

BENEFIT PROVISIONS

7. Accumulated Member Contributions:

Member contributions accumulate with interest at the following rates:

Time Period	Per Annum Interest Rate
Through June 30, 1981	5.0%
July 1, 1981, to June 30, 1986	6.0%
After June 30, 1986	0.5% less than the actuarial interest rate assumption

8. Standard and Optional Forms of Payment:

Standard form of payment:

Main System and Law Enforcement:

Monthly benefit for life with a refund to beneficiary at death of the remaining balance (if any) of accumulated member contributions.

Judges:

Monthly benefit for life, with 50% payable to an eligible survivor.

Optional forms of payment:

- Life annuity (for Judges).
    - 50% joint and survivor annuity with pop-up (for Main System and Law Enforcement).
    - 100% joint and survivor annuity with pop-up.
    - Twenty-year certain and life annuity.
    - Ten-year certain and life annuity.
    - Social Security level income annuity.
    - A partial lump sum payment in addition to one of the annuity options above.
    - An actuarially equivalent graduated benefit option with either a one percent or two percent increase to be applied the first day of January of each year. Not available for disability or early retirements or in combination with a partial lump sum option, a deferred normal retirement option, or a Social Security level income annuity.

9. Final Average Salary:

Average of the highest salary received by the member for any 36 months employed during the last 180 months of employment.

10. Contributions:

Contribution rates specified in the Century Code (except employer rate for Law Enforcement); differ between permanent full-time employees and part-time temporary employees. Rates are as follow:

	Rates Set by Statute		Rates Determined by the Board of Retirement
	Member	Employer	Employer
Main System Full-Time Employees	7.00%	7.12%	
Main System Part-Time Employees	14.12%	0.00%	
Judges	8.00%	17.52%	
Law Enforcement with prior Main System service	5.50%		9.81%
➢ BCI Employees	6.00%		9.81%
➢ National Guard members	5.50%		9.81%
Law Enforcement without prior Main System service	5.50%		7.93%

Effective January 1, 2000:

A member's account balance includes vested employer contributions equal to the member's contributions to the deferred compensation Plan under chapter 54-52.2. The vested employer contribution may not exceed:

1. For months one through 12 of service credit, $25 or 1% of the member's monthly salary, whichever is greater.

2. For months 13 through 24 of service credit, $25 or 2% of the member's monthly salary, whichever is greater.

3. For months 25 through 36 of service credit, $25 or 3% of the member's monthly salary, whichever is greater.

4. For service exceeding 36 months, $25 or 4% of the member's monthly salary, whichever is greater.

Vested employer contributions are credited monthly to the member's account balance.

11. Rollovers:

The fund may accept rollovers from other qualified plans under rules adopted by the Board for the purchase of additional service credit.

North Dakota
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Memorandum

TO: NDPERS Board

FROM: Sharon Schiermeister

DATE: April 19, 2017

SUBJECT: **Retirement Contribution Policy**

At the March 2017 board meeting, the Board was provided with proposed policies for overtime pay and written agreements to help address inconsistencies in how salary is being reported for retirement contribution purposes (Attachment 1). The Board directed staff to distribute the proposed policies to participating employers to gather their feedback.

Process

State Employers. We provided the Office of Management and Budget with the draft policies and asked if they would be providing feedback on behalf of the state agencies, or if we should distribute the policies to each agency for individual feedback. They determined that they would review the policies and provide feedback, so we did not send the draft policies out to each state agency.

Political Subdivision Employers. Information was mailed to each employer on April 6 explaining the policies and asking them to complete a brief survey by April 18 (Attachment 2). To help explain the information and respond to questions, staff hosted webinars on April 11 and April 13, which included a recording that was made available on the website. Approximately 90 employers participated in the webinars. Follow-up emails were sent out directing employers to the website to view the recorded webinar and encouraging them to complete the survey.

Feedback

State Employers. OMB expressed deep concerns with making a change to our current overtime policy and they are not open to changing the definition of overtime currently used by the State as it relates to retirement. Anything over 40 hours per week is considered overtime, whether it is paid at straight time or time and one-half, and retirement is not paid on overtime. They did not provide any feedback on the proposed written agreement policy, as this generally does not occur within state agencies.

Political Subdivision Employers. We received survey responses from 160 employers out of 356. Attachment 3 is summary of the survey results. The results show:

- 86% of the employers who responded did not have concerns with the current overtime policy and their payroll system was able to administer this definition
- 39% of the employers who responded would utilize written agreements
- 92% thought the proposed implementation date of July 1, 2017 for written agreements was feasible
- 87% did not have concerns with the proposed written agreement policy

Overtime Pay Policy

The feedback received from the State and political subdivision employers who completed the survey indicates strong support to maintain our current interpretation of overtime pay. Therefore, staff would recommend that the following policy be adopted:

a. Define overtime to include hours worked over 40 in a week that are paid at more than the regular hourly rate (time and one-half), and also hours over 40 in a week that are paid at the regular hourly rate. For public safety officers, overtime would be defined as hours worked over the regularly scheduled work period that are paid either at the regular hourly rate or time and one-half.

b. Upon becoming aware of overtime reported in error for a member, either at the time of contribution reporting through the salary variance process or at the time of retirement when final average salary (FAS) is being reviewed, corrections would be made to that member's account as follows:

    i. Remove overtime wages and related contributions for all months that were reported in error for that member

c. If an employer notifies PERS of a reporting error which was not identified through our salary variance or FAS review process, the employer would be advised to correct the error going forward; however, the employer has the option to initiate corrections using PERSLink Employer Self Service (ESS). The employer would also be advised that corrections may be required in the future if a member's salary is questioned as part of the salary variance or FAS review process.

Written Agreements Policy

The feedback received from the political subdivision employers who completed the survey indicates strong support to change our current definition of written agreement. Therefore, staff would recommend the following policy to address the inconsistency we have seen in this area:

a. Define 'written agreement' to be "a document that includes the work to be performed by the employee and is signed by both the employee and the employer".

b. Make the definition effective 7/1/2017 to allow us to communicate the change to our employers

c. Upon becoming aware of wages being reported in error for a member under this policy, either at the time of contribution reporting through the salary variance

process or at the time of retirement when final average salary (FAS) is being reviewed, corrections would be made to that member’s account as follows:

   i. Remove ineligible wages and contributions for that member, back to 7/1/2017
   ii. Variances prior to 7/1/2017 resulting from written agreement interpretation would not be corrected

d. If an employer notifies PERS of a reporting error which was not identified through our salary variance or FAS review process, the employer would be advised to correct the error going forward; however, the employer has the option to initiate corrections using PERSLink Employer Self Service (ESS). The employer would also be advised that corrections may be required in the future if a member’s salary is questioned as part of the salary variance or FAS review process.
e. After 7/1/2017, if PERS becomes aware that an employer is not reporting wages and contributions for eligible wages pursuant to the written agreement clarification, they will be required to be reported from 7/1/2017 forward.

Board action requested:
Adopt policies for overtime pay and written agreements.

Retirement Contribution Policy
Attachment 1

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Memorandum

TO: NDPERS Board

FROM: Sharon Schiermeister

DATE: March 8, 2017

SUBJECT: **Retirement Contribution Policy**

Background
In June 2012, the Governmental Accounting Standards Board (GASB) issued two new standards that substantially changed the accounting and financial reporting of public employee pension plans and the state and local governments that participate in such plans. GASB Statement No. 67, *Financial Reporting for Pension Plans,* revised existing guidance for the financial reports of most governmental pension plans. GASB Statement No. 68, *Accounting and Financial Reporting for Pensions,* revised and established new financial reporting requirements for most governments that provide their employees with pension benefits. NDPERS implemented the GASB Statement No. 67 requirements in the June 30, 2014 financial statements. Participating employers in the retirement plans administered by NDPERS implemented GASB Statement No. 68 in 2015.

As a result of these new financial reporting requirements for our employers, our external auditors included a finding as part of our audit report for June 30, 2014 relating to accuracy of census data for active employees in the retirement plans (see Attachment 1 from June 30, 2014 audit report prepared by Brady Martz and Associates). This finding was repeated in our June 30, 2015 audit report (see Attachment 2 from June 30, 2015 audit report prepared by Clifton Larson Allen).

To address this finding, we have implemented additional procedures and controls in two areas. We hired an intern in our internal audit area to allow them to expand their testing of our participating employers. In addition, we implemented a control in our PERSLink system to flag salary variances at the time the employer is reporting monthly salary and contributions for each employee. Our auditors felt that these additional procedures addressed their concerns, therefore this finding was not repeated in our June 30, 2016 audit report.

However, as a result of the control that was implemented in PERSLink which requires additional staff follow-up with employers, it has brought to light some areas requiring direction from the Board.

Overtime Pay
NDCC 54-52-01 (22) defines wages that are eligible for retirement as:

> "Wages" and "salaries" means the member's earnings in eligible employment under this chapter reported as salary on the member's federal income tax withholding statements plus any salary reduction or salary deferral amounts under 26 U.S.C. 125, 401(k), 403(b), 414(h), or 457. "Salary" does not include fringe benefits such as payments for unused sick leave, personal leave, vacation leave paid in a lump sum, overtime, housing allowances, transportation expenses, early retirement incentive pay, severance pay, medical insurance, workforce safety and insurance benefits, disability insurance premiums or benefits, or salary received by a member in lieu of previously employer-provided fringe benefits under an agreement between the member and participating employer. Bonuses may be considered as salary under this section if reported and annualized pursuant to rules adopted by the board.

The definition above excludes "overtime" from reported salary. We do not further define overtime in either the NDCC or NDAC, but it has been NDPERS interpretation that overtime includes hours worked over 40 in a week that are paid at more than the regular hourly rate (time and one-half), and also hours over 40 in a week that are paid at the regular hourly rate (an example of this is when a week has 8 hours of holiday pay and the employee works more than 32 hours during the week). It has come to our attention that employers are not consistently excluding overtime paid at the regular hourly rate when reporting wages for retirement purposes. Their interpretation of overtime is only for hours paid at time and one-half, which is common for how this would be set up in a payroll system.

Staff would like to propose the following policy to address this inconsistency:

a. Define overtime as "hours paid at more than the regular hourly rate"
b. Make the definition effective 7/1/2017 to allow us to communicate the change to our employers
c. Upon becoming aware of overtime reported in error for a member, either at the time of contribution reporting through the salary variance process or at the time of retirement when final average salary (FAS) is being reviewed, corrections would be made to that member's account as follows:
    i. Remove overtime wages (paid at more than the regular hourly rate) and related contributions for all months that were reported in error for that member
    ii. Overtime paid at the regular hourly rate would not be removed, even if it occurred prior to 7/1/2017
d. If an employer notifies PERS of a reporting error which was not identified through our salary variance or FAS review process, the employer would be advised to correct the error going forward; however, the employer has the

option to initiate corrections using PERSLink Employer Self Service (ESS). The employer would also be advised that corrections may be required in the future if a member's salary is questioned as part of the salary variance or FAS review process.

e. After 7/1/2017, if PERS becomes aware that an employer is not reporting wages and contributions for overtime hours paid at the regular hourly rate, they will be required to be reported from 7/1/2017 forward.
f. Retroactive reporting of overtime hours paid at the regular hourly rate prior to 7/1/2017 will not be accepted.

Written agreements

NDPERS has provided guidance to our employers for reporting wages and contributions for employees who are under a contract/written agreement and for employees who work in several capacities as follows:

> Retirement contributions must be paid on all work performed within the contract or agreement arrangement. Duties performed outside these arrangements will be considered incidental and similar to overtime and therefore, excluded for retirement contribution purposes.
>
> If an employee works in several capacities for the same employer and does not have any contract or written agreement, and the sum of hours meets eligibility guidelines, retirement contributions should be made on all wages earned, excluding overtime.

We have found that the definition of written agreement has not always been interpreted consistently by employers and even among NDPERS staff. In the past, staff would ask the employer if a written agreement was in place but did not require documentation. With the increased responsibility under GASB 68, copies of written documentation is now being requested to include in the member's file, however, we have been accepting documents such as job descriptions, employment letters or acknowledgement of duties which may or may not have the signatures of both the employee and employer.

Staff would like to propose the following policy to address this inconsistency:

a. Define 'written agreement' to be "a document that includes the work to be performed by the employee and is signed by both the employee and the employer".
b. Make the definition effective 7/1/2017 to allow us to communicate the change to our employers
c. Upon becoming aware of wages being reported in error for a member under this policy, either at the time of contribution reporting through the salary variance process or at the time of retirement when final average salary (FAS) is being reviewed, corrections would be made to that member's account as follows:
    i. Remove ineligible wages and contributions for that member, back to 7/1/2017

        ii. Variances prior to 7/1/2017 resulting from written agreement interpretation would not be corrected

d. If an employer notifies PERS of a reporting error which was not identified through our salary variance or FAS review process, the employer would be advised to correct the error going forward; however, the employer has the option to initiate corrections using PERSLink Employer Self Service (ESS). The employer would also be advised that corrections may be required in the future if a member's salary is questioned as part of the salary variance or FAS review process.
e. After 7/1/2017, if PERS becomes aware that an employer is not reporting wages and contributions for eligible wages pursuant to the written agreement clarification, they will be required to be reported from 7/1/2017 forward.
f. Retroactive reporting of eligible wages prior to 7/1/2017, pursuant to the written agreement clarification, will not be accepted.

If the Board is comfortable with these proposed policies, staff would recommend sending them out to our participating employers to get their feedback. We would then bring the policies back to the Board for final approval at either the April or May meeting.

Board action requested:

Approve distribution of the proposed policies on overtime and written agreements to participating employers in the retirement plan to gather their feedback.

April 12, 2017

«ORG_ID»

«FIRST_NAME» «LAST_NAME»
«AGENCY»
«STREET»
«CITY» «STATE» «ZIP»

NDPERS Employer,

<u>RESPOND BY TUESDAY, APRIL 18, 2017</u>

NDPERS is reviewing the definitions for overtime and written agreements as it relates to retirement contributions. Any changes to the definitions could have Fiscal, Payroll and Human Resources impact. ***Ensure the Director or Agency Head in your organization receives this information and responds promptly.*** *Register for a webinar to learn more on the topic and ask questions.*

As a result of reporting requirements issued by the Governmental Accounting Standards Board (GASB), NDPERS continues to revise internal practices to meet GASB requirements. At this time, NDPERS is evaluating the definitions of overtime and written agreements to increase consistency in the reporting of employee's wages and retirement contributions when overtime or written agreements exist. *Find examples on the back of this letter.*

It is important that you provide input for your organization by Tuesday, April 18, 2017. We will accept only one response per organization. The short online survey will assist NDPERS in gathering feedback from employers on the definitions of overtime and written agreements. The survey will be made available online at https://www.surveymonkey.com/r/NDPERSRetirementPolicy on Monday, April 10, 2017. It will remain open until 5 p.m. on Tuesday, April 18, 2017.

If you have any questions before completing the survey, please attend one of our GoToWebinar sessions below. Additional details are listed on the back of this letter.

- Session 1: Tuesday, April 11, 2017 at 11 a.m. CST
- Session 2: Thursday, April 13, 2017 at 11 a.m. CST

Regards,

Benefits Division
North Dakota Public Employees Retirement System

Overtime Definition

Overtime is not reportable for retirement contribution purposes under NDCC 54-52-01 (22). NDPERS considers overtime as *any time over 40 hours a week* whether the additional time is paid at the regular hourly rate or time and a half.

Example of Inconsistency in Overtime Wages Reporting

When a regular full-time (40 hours per week) employee has an 8 hour holiday on Monday, the regular work week would consist of 32 hours. If the employee works over 32 hours, we have noted that currently there is inconsistency in how these wages for the additional time worked over 32 hours are being reported.

Some employers have expressed interest in allowing the additional time worked over 32 hours to be *paid at the same regular hourly rate* as wages subject to retirement contributions. All employers seem to agree that any hours paid at time and a half should be excluded from reportable wages.

Proposed Written Agreement Definition Effective July 1, 2017

The way employers structure written agreements with employees can determine the eligibility of wages subject to retirement contributions. This creates inconsistency in our internal procedures.

NDPERS would like to clarify the definition of written agreements to be "a document that includes the work to be performed by the employee and is signed by both the employee and employer". NDPERS generally finds this scenario in school districts where employees may perform duties in multiple capacities.

Example of Inconsistency in Written Agreement Wages Reporting

- **Currently,** an employee may perform duties in multiple capacities under different written agreements. Each written agreement and duties performed outside of written agreements must qualify individually to be eligible for retirement contributions.
- **If NDPERS adopts the proposed written agreement definition effective July 1, 2017** an agreement would need to be **signed by both** the employer and employee for NDPERS to recognize it as a written agreement. In the absence of a signed written agreement, all wages would be reportable.

GoToWebinar Sessions

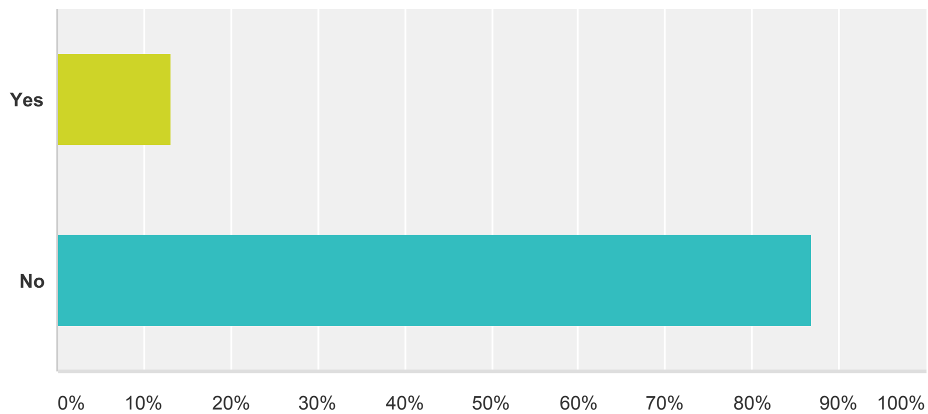
- **To join Session 1** on Tuesday, April 11, 2017 at 11 a.m. CST, please use the following link to register https://attendee.gotowebinar.com/register/6796193903272121091

- **To join Session 2** on Thursday, April 13, 2017 at 11 a.m. CST, please use the following link to register https://attendee.gotowebinar.com/register/412714165915878659.

After you register for an online session, you will receive a confirmation email with the information to join the webinar. NDPERS will share an online presentation during the webinar and have staff available to answer your questions.

Q4 Do you have any concerns with the current definition of overtime wages subject to retirement contribution?

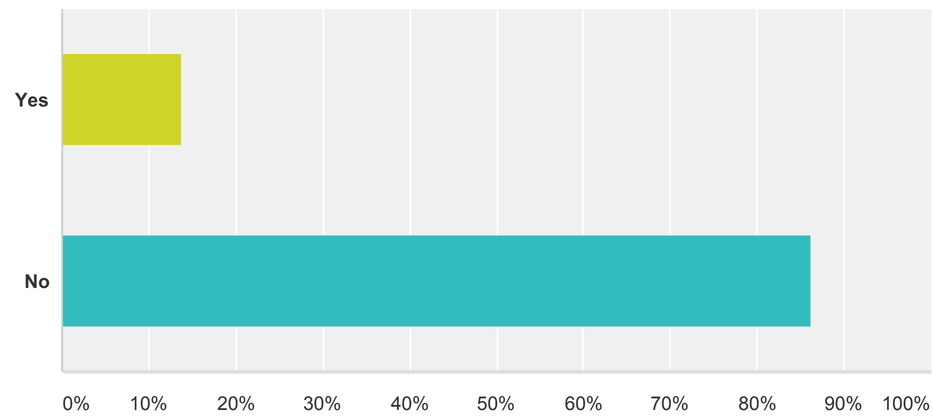
Answered: 159 Skipped: 1



Answer Choices	Responses	
Yes	**13.21%**	21
No	**86.79%**	138
Total		**159**

Q5 Does your payroll/timekeeping system find challenges when administering the current definition of overtime?

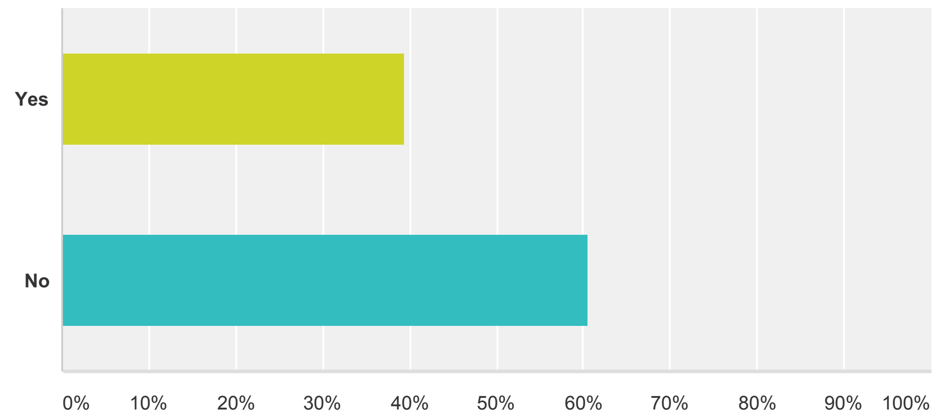
Answered: 160 Skipped: 0



Answer Choices	Responses	
Yes	**13.75%**	22
No	**86.25%**	138
Total		**160**

Q6 Would your organization utilize written agreements as defined in this new policy?

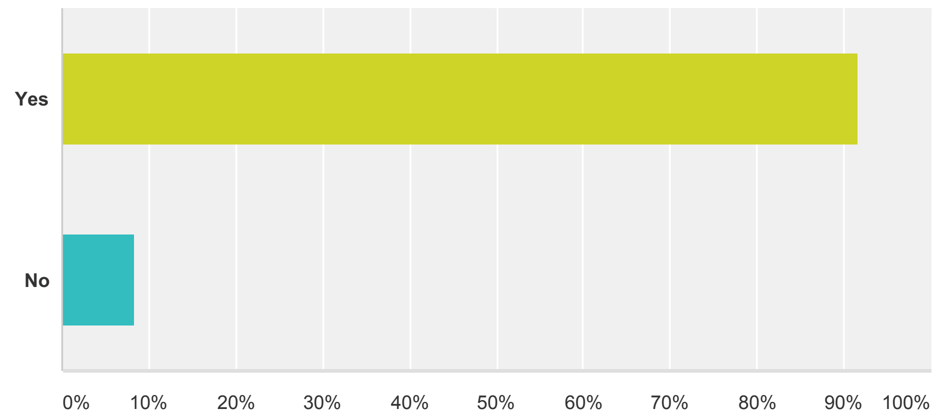
Answered: 157 Skipped: 3



Answer Choices	Responses	
Yes	**39.49%**	62
No	**60.51%**	95
Total		**157**

Q7 Is the July 1, 2017 date we are proposing feasible for implementation of this policy?

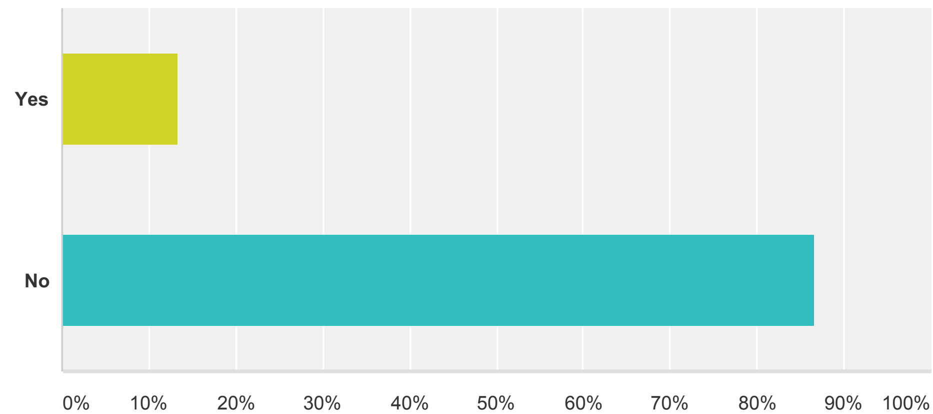
Answered: 60 Skipped: 100



Answer Choices	Responses	
Yes	**91.67%**	55
No	**8.33%**	5
Total		**60**

Q8 Do you have any concerns with the proposed written agreement policy?

Answered: 60 Skipped: 100



Answer Choices	Responses	
Yes	**13.33%**	8
No	**86.67%**	52
Total		**60**

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Memorandum

TO: PERS Board

FROM: Derrick Hohbein, CPA

DATE: April 10, 2017

SUBJECT: 2016 GASB 68 AUDIT REPORT

The 2016 GASB 68 audit report has been completed and will be distributed to the board at the meeting. Statement 68 requires employers to report a proportionate share of the retirement plan's net pension liability and pension expense on the employer's financial statements. Also, the employer's Note Disclosures and Required Supplementary Information sections of the financial statements have been greatly expanded to include much more information about the pension plan. These changes won't affect the amount of contributions sent to NDPERS; GASB 68 is an accounting change only.

The material is also available on our website for download:

https:/ndpers.nd.gov/employers/employer-resources/governmental-accounting-standards-board-gasb/

An email notice was sent to each participating employer notifying them that the annual report is available on the NDPERS website.

Please let me know if you have any questions on the report.

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Memorandum

TO: **NDPERS Board**

FROM: **Kathy**

DATE: **April 18, 2017**

SUBJECT: **FlexComp Plan Document**

At the January meeting, the board adopted a lag policy for implementation of IRS medical spending account adjustments. This means that when the IRS announces an increase in the annual limit which is traditionally in late October, it would be effective one year following the upcoming January 1. In other words, a release in October 2017 would be effective January 1, 2019.

At the time the policy was approved, staff advised the Board it would review the Plan Document to determine if this change required a revision. As the $2,500 limit is specifically referenced, an update will be required.

In conjunction with the above, staff is proposing two additional items for review with regard to Plan Document updates.

1. Over the past year, the Board and staff have been studying the option of allowing the pretaxing of HSA contributions. If this option is adopted by the Board, our consultant has indicated that we must include this policy in our FlexComp plan document.

2. The other issue is with regard to our enrollment policies. For the group health, life, dental, and vision plans employees have a 31-day enrollment window from date of hire date or date of a life change in status event. The FlexComp plan has a 60-day enrollment window for these occurrences. Staff is proposing that the enrollment and change of status window for the FlexComp plan also be 31 days to be consistent with the enrollment window for the group insurance plans. Besides the Plan Document, the only other administrative requirements for PERS would be the updating of our communication materials.

At this time, the above items are being proposed to allow the Board the opportunity to request any additional information for its consideration. Staff will bring these items to the Board for action at a future meeting.

North Dakota
Public Employees Retirement System
400 East Broadway, Suite 505 ● Box 1657
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 ● https://ndpers.nd.gov

Memorandum

TO: **NDPERS Board**

FROM: **Kathy**

DATE: **April 18, 2017**

SUBJECT: **Hardship Withdrawal Application Form**

At the December meeting, Groom Law provided the Board with information on the hardship withdrawal provisions for the 457 deferred compensation plan. In addition to that review, they also provided staff with recommendations with regard to revising our Deferred Compensation Financial Hardship Hardship Application.

The application has been revised to include Groom's recommendations. A copy is included for your information and has also been forwarded to Groom for final review. Any additional feedback will be shared with the Board at the meeting.

457 DEFERRED COMPENSATION FINANCIAL HARDSHIP APPLICATION

NORTH DAKOTA PUBLIC EMPLOYEES RETIREMENT SYSTEM
SFN 16662 (Rev. 04-2017)

NDPERS • 400 East Broadway • PO Box 1657 • Bismarck, • North Dakota 58502-1657
(701) 328- 3900 • 1-800-803-7377 • Fax 701-328-3920

Name (Last, First, Middle)	NDPERS Member ID
Last Four Digits of Social Security Number	Date of Birth (mm/dd/yyyy)
Email Address	Daytime Telephone Number
Organization Name	NDPERS Organization ID

"Unforeseeable Emergency" is defined as a severe financial hardship of the participant or beneficiary resulting from an illness or accident of the participant or beneficiary; loss of the participant's or beneficiary's property due to casualty; or other similar extraordinary and unforeseeable circumstances arising as a result of events beyond the control of the participant or beneficiary. Example of expenses that do not qualify as unforeseeable emergencies are purchase of a home or college tuition.

Payment may not be made to the extent that such hardship is or may be relieved (1) through reimbursement, (2) by liquidation of the Participant's assets to the extent the liquidation of such assets would not itself cause severe financial hardship, or (3) by cessation of deferrals under the Plan.

A. Are you currently contributing to a deferred compensation account under this plan?
☐No ☐Yes, current monthly contribution? $_____________ Name of Company/Provider _________________________________

B. Will the elimination of the current monthly contribution eliminate the need for a unforeseeable emergency distribution?
☐ No ☐ Yes

C. Have you attempted to obtain a loan to cover the emergency? ☐ No, give reason __________________________________
If yes, will the amount received cover the hardship? ☐ No ☐ Yes

D. Name of Institution(s) refusing credit ____

E. Have garnishment or collection proceedings been initiated against you because of your financial hardship?
☐ No ☐ Yes (Attach Documentation)

F. If the answers to item B, C, and E are no, describe in detail the nature of your financial hardship. (Please attach a separate sheet if more space is needed.)

G. Describe the event and explain why it was unforeseeable.

H. Have you attempted to sell any assets to cover the unforeseeable expense?
☐ No ☐ Yes. If Yes, why would the liquidations of such assets create an unforeseeable hardship?

Name (Last, First, Middle)	NDPERS Member ID

I. Please list the expenses directly related to this emergency which you are legally obligated to pay and attach a copy of each bill, estimate of repair costs, police or fire accident report, insurance statement, etc.

Item	Owed To	Total Owed	Reimbursable
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No

J. Amount needed to relieve financial hardship $ _____________ (Note: IRS regulations do not permit withdrawals to exceed the expenses incurred as a result of the hardship.)

K. Have you filed or are you going to file, a bankruptcy petition? ☐No ☐Yes (Attach documentation)

L. **MONTHLY INCOME**: Please itemize all sources of monthly income of your household. Provide all information requested to avoid delays in processing your application. A copy of your pay stub may be included, but it cannot be substituted in lieu of completing this section.

	GROSS SALARY	FEDERAL TAX	STATE TAX	FICA	INSURANCE	PERS	OTHER	NET INCOME
SELF	$	$	$	$	$	$	$	$
SPOUSE	$	$	$	$	$	$	$	$
OTHER	$	$	$	$	$	$	$	$
							TOTAL NET INCOME	$

M. OTHER INCOME SOURCES:

Retirement Income	$	Insurance Benefits	$
Social Security	$	Rental Income	$
Dividends/Interest	$	Loan Payments Received	$
Alimony//Separation Maintenance	$	Family Assistance Payments	$
Child Support	$	Other, (Itemize):	
Alimony/Separation Maintenance	$	1.	$
Unemployment Compensation	$	2.	$
Workers Compensation	$	3.	$
		TOTAL OTHER SOURCES OF INCOME	$
		PLUS TOTAL NET INCOME	$
		TOTAL NET INCOME AND OTHER INCOME SOURCES	$

Name (Last, First, Middle)	NDPERS Member ID

N. MONTHLY EXPENSES: Please itemize ongoing monthly expenses of your household.

Mortgage/Rent	$	List Credit Cards (Avg. Minimum Payments):	
Utilities (Common Average)	$	1.	$
Food (Average)	$	2.	$
Clothing (Average)	$	3.	$
Medical Expenses Not Covered by Insurance	$	4.	$
Car Payments	$	List Loans:	
Transportation Expense	$	1.	$
Alimony/Separation Maintenance	$	2.	$
Child Support	$	List any Other Expenses:	
Daycare	$	1.	$
Insurance Premiums	$	2.	$
Charge Accounts (Average Minimum Payment)	$	3.	$
		TOTAL EXPENSES	$

O. ASSETS AND NET WORTH. Itemize all major assets owned by you or members of your household. Examples of pertinent documentation include bills of sale, statements, purchase confirmations, loan agreements, billing invoices, court orders or decrees itemizing assets or liabilities (which may be submitted in lieu of separate documents), deeds, registration documents, etc. Complete information requested across each row to avoid delays in processing your application.

ASSET	**CURRENT VALUE**	**MINUS INDEBTEDNESS**	**NET WORTH**	**IS ASSET SECURING A LOAN?**	
				Yes	**No**
Home					
Other Real Estate					
List Automobiles(Year, Make, Model)					
1.					
2.					
3.					
List Recreational Vehicles: boats, campers, RVs, motorcycles, etc. (Year, Make, Model) Itemize					
1.					
2.					
3.					
Other Personal Property					
Stocks, Bonds, C.D.'s, etc.					
Life Insurance Cash Value					
Savings Account(s)					
Checking Account(s)					
I.R.A.					
List any Other Assets:					
1.					
2.					
3.					
TOTAL ASSETS AND NET WORTH	**$**	**$**	**$**		

Name (Last, First, Middle)	NDPERS Member ID

P. UNDERSTANDING, CERTIFICATION AND AUTHORIZATION.

I understand that the information shown on this application and any attachments is strictly confidential and will be used for the purpose of determining my eligibility to withdraw funds from the Deferred Compensation Plan as a result of an unforeseeable emergency producing a severe financial hardship. I understand the only other use of this information will be for an auditor or Internal Revenue Service audit of the Deferred Compensation Plan.

I further understand that the Plan Administrator or his/her designated representative (s) will rule on my hardship withdrawal request based in part on the information and documents contained in and with this application. I know the Plan Administrator or his/her designated representative(s) cannot make a decision on my application without sufficient information and documentation.

I certify that all statements, figures, and other information contained in, and attached to, this application are, to the best of my knowledge, true, correct, and complete. In addition, I authorize the Plan Administrator or his/her designated representative(s) to verify the information and documentation contained in this application and attachments.

Signature of Applicant	**Date**

65th Legislative Assembly 2017

bill number	short name	Title	fiscal impact	bill status	chamber/ committee	hearing date	hearing time	meeting room	committee members	
HB 1023 w/ amendments	approps	A BILL for an Act to provide an appropriation for defraying the expenses of the public employees retirement system; and to provide for a transfer.		1/3 1st reading, referred to approps 1/5 committee hearing 8:30 am 1/17 committee hearing 9:30 2/1 committee hearing 2:45pm 2/10 committee hearing, 9:30 2/13 committee hearing 11:00 am 2/16 Employee Benefits Programs Committee 8am 2/20 reported back, amended DO PASS, placed on calendar 15-3-3 2/21 amendment adopted, placed on calendar 2/22 2nd reading PASSED 76-15 2/23 1st reading SENATE, referred to Senate GVA 3/2 Senate Committee hearing 10:20 am 3/20 Senate reported back amended, do pass, placed on calendar 6-0-0 3/21 Senate consideration of amendments passed. amendment adopted. referred to appropriatiions 3/23 Senate Approps 8:30 am 3/30 Senate reported back DO PASS, amendment placed on calendar 14-0-0 3/31 rereferred to appropriations 4/7 reported back amended, do pass, amendment placed on calendar 14-0-0 4/10 consideration of amendments passed 4/10 2nd reading of other chamber bills passed 46-0 4/10 amendment adopted, placed on calendar 4/10 returned to House 4/12 consideration of other chamber messages-not concurred 4/12 House refused to concur 4/12 Senate conf committee appointed Krebsbach Oehlke Robinson 4/12 House conference committee appointed Vigesaa Boehnig Keiser 4/14 House Conf committee hearing 11am	approps Govt Ops EBPC Senate GVA Senate approps	2/16/2017 3/2/2017 3/23/2017 4/14/2017	8:00 AM 10:30 am 8:30 am 11am	Medora Harvest Sheyenne River Harvest Medora	**Govt Operations Division** Brandenburg, chair Randy Boehning R Brabandt L Delmore K Kempenich M Nathe D Vigesaa	**Senate GVA** N Pool man, chair K Davison B Bekkedahl R Marcellais S Meyer S Vedaa **Senate Approps** Ray Holmberg, chair Bill Bowman, vice Karen Krebsbach, vice Dick Dever Robert Erbele John Grabinger David Hogue Ralph Kilzer Gary Lee Tim Mathern Dave Oehlke Larry Robinson Ronald Sorvaag Terry Wanzek
HB 1053	recovery	Relating to increased employer and employee contributions under the public employees retirement system defined benefit and defined contribution plans.	FN 1053	House: DEFEATED 01/20 H Reported back, do not pass, placed on calendar 15 0 6 01/24 H Second reading, failed to pass, yeas 0 nays 90	DEFEATED	1/17/2017	8:30 AM			
HB 1083	approps	A BILL for an Act to provide an appropriation for defraying the expenses of the public employees retirement system; and to provide for a transfer.		1/04 1st reading, referred to approps 1/05 committee hearing 1/26 Reported back, do not pass, placed on consent calendar 19-0-2 1/27 2nd reading FAILED TO PASS 0-88-6	DEFEATED	1/5/2017 1/17/2017	8:30 AM 9:30 AM	Medora	**Govt Operations Division** Brandenburg, chair Randy Boehning R Brabandt L Delmore K Kempenich M Nathe D Vigesaa	
HB 1148	firefighter	A BILL for an Act to amend and reenact sections 54-52-01, 54-52-02.1, & 54-52-06.3 & subsections 3 & 4 of section 54-52-17 of the NDCC, relating to a public employee retirement plan for firefighters.	FN 1148	1/03 1st reading, referred to Political Subs 1/13 hearing 9am, DO PASS 14-0-1 placed on calendar 11th order 1/18 2nd reading PASSED 85-6-3 2/17 received in Senate, 1st reading, referred to GVA 3/3 Senate Committee hearing 9am 3/10 Reported back, DO PASS 6-0 placed on calendar 3/13 2nd reading, passed 45-0 3/15 signed by President (Senate) 3/21 signed by Governor 3/23 filed with Secretary of State	House SENATE GVA SOS	3/3/2017	9:00 am	Prairie Room Peace Garden Sheyenne River	**Political Subdivisions** Larry Klemin, chair Pat Hatlestad Tom Beadle Rich Becker Sebastian Ertelt Ron Guggisberg Karla Hanson Mary Johnson Kim Koppelman Don Longmuir Andrew Maragos Brandy Pyle Luke Simons Nathan Toman Denton Zubke	**Senate GVA** N Pool man, chair K Davison B Bekkedahl R Marcellais S Meyer S Vedaa

HB 1403		A BILL for an Act to create and enact a new section to chapter 54 52.1 of the North Dakota Century Code, relating to public employee health benefits transparency.		1/16 1st reading, referred to Human Services Committee 1/17 referred to IB&L 1/24 committee hearing 9am 1/26 Employee Benefits Committee hearing 8 am 1/27 Employee Benefits Committee hearing 1 pm 1/30 Employee Benefits Committee hearing 4 pm 2/1 reported back amended DO PASS 13-0-1 2/2 amendment adopted, placed on calendar 2/8 Second reading, passed 91-0 2/17 1st reading SENATE, referred to Human Services committee 3/7 Senate Committee Hearing 9am 3/23 EBPC consideration 3/28 reported back amended, do pass, 5-2-0 placed on calendar 3/29 2nd reading of other chamber bills passed 37-10 amendment adopted, placed on calendar 3/29 Senate 2nd reading, passed as amended 37-10 3/30 returned to House 4/6 conference committee 3pm 4/10 conference committee 3:30pm 4/11 conference committee 2pm 4/12 conf committee hearing 4pm 4/13 conference commiittee 9 am 4/14 House Conf committee 9am 4/17 house conf committee 10 am 4/20 House - select and divided committee reports - passed 4/20 House - 2nd reading of Bills and Resolutions passed 91-0	IB&L EBPC House SENATE Human Services EBPC Senate floor Conf committee	1/24/2017 1/27/2017 1/30/2017 3/7/2017 3/23/2017 4/6/2017 4/10/2017 4/11/2017 4/13/2017 4/14/2017 4/17/2017	9:00 AM 1:00 PM 4:00 PM 9:00 am 4:00 pm 3:00 pm 3:30 pm 2:00pm 9:00 am 10:00 am	Peace Garden Harvest Harvest Red River Harvest Peace Garden	**Industry, Business & Labor** George Keiser, chair Gary Sukut Tom Beadle Rick Becker Glenn Bosch Joshua Boschee Gretchen Dobervich Craig Johnson Jim Kasper Vern Laning Mike Lefor Scott Louser Emily O'Brien Dan Ruby **Conference Committee** Dan Ruby, chair ~~Scott Louser~~ Jim Kasper Josh Boschee Judy Lee Howard Anderson Joan Heckaman	**Senate Human Services** Judy Lee Oley Larson Howard Anderson David Clemens Joan Heckaman Curt Kreun Merrill Piepkorn
HB 1406		A Bill for an Act to create and enact a new section to chapter 54-52.1 of NDCC, relating to public employee uniform group health insurance benefits, to provide for application, and to declare an emergency		1/16 1st reading, emergency clause referred to IB&L 1/26 Employee Benefits Committee hearing 8 am 1/26 Reported back, do pass 11-2-1, referred to appropriations 1/27 Employee Benefits Committee hearing 1 pm 1/30 Employee Benefits Committee hearing 4 pm 1/17 2nd reading, PASSED 73-13 2/20 received in Senate, 1st reading (EM) referred to GVA committee 3/2 Senate Committee hearing 9:30am 3/30 Senate - reported back DO NOT PASS 6-0-0	IB&L House approps PASSED SENATE GVA failed	1/25/2017 1/30/2017 3/2/2017	9:00 AM 4:00 pm 9:30 am	Peace Garden Harvest Sheyenne River	**Industry, Business & Labor** George Keiser, chair Gary Sukut Tom Beadle Rick Becker Glenn Bosch Joshua Boschee Gretchen Dobervich Craig Johnson Jim Kasper Vern Laning Mike Lefor Scott Louser Emily O'Brien Dan Ruby	**Govt & Veterans Affairs** N Pool man, chair K Davison B Bekkedahl R Marcellais S Meyer S Vedaa
HB 1407		A Bill for an Act to amend and reenact section 54-52.1-05 of the NDCC relating to the term of the public employee uniform group insurance contract for health benefits coverage, to provide for application, and to declare an emergency.		1/17 2nd reading, PASSED 73-12-9 2/17 2nd reading passed 73-12 2/20 received in Senate, 1st reading, referred to Senate GVA committee 3/2 Senate Committee hearing 9:45 am 3/30 Senate - reported back DO NOT PASS 6-0-0 3/31 2nd reading ,failed to pass 1-43	IB&L EBPC House approps PASSED SENATE GVA failed	1/25/2017 1/30/2017 3/2/2017	9:00 AM 4:00 pm 9:30 am	Peace Garden Harvest Sheyenne River	**Industry, Business & Labor** George Keiser, chair Gary Sukut Tom Beadle Rick Becker Glenn Bosch Joshua Boschee Gretchen Dobervich Craig Johnson Jim Kasper Vern Laning Mike Lefor Scott Louser Emily O'Brien Dan Ruby	**Senate GVA** N Pool man, chair K Davison B Bekkedahl R Marcellais S Meyer S Vedaa

65th Legislative Assembly 2017

HB 1434	autism	A BILL for an Act to create and enact a new section to chapter 26.1 36 and a new section to chapter 54 52.1 of the North Dakota Century Code, relating to health insurance coverage for autism related services; to provide a statement of legislative intent; and to provide for a report to the legislative management.	FN 1434	1/16 1st reading, referred to House Human Services Committee 1/27 Employee Benefits Programs Committee hearing 1 pm 1/30 Committee hearing 2:45 pm 1/30 Employee Benefits Committee hearing 4 pm 2/8 reported back, DO PASS 9-2-3 placed on calendar 2/9 amendment adopted, referred to approps 2/14 2nd reading FAILED 47-43 (lacks constitutional majority) 2/15 bill reconsideration PASSED 61-29 2/17 received in Senate, 1st reading, referred to Senate Human Services Committee 3/6 Senate Committee hearing 9am 3/20 reported back amended, do not pass, placed on calendar 4-3-0 3/21 Senate consideration of amendments passed 3/21 2nd reading other chamber bills, FAILED 16-31	EBPC House Human Services EBPC DEFEATED reconsidered Senate Human Services FAILED	1/27/2017 1/30/2017 1/30/2017 3/6/2017	1:00 pm 2:45 PM 4:00 pm 9:00 am	Harvest Fort Union Harvest Red River	**House Human Services** Robin Weisz, chair Karen Rohr, vice Bert Anderson Dick Anderson Pamela Anderson Chuck Damschen Bill Devlin Dwight Kiefert Aaron McWilliams Todd Porter Mary Schneider Jay Seibel Kathy Skroch Greg Westlind	**Senate Human Services** Judy Lee Oley Larson Howard Anderson David Clemens Joan Heckaman Curt Kreun Merrill Piepkorn
HB 1436	self funding	Relating to the employee benefits program committee, public employee uniform group insurance health benefits coverage, and to provide for a retirement board line of credit; to provide a continuing appropriation; to provide for application; and to provide statements of legislative intent.	FN 1436	House: INTRODUCED 03/09 H Introduced, first reading, referred Industry, Business and Labor Committee 03/14 H Committee Hearing - 02:00 PM 3/23 EBPC consideration of bill 3/27 House IB&L 9:00 am 3/28 reported back, do pass, amendment placed on calendar 10-3-1 3/29 house - consideration of amendments passed 3/29 House 2nd reading of bills and resolutions passed 71-19 amendment adopted 4/3 Senate GVA committee hearing 10:30 am 4/13 Senate 2nd reading other chamber bills failed 0-47 4/13 Senate reported back, do not pass, 5-0-1 placed on calendar 4/13 Senate 2nd reading failed to pass 0-47	House IB&L EBPC IB&L House floor Senate GVA	3/14/2017 3/23/2017 3/27/2017 4/3/2017	2:00 pm 4:00 pm 9:00 am 10:30 am	Peace Garden Harvest Peace Garden Sheyenne River	Industry, Business & Labor George Keiser, chair Gary Sukut Tom Beadle Rick Becker Glenn Bosch Joshua Boschee Gretchen Dobervich Craig Johnson Jim Kasper Vern Laning Mike Lefor Scott Louser Emily O'Brien Dan Ruby	
SB 2052	telehealth	Relating to individual and group health insurance coverage of telehealth services; and to amend and reenact section 54-52.1-04.13 of the NDCC, relating to public employees retirement system uniform group insurance coverage of telehealth services.	FN 2052	1/03 1st reading 1/09 hearing 9am DO PASS 7-0-0, placed on calendar 11th order 1/10 2nd reading, PASS 46-0-1 SENATE PASSED 1/11 sent to House / received by House 2/9 introduced in House, 1st reading, referred to Human Services Committee 3/7 House Committee Hearing 3/9 Reported back amended DO PASS, 14-0-0 placed on calendar. 3/10 amended, placed on 14th order for 3/17 calendar 3/15 returned to Senate 3/31 conf committee appointed 4/5 Senate HS conference committee 3pm 4/10 reported back from conference committee. placed on calendar (House recede) 4/13 Senate - select and divided committee reports concurred 4/13/ Senate conference committee report adopted 4/13 House reported back from conference committee, placed on calendar (House recede) 4/14 House conference committee report adopted 4/14 House 2nd reading passed, 85-5 417 Signed by Speaker and President and sent to the Governor 4/19 Signed by the Governor	HOUSE Human Services conf committee SOS	1/9/2017 3/7/2017 4/5/2017	9:00 AM 9:00 am 3pm	Red River Ft Union Red River	**Senate Human Services** Judy Lee Oley Larson Howard Anderson David Clemens Joan Heckaman Curt Kreun Merrill Piepkorn **Conf Committee:** Bert Anderson ~~Dwight Kiefert~~ Robin Weisz Mary Schneider Judy Lee, chair Howard Anderson Joan Heckaman	**House Human Services** Robin Weisz, chair Karen Rohr, vice Bert Anderson Dick Anderson Pamela Anderson Chuck Damschen Bill Devlin Dwight Kiefert Aaron McWilliams Todd Porter Mary Schneider Jay Seibel Kathy Skroch Greg Westlind

65th Legislative Assembly 2017

SB 2053	technical	Relating to the definitions of retirement and retirement board, decreased employee contributions under the public employees retirement system for peace officers employed by the bureau of criminal investigation, eligibility for disability retirement and early retirement benefits under the public employees retirement system, employee enrollment, billing for the retiree health insurance credit, failure to maintain a health savings account when the high-deductible health plan is elected, payment of administrative expenses of the defined contribution plan, and penalties for employers failing to pay contributions under the defined contribution plan.	FN 2053	1/03 1st reading referred to GVA 1/05 Hearing 11am 1/09 DO PASS 5-0-1 placed on calendar 6th order 1/10 amendment adopted-placed on 11th order 1/11 2nd reading 46-0-1 engrossed passed SENATE PASSED 1/12 sent to House / received by House 2/9 introduced, 1st reading, referred to House GVA 3/2 House Committee hearing 8:30am 3/21 House reported back amended DO PASS 13-0-1 placed on calendar 3/23 EBPC 4:00 pm 3/22 amendment adopted, placed on calendar 3/24 2nd reading other chamber bills Passed 92-0 3/30 Senate - consideration of other chamber messages - concurred. 2nd reading passed 46-0 4/4 signed by the Governor 4/5 filed with Secretary of State	HOUSE GVA EBPC SOS	1/5/2017 3/2/2017 3/23/2017	11:00 am 8:30 am 4:00 pm	Sheyenne River Ft Union Harvest	**Govt & Veterans Affairs** N Pool man, chair K Davison B Bekkedahl R Marcellais S Meyer S Vedaa	**House GVA** Jim Kasper, chair Scott Louser Pam Anderson Jason Dockter Craig Johnson Daniel Johnston Karen Karls Ben Koppelman Vern Laning Christopher Olson Karen Rohr Mary Schnieder Vicky Steiner Steve Vetter

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Memorandum

TO: PERS Board

FROM: Derrick Hohbein, CPA

DATE: April 10, 2017

SUBJECT: Consultant Fees for the Quarter Ended March 2017

Attached is a quarterly report showing the consulting, investment, and administrative fees paid during the quarter ended March 2017

Attachment

North Dakota Public Employees Retirement System
Consulting/Investment/Administrative Fees
For the Quarter ended March 31, 2017

	Program/Project	Fee Type	Jan-17	Feb-17	Mar-17	Fees Paid During The Quarter	Fees Paid Fiscal Year-To-Date
Actuary/Consulting Fees:							
Buck Consulting	General Consulting				5,600	5,600	$ 16,810
Mid Dakota Clinic	Retirement Disability	Time charges		1,400	1,100	2,500	$ 6,100
Ice Miller	Legal fees Employee benefit matters		2,378	1,742	527	4,646	$ 6,001
Callan & Associates	Travel Expenses					-	$ 3,234
Deloitte	Consulting		3,519			3,519	$ 77,082
The Segal Company	Retirement (DB)	Fixed Fee				-	$ 18,625
The Segal Company	Retirement (DB)	Time charges		3,009		3,009	$ 57,068
The Segal Company	Ret Health Credit	Fixed Fee				-	$ 3,425
The Segal Company	Job Service	Fixed Fee				-	$ 4,875
The Segal Company	Def comp	time charges				-	$ 811
The Segal Company	GSAB 67 disclosures	Time charges				-	$ 47,274
						19,274	$ 241,304
Gabriel Roeder Smith & Company	Retirement	Fixed Fee				-	$ 45,500
Gabriel Roeder Smith & Company	RHIC	Fixed Fee				-	$ 8,400
Gabriel Roeder Smith & Company	GASB 67/68	Fixed Fee		9,000		9,000	$ 35,000
Gabriel Roeder Smith & Company	Retirement	Time Charges				-	$ 9,025
Gabriel Roeder Smith & Company	Legislative Work	Time Charges		2,423		2,423	$ 10,948
Gabriel Roeder Smith & Company	Deferred Comp	Time Charges		9,400		9,400	$ 9,400
Audit Fees:							
Clifton Larson Allen	Annual Audit Fee		33,750			33,750	$ 87,500
Website Redesign							
MABU	Website Redesign	Time Charges		4,046	3,150	7,196	$ 56,272
Legal Fees:							
ND Attorney General	Administrative	Time charges	3,862	3,363	6,548	13,772	$ 45,006
Investment Fees:							
SIB - Investment Fees	Retirement (DB)	% Allocation	460,938	739,996	522,948	1,723,882	$ 4,117,700
SIB - Investment Fees	Ret Health Credit	% Allocation	2,862	76,915	3,065	82,842	$ 241,505
SIB - Investment Fees	Insurance	% Allocation	982	39,490	1,065	41,537	$ 76,919
SIB - Administrative Fees	Retirement (DB)	% Allocation	20,318	26,862	26,186	73,366	$ 249,396
						1,921,627	$ 4,685,520
Administrative Fee:							
Sanford Health Plan	Health Plan	Fixed fee	1,846,626	1,846,898 *		3,693,525	$ 14,765,976

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

Memorandum

TO: **NDPERS Board**

FROM: **Kathy**

DATE: **April 18, 2017**

SUBJECT: **Board Election Update**

The Election Committee is scheduled to meet on April 20th. Therefore, an update and the minutes of that meeting will be provided to the Board at the April 27th meeting.

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Memorandum

TO: PERS Board

FROM: Sparb

DATE: April 27, 2017

SUBJECT: ANNUAL EXECUTIVE DIRECTOR EVALUATION

Attached is the form that is used by the Board to evaluate the Executive Director. We will email the Board members the evaluation form after today's meeting.

In the past the Board has appointed a committee of three to coordinate the annual evaluation of the Executive Director. Last year Mr. Sandal, Ms. Arvy Smith and Chairman Strinden served on the committee.

Board Action Requested
To determine how to proceed with the evaluation process.

Critical Job Elements
NDPERS Executive Director
For the Year: 2016
Completed in 2017

Board Member Completing Evaluation: ________________________________

CJE – Critical Job Element	Expectation	Rating	Comments
Category 1 Board Meetings	1. Agenda items are prepared with supporting information. 2. Board materials are distributed at least 3 days before the meeting. 3. Appropriate information is provided to Board either orally/verbally to aid the Board in arriving at a decision. 4. Board material identifies items, which need "Board Action", and makes a staff recommendation where appropriate. 5. Education is provided at Board meetings in order that Board may adequately perform their policy setting role.		
Category 2 Board Relations	1. The Director is responsive to Board requests. 2. The Director is adaptable to Board direction on PERS policy and able to work with the board as a team member. 3. The Director keeps Board members aware of current issues and when appropriate provides information to Board members between board meetings. 4. The Director provides timely and accurate problem identification to the Board as well as providing solutions and options for the Boards consideration.		
Category 3 Operations	1. Accurate Records 1.1 Maintain appropriate, accurate and accessible data for individual members and benefit recipients. 1.2 Accurate accounting records and a system of internal controls is maintained to result in an annual, unqualified opinion by the System's auditor. 1.3 An application to GFOA for the Certificate of Achievement for Excellence in Financial Reporting is submitted annually. 1.4 The Public Pension Coordinating Council's Award of Excellence is submitted biennially. 2. Biennial Budget 2.1 Biennial budget is prepared pursuant to OMB guidelines and submitted pursuant to guidelines established by the Governor. 2.2 Board is provided opportunity to review the budget before it is submitted. 2.3 Expenditures for budget items do not exceed appropriation without approval of the Board. 3. Timely and Understandable Service 3.1 Member inquiries are responded to in a timely manner. (Survey information shall be reported to the board relating to this from the "How are we doing" cards and the biennial survey).		

CJE – Critical Job Element	Expectation	Rating	Comments
	3.2 Participating employers shall be provided the necessary support to administer the PERS programs in which they participate. (Biennial surveys shall be done relating To this and reported to the Board). 4. Staffing 4.1 All applicable personnel rules of the State of North Dakota shall be followed. 4.2 Staff performance evaluations are completed at least annually. 4.3 Employee's receiver recognition, direction or discipline as appropriate.		
Category 4 Investment Programs	1. Maintain board approved Investment Objectives and Policies for: 1.1 The defined benefit plan 1.2 The defined contribution plan 1.3 The deferred compensation plan 2. Performance 2.1 Produce and report investment return information for the defined contribution plan and the PERS Companion Plan. 2.2 Accurate yearly reports are given to the Board concerning the defined benefit plan and its progress and compliance with the investment policies. 2.3 Advice and recommendations are given to the board on investment matters to support Board decision making. 2.4 Recommend corrective actions including termination of funds in the deferred comp plan and the defined contribution plan. 3. Provider Monitoring 3.1 Monitor the various providers in the defined contribution plan and deferred compensation to insure that all contract provisions are being followed. 3.2 Identify and report to the board all infractions of the contract provisions. 4. Fiduciary Standards Discharge investment duties solely in the interest of the members and benefit recipients With the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.		
Category 5 Benefit Program Operations	1. Actuarial Management 1.1 Provide accurate member, retiree and asset data necessary for the Actuary to perform the annual actuarial valuation for the four PERS defined benefit plans.		

CJE – Critical Job Element	Expectation	Rating	Comments
	1.2 Provide accurate member and retiree data for the actuary to perform biennial premiums estimates for the group insurance plans. 1.3 Maintain knowledge of actuarial methods, the current status of the actuarial makeup of the various retirement and group insurance plans and the impact of benefit enhancements to the contribution rates. 1.4 Provide actuarial information to the Board, Legislature, employers, members and retirees so they have sufficient background to make knowledgeable decisions. 2. Contract Management 2.1 Distribute and analyze bids for services for the various retirement, group insurance, EAP and Flex Programs to facilitate Board decision making. 2.2 Monitor contractor performance and advise the Board of any issues, including options for responding and recommended action plan. 2.3 Provide direction to all contractors to insure that board objectives are achieved. 2.4 Insure that all contractors comply with contract provisions, state law and administrative rules.		
Category 6 Public Relations	1. Publish a newsletter at least semiannually. 2. Provide informational programs to employers, members, retirees, and public groups. 3. Represent the System with appropriate affiliate organizations and functions. 4. Maintain availability to the news media.		
Category 7 Legislative Relations	1. Develop Legislative proposals in concert with the Board and its advisory committee. 2. Present requests for legislative changes to the Legislature. 3. Make the Boards position known to members, employers and the legislature. 4. Keep the Legislature, through the Interim Committee informed regarding the financial, legislative and administrative status of the system. 5. Develop adequate rapport with Legislators so that the legislative body as a whole has a sense of credibility with the positions taken by the Board on behalf of the System.		

CJE – Critical Job Element	Expectation	Rating	Comments
Category 8 Professional and Personal Development	1. Maintain membership and involvement in professional organizations. 2. Maintain professional certifications. 3. Be dependable. 4. Exhibit stability/reaction to pressure. 5. Have strong leadership skills.		
Category 9 General	1. Follow safety procedures. 2. Adhere to all laws, rules, policies, procedures and professional ethics. 3. Work as part of a team. 4. Use courtesy and respect in all interactions. 5. Maintain a well-organized work area and a business like appearance. 6. Foster good working relations by being responsive to requests. 7. Maintain confidentiality policy.		

There are nine major evaluation categories. When evaluating, rate using the following categories (indicate a rating of 1, 2, or 3 in each evaluation category):

1. **DOES NOT MEET EXPECTATIONS**: Executive Director is not performing acceptably and expectations are not being met.. Goals for improvement must be set and performance review date established (3-6 months).

2. **MEETS EXPECTATIONS:** Executive Director is performing acceptably and is meeting all standards and expectations.

3. **EXCEEDS EXPECTATIONS:** Executive Director is performing beyond and exceeds the established standards and expectations.