

Agenda

ND Teachers' Fund for Retirement Board Meeting

Thursday, January 26, 2017
1:00 pm

Workforce Safety & Insurance – Board Room
1600 East Century Avenue, Bismarck, ND

1. Call to Order and Approval of Agenda - Pres. Gessner (Board Action) 5 min
2. Approval of Minutes of October 27, 2016 Meeting – Pres. Gessner (Board Action) 5 min
3. Board Education: ND Teacher Shortages – Becky Pitkin, ESPB (Information) 30 min
4. 2017 Legislative Update – Fay Kopp (Information) 15 min
5. IRS Determination Letter Update – Fay Kopp, Jan Murtha (Board Action) 15 min.
6. Quarterly Investment Update – Dave Hunter (Information) 10 min
7. 2016 GASB 67 & 68 Report – Shelly Schumacher (Board Action) 10 min
8. Actuarial Contract – Fay Kopp (Board Action) 10 min
9. Eligible Salary Discussion – Fay Kopp (Information) 15 min
10. Board Policies (2nd reading) - Fay Kopp (Board Action) 15 min
11. Annual TFFR Ends and Statistics Report – Shelly Schumacher (Board Action) 15 min
12. Annual Retirement Trends Report – Shelly Schumacher (Board Action) 15 min
13. Quarterly Audit Services Update - Terra Miller Bowley (Information) 10 min
14. 2015 CAFR and PPCC Awards – Fay Kopp (Information) 5 min
15. TFFR Webcast Library – Fay Kopp (Information) 5 min
16. Consent Agenda – (Board Action) 5 min
*Executive Session possible if Board discusses confidential information under NDCC 16-39.1-30.
17. Other Business
Next Board Meeting: March 23, 2017 – WSI Board Room
18. Adjournment

Any individual who requires an auxiliary aid or service should contact the Retirement and Investment Office at 701-328-9885 at least three (3) days prior to the scheduled meeting.

**NORTH DAKOTA TEACHERS' FUND FOR RETIREMENT
MINUTES OF THE
OCTOBER 27, 2016, BOARD MEETING**

BOARD MEMBERS PRESENT: Mike Gessner, President
Mike Burton, Trustee
Toni Gumeringer, Trustee
Mel Olson, Trustee
Kelly Schmidt, State Treasurer

ABSENT: Kirsten Baesler, State Superintendent
Rob Lech, Trustee

STAFF PRESENT: Paula Brown, Retirement Programs Specialist
David Hunter, ED/CIO
Fay Kopp, Deputy ED/CRO
Terra Miller Bowley, Audit Services Supervisor
Denise Osmond, Retirement Programs Specialist
Darlene Roppel, Retirement Assistant
Shelly Schumacher, Retirement Program Manager
Tami Volkert, Employer Services Coordinator

OTHERS PRESENT: Erica Cermak, NDRTA
Jerry Coleman, NDDPI
Janilyn Murtha, Attorney General's Office
Kim Nicholl, Segal Consulting
Nancy Peterson, NDU-R
Matt Strom, Segal Consulting
Adam Tescher, NDDPI
Judy Vetter, NDRTA

CALL TO ORDER:

Mr. Mike Gessner, President of the Teachers' Fund for Retirement (TFFR) Board of Trustees, called the board meeting to order at 1:00 p.m. on Thursday, October 27, 2016, in the Peace Garden Room at the State Capitol in Bismarck, ND.

THE FOLLOWING MEMBERS WERE PRESENT REPRESENTING A QUORUM: MR. BURTON, MR. GESSNER, MRS. GUMERINGER, MR. OLSON, AND TREASURER SCHMIDT.

Supt. Baesler and Mr. Lech were absent.

APPROVAL OF AGENDA:

The Board considered the meeting agenda.

MR. OLSON MOVED AND MR. BURTON SECONDED TO APPROVE THE AGENDA AS PRESENTED.

AYES: TREASURER SCHMIDT, MR. BURTON, MRS. GUMERINGER, MR. OLSON, AND PRESIDENT GESSNER

NAYS: NONE

MOTION CARRIED.

ABSENT: SUPT. BAESLER AND MR. LECH

MINUTES:

The board considered the minutes of the regular TFFR board meeting held September 22, 2016.

MRS. GUMERINGER MOVED AND MR. OLSON SECONDED TO APPROVE THE MINUTES OF THE REGULAR TFFR BOARD MEETING HELD SEPTEMBER 22, 2016.

AYES: MR. OLSON, TREASURER SCHMIDT, MR. BURTON, MRS. GUMERINGER, AND PRESIDENT GESSNER

NAYS: NONE

MOTION CARRIED.

ABSENT: SUPT. BAESLER AND MR. LECH

Mrs. Kopp congratulated Treasurer Schmidt on receiving the 2016 Service Leadership award from the State Financial Officers' Association (SFOA).

Mrs. Kopp introduced Retirement and Investment Office (RIO) staff members attending the meeting and thanked them for their excellent service to TFFR members and employers - Tami Volkert, Employer Services Coordinator; Denise Osmond and Paula Brown, Retirement Program Specialists.

2016 VALUATION REPORT:

Ms. Kim Nicholl and Mr. Matt Strom, Segal Consulting, presented the 2016 Actuarial Valuation as of July 1, 2016.

The primary purposes of the actuarial valuation are to report the Fund's actuarial assets, calculate the Fund's liabilities, determine the funding policy actuarially determined contribution (ADC) for fiscal year 2017 and compare to the statutory employer contribution, determine the effective amortization period, explore the reasons why the current valuation differs from the prior valuation, and provide information for annual financial statements.

The market value of assets (MVA) returned 0.39% for the year ending June 30, 2016. The MVA decreased from \$2.14 billion (as of 6/30/15) to \$2.12 billion (as of 6/30/16). The net impact on funded ratio was an increase from 61.6% (as of 7/1/15) to 62.1% (as of 7/1/16). The effective amortization period remained unchanged at 29 years. Net impact on ADC was an increase from 13.04% of payroll (fiscal year (FY) 15) to 13.22% of payroll (FY16) primarily due to actual investment experience being less than expected. Based on the employer contribution rate of 12.75% for FY15, the contribution deficiency has increased from 0.29% of payroll to 0.47% of payroll. The GASB net pension liability increased from \$1.31 billion as of 6/30/15, to \$1.47 billion as of 6/30/16.

Active membership increased by 2.8% and payroll increased by 6.3%. Since 2006, active payroll has increased, on average, 4.9% per year; the total number of retirees and beneficiaries increased by 2.8% and total annual benefits increased by 5.5%.

The actuarial accrued liability (AAL) increased from \$3.45 billion (as of 6/30/15) to \$3.59 billion (as of 6/30/16). The unfunded actuarial accrued liability (UAAL) increased from \$1.32 billion to \$1.36 billion.

Governmental Accounting Standards Board (GASB) 68 requires the net pension liability (NPL) to be reported in the Fund's financial statements and proportionate share on each employer's balance sheet. The NPL for TFFR increased from \$1.308 billion to \$1.465 billion.

TREASURER SCHMIDT MOVED AND MRS. GUMERINGER SECONDED TO ACCEPT THE 2016 ACTUARIAL VALUATION REPORT.

AYES: TREASURER SCHMIDT, MRS. GUMERINGER, MR. OLSON, MR. BURTON, AND PRESIDENT GESSNER.

NAYS: NONE

MOTION CARRIED.

ABSENT: SUPT. BAESLER AND MR. LECH

ACTUARIAL AUDIT REPORT RESPONSE:

Ms. Nicholl and Mr. Strom reviewed Segal's response to the 2015 actuarial audit performed by Cavanaugh Macdonald Consulting (CavMac). CavMac concluded that Segal's work provides an appropriate assessment of the health and funding requirements of TFFR. Comments and suggestions were made that Segal will consider and implement as warranted.

NATIONAL PUBLIC PENSION ISSUES:

Ms. Nicholl and Mr. Strom reported on public sector topics in the news: Society of Actuaries' mortality study for public sector plans, Actuarial Standards Board (ASB)-Pension Task Force Report, and Actuarial Standards Board-Second Exposure Draft on Assessment and Disclosure of Risk.

BOARD EDUCATION - ND EDUCATION DEMOGRAPHICS:

Mr. Jerry Coleman, Director of School Finance and Organization, and Mr. Adam Tescher, Assistant Director, both from Department of Public Instruction (DPI), presented observations on past, present and projected future teacher and student demographic changes in North Dakota (ND). The ND Census Office projects a steady growth in ND population from now to 2040. There is an increase of about 800 students in the public school system in 2016-17. There are more students entering than exiting. Sixty percent of ND students are served in ND's major cities where enrollments are expected to steadily increase.

Many small rural school districts will continue to experience declines. The impact from rapid oil development is real and unpredictable. The number of teachers remains relatively constant with a 12% increase since 2010. A significant reversal of out-migration, an influx in the number of adults of childbearing age and corresponding increase in the number of births, has changed the make-up of the state's population the past few years.

The meeting recessed at 2:42 p.m. and reconvened at 2:50 p.m.

INVESTMENT UPDATE:

Mr. Hunter presented an update on TFFR pension plan returns. Net return for fiscal year ended June 30, 2016, was 0.3%. Current fiscal year to date estimated return through August 31, 2016, is 3.0%.

LEGISLATIVE UPDATE:

Mrs. Kopp reported the Legislative Audit and Fiscal Review Committee met October 13, 2016, at which time RIO's external auditor, CliftonLarsonAllen, presented the GASB 68 report. The Legislative Employee Benefits Programs Committee met October 26, 2016. Segal presented the 2016 TFFR Actuarial Valuation report and Mrs. Kopp commented on the 2015 Actuarial Audit conducted by CavMac.

No TFFR related bills have been submitted for interim study.

BOARD POLICIES:

Mrs. Kopp presented the second reading of policy C-21 - Board Appeals and C-22 - Board Communications.

MR. OLSON MOVED AND MR. BURTON SECONDED TO ADOPT POLICY C-21 BOARD APPEALS.

AYES: MRS. GUMERINGER, MR. BURTON, MR. OLSON, TREASURER SCHMIDT, AND PRESIDENT GESSNER.

NAYS: NONE

MOTION CARRIED.

ABSENT: SUPT. BAESLER AND MR. LECH

TREASURER SCHMIDT MOVED AND MR. OLSON SECONDED TO ADOPT POLICY C-22 BOARD COMMUNICATIONS.

AYES: MR. OLSON, MRS. GUMERINGER, TREASURER SCHMIDT, MR. BURTON, AND PRESIDENT GESSNER.

NAYS: NONE

MOTION CARRIED.

ABSENT: SUPT. BAESLER AND MR. LECH

Mrs. Kopp introduced two new policies for the board's consideration. Board Policy C-23: Board Policy Introduction/Amendment/Passage outlines the process of adopting and amending policies.

TREASURER SCHMIDT MOVED AND MRS. GUMERINGER SECONDED TO APPROVE THE FIRST READING OF BOARD POLICY C-23-BOARD POLICY INTRODUCTION/AMENDMENT/PASSAGE.

AYES: MR. BURTON, MRS. GUMERINGER, MR. OLSON, TREASURER SCHMIDT, AND PRESIDENT GESSNER.

NAYS: NONE

MOTION CARRIED.

ABSENT: SUPT. BAESLER AND MR. LECH

Board Policy C-24: In-Staff Subbing Contract Period documents the guidelines as they are currently interpreted for determining the contract period for in-staff subbing for active members and re-employed retirees.

TREASURER SCHMIDT MOVED AND MR. BURTON SECONDED TO APPROVE THE FIRST READING OF BOARD POLICY C-24-IN-STAFF SUBBING CONTRACT PERIOD.

AYES: MRS. GUMERINGER, TREASURER SCHMIDT, MR. BURTON, MR. OLSON, AND PRESIDENT GESSNER.

NAYS: NONE

MOTION CARRIED.

ABSENT: SUPT. BAESLER AND MR. LECH

ANNUAL TFFR PROGRAM AUDIT REPORT:

Ms. Miller Bowley reported on the audit activities completed for fiscal year ended June 30, 2016. A total of 22 TFFR employer audits were completed, which included 21 compliance audits and one not-in-compliance review. Other audits completed include: benefit payment audit, four TFFR file maintenance audits, annual salary verification audit, and Executive Limitation audit. Audit Services assisted the external auditor, CliftonLarsonAllen, with a variety of tasks. They also initiated an internship program to work with Audit Services and Retirement Services for the summer months.

MR. OLSON MOVED AND MRS. GUMERINGER SECONDED TO APPROVE THE ANNUAL TFFR PROGRAM AUDIT REPORT.

AYES: MR. BURTON, MRS. GUMERINGER, MR. OLSON, TREASURER SCHMIDT, AND PRESIDENT GESSNER.

NAYS: NONE

MOTION CARRIED.

ABSENT: SUPT. BAESLER AND MR. LECH

TRUSTEE EDUCATION REPORTS:

Mr. Olson and Mrs. Gumeringer reported on the National Council on Teacher Retirement (NCTR) Conference held Oct. 8-12, 2016, in Providence RI. Mr. Burton reported on the Callan College-Introduction to Investments, which he attended Oct. 18-19 in Chicago IL.

OTHER BUSINESS:

The next regular board meeting will be held January 26, 2017, in the conference room at Workforce Safety and Insurance (WSI).

All presentations and reports from this meeting are on file at RIO.

ADJOURNMENT:

With no further business to come before the Board, President Gessner adjourned the meeting at 3:40 p.m.

Respectfully Submitted:

Mr. Mike Gessner, President
Teachers' Fund for Retirement Board

Darlene Roppel
Reporting Secretary

MEMORANDUM

TO: TFFR Board
FROM: Fay Kopp
DATE: January 19, 2017
SUBJ: BOARD EDUCATION: ND Teacher Shortages

North Dakota's teacher shortages continue to be a concern, and school districts are challenged to find qualified teachers to educate students, particularly in rural areas.

Rebecca Pitkin, Executive Director of the ND Education Standards and Practices Board (ESPB), will be at the Board meeting to present information on ND teacher shortages, how ESPB determines critical shortage areas, what school districts are doing to address teacher shortages, and provide other related information.

Board Information Only. No board action is requested.

Attachment

Education Standards and Practices Board

Educator Shortages 2016-2017



The Process for Identification

- ▶ Administrative Code
- ▶ 67.1-02-04-01
- ▶ Alternate Access Licenses
- ▶ Educator Programs Completers
- ▶ Openings
- ▶ Out of State Applicants

Alternative Access Licenses

- ▶ Must have a major in a content to be taught
- ▶ Letter from school administrator indicating shortages of applicants who were regularly prepared, explain the application process, and the number of applicants
- ▶ Example

Benefits of Shortage Designation

- ▶ Teacher candidate loan forgiveness and additional time to complete testing requirements
- ▶ Districts-available applicants to fill unfilled positions
- ▶ Retirees-return to work and continue receiving benefits
- ▶ Challenges-sometimes to students

ND Shortages

1998-2001

- ▶ All areas identified with the exception of elementary education, physical education, and social studies

2001-2002

- ▶ All areas with the exception of elementary education and physical education

2014-2015

- ▶ All areas

Educator Preparation Programs

- ▶ University of North Dakota (155)
- ▶ Valley City State University (139)
- ▶ Minot State University (124)
- ▶ North Dakota State University (81)
- ▶ Dickinson State University (61)
- ▶ Mayville State University (54)
- ▶ University of Mary (54)

Educator Preparation Programs

- ▶ University of Jamestown (32)
- ▶ Turtle Mountain Community College (15)
- ▶ Fort Berthold Community College, United Tribes, and Sitting Bull/Sinte Gleske College had no grads during 2014-2015

- ▶ Total-715
- ▶ 2014-2015 Total: 657

Teacher Shortage Areas: Nationwide Listings

1990-1991 through 2016-2017

August 2016

U.S. Department of Education
Office of Postsecondary Education



Historical Information

- ▶ **1993-1994**
- ▶ Chemistry
- ▶ Music
- ▶ Spanish
- ▶ **1994-1995**
- ▶ Biology
- ▶ Chemistry
- ▶ **1995-1996 through 1999-2000**
- ▶ No TSA proposal submitted
- ▶ **2000-2001 through 2002-2003**
- ▶ Computer Education
- ▶ Health Careers
- ▶ Music
- ▶ **Special Education**

2004-2005

- ▶ Subject Areas (Grades 9-12)
- ▶ Agriculture Education
- ▶ Art
- ▶ Career Clusters
- ▶ Driver and Traffic Safety
- ▶ Family and Consumer Science
- ▶ Health
- ▶ Music
- ▶ Science
- ▶ Special Education
- ▶ Trade and Industrial Education

2012-2013

- ▶ Statewide Academic Disciplines or Subject Matter
- ▶ Business
- ▶ Elementary Education
- ▶ English
- ▶ Foreign Language
- ▶ Mathematics
- ▶ Music
- ▶ Science
- ▶ School Counselor
- ▶ School Psychologist
- ▶ Special Education

2013-2014

- ▶ Statewide Academic Disciplines or Subject Matter
- ▶ Early Childhood Education
- ▶ Elementary Education
- ▶ English
- ▶ Foreign Languages
- ▶ Mathematics
- ▶ Science
- ▶ School Counselor
- ▶ School Psychologist
- ▶ Social Studies
- ▶ Special Education

2014-2015

- ▶ Statewide Academic Disciplines or Subject Matter
- ▶ Business
- ▶ Early Childhood Education
- ▶ Elementary Education
- ▶ English
- ▶ Foreign Languages
- ▶ Mathematics
- ▶ Physical Education/Health
- ▶ Science
- ▶ School Counselor
- ▶ School Psychologist
- ▶ Social Studies
- ▶ Special Education

2016-2017

- ▶ Statewide Academic Disciplines or Subject Matter
- ▶ Art
- ▶ Business
- ▶ Career and Technical Education
- ▶ Computer Science
- ▶ Early Childhood Education
- ▶ Elementary Education
- ▶ English
- ▶ Foreign Languages
- ▶ Health Education
- ▶ Humanities
- ▶ Library Science
- ▶ Mathematics
- ▶ Music
- ▶ School Counselor
- ▶ Science
- ▶ Social Studies
- ▶ Special Education

Alternate Access Licenses

Alternate Access Content Area	Number of Licenses
Business Ed/General Business	6
Family and Consumer Science	6
Technology and Engineering Education	4
Guidance Counseling	11
Biology	10
Chemistry	2
Earth Science	1
General Composite Science	3
Communication/English	7
Music	6
Physical Education	2
Elementary Education	6
Early Childhood	2
Mathematics	5
Agriculture Education	4
Social Studies/Social Science	2
History	4
Computer Science	1
Marketing Education	1
Art	3
Psychology	1
Computer Science	1
World Languages Spanish	4
World Languages French	1
English Language Learner	2
Special Education	4
Government	1

Previous Steps to Alleviate Shortages

- ▶ 2009 changed school counseling to K-12 and dropped the need to be prepared as a classroom teacher
- ▶ 2011 changed requirements for special education teachers
 - No longer double major
 - Allowed anyone with either a major or endorsement to work with any child with a disability-no longer a categorical state

Substitute Teachers

- ▶ 2001-allowed anyone with a bachelor's degree to become a substitute teacher
- ▶ 2012-changed the requirements for substitute teachers to two years of post-secondary work
- ▶ 2013: 454 sub licenses
- ▶ 2014: 660 sub licenses
- ▶ 2015: 1421 sub licenses
- ▶ July to January : 865

ESPB Working to Alleviate Shortages

- ▶ Recognize other state educator licenses
- ▶ Praxis Endorsement (July 1, 2014)
Regular program completers with a valid ND License for two years

Opportunities for Individuals Pursuing Education Degrees

- ▶ Online programs
 - VCSU-most all programs
 - UND-Counseling and Special Education
 - Mayville State-early Childhood
 - Many other programs nationwide

- *Transition to Teaching Program-VCSU

Current Proposals from ESPB

- ▶ SB 1098 changes license configuration.
 - Elementary licensure currently is grades 1-6 (proposed 1-8) and Secondary licensure currently is grades 7-12 (proposed 5-12)
 - ESPB is addressing Administrative Rules to enable secondary majors to teach with a minor.

Future Challenges

- ▶ Fewer individuals choosing teaching as a career so fewer teacher education candidates
- ▶ Increasing flexibility while still maintaining high quality teachers
- ▶ Doing what is best for kids

TFFR Legislative Update

January 20, 2017

BILL NO.	DESCRIPTION	INTRODUCED BY:
<u>HB 1022</u>	RIO Budget	Appropriations Committee
<u>HB 1082</u>	RIO Budget	Approp Com/Governor's Office

HB 1022 and HB 1082 both contain the 2017-19 budget authority and continuing appropriations for the Retirement and Investment Office (RIO) administrative expenses for operating the retirement program for the TFFR Board and the investment program for the SIB. There are two RIO budget bills. While both start with base level amounts, HB 1082 includes former Governor Dalrymple's executive budget adjustments, while HB 1022 does not.

HB 1022 and HB 1082 were assigned to the House Appropriations - Government Operations Division. Dave, Connie, and Fay attended a committee hearing on 1/5. Many questions revolved around Legacy Fund earnings and returns which Dave addressed. Other questions related to TFFR funding, plan design, and contributions which Fay responded to.

Another committee meeting on HB 1022 was held on 1/16 which was attended by Dave, Connie, and Fay. Review of the RIO budget and programs continued, with no specific issues noted.

On 1/17, OMB requested (on behalf of Governor Burgum) reductions to RIO's budget of an additional \$110,000 for the 2017-19 biennium. After a careful review of all budget areas, RIO proposed the following expense reductions:

- 1) Reduced "Temporary Salaries" (and related fringe benefits) by \$20,000 (thereby eliminating the summer internship position);
- 2) Reduced "Travel" by \$53,000 for both Board members and RIO Staff;
- 3) Reduced "Contingency" line item by \$28,000 (to \$52,000); and
- 4) Eliminated a \$9,000 copier purchase in the 2017-19 biennium.

The new "Contingency" amount of \$52,000 approximates the average contingency amount used by RIO the last four biennia.

OTHER BILLS OF INTEREST:

<u>HB 1088</u>	Risk Management - Data Breach Response Costs	OMB
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HB 1088 would allow the State's Risk Management fund to cover state agencies for certain 1st party costs associated with a data breach including notification of affected parties, credit counseling, etc. A related OMB bill (HB1075) also includes special fund appropriation authority for self-insurance remediation costs, i.e. fixing the issues related to hardware and software. Please be reminded that RIO had originally included funds in an optional budget package for cyber insurance which was not included in the former Governor's Executive Budget recommendation.

HB 1088 was assigned to House GVA Committee. A committee hearing was held on 1/05. The Committee gave the bill a do pass recommendation 14-0-0. The House approved the bill on 1/10 by a vote of 91 – 1. The bill will now move to the Senate.

HB 1175 SIB Membership Reps. Kreidt, Delzer, Devlin, Kempenich & Sen. Klein

HB 1175 adds two members to the SIB, one selected by the House Majority Leader and one selected by the Senate Majority Leader, thereby increasing the number of SIB members to 13.

The bill was assigned to House Political Subdivisions Committee. **The Committee hearing was scheduled for 1/19, but was postponed since the bill’s prime sponsor was unable to attend.**

**HB 1318 Regional Education Associations
Reps. Schatz, Kasper, Rohr, D. Ruby, Toman; Sens. O. Larsen, Unruh**

HB 1318 repeals state statutes relating to regional education associations (REAs). Sections 2 and 3 remove specific references to REA’s in TFFR statutes regarding participation in the plan, and penalty for failure to make required reports and payments.

The bill was assigned to the House Education Committee. A committee hearing has not been scheduled.

SB 2030 NDEA/ND United statutory reference updates Leg Mgmt/Education Com.

SB 2030 relates to updating statutory references of the former ND Education Association. While most sections of the bill delete NDEA and replace with ND United, Section 4 removes the requirement that the Governor receive a list of nominees from NDEA/ND United from which to appoint active teachers to the TFFR Board.

SB 2030 was assigned to the Senate Education Committee. The Committee hearing was on 1/04. On 1/11, the bill was amended to reinstate the provision that ND United submit a list of nominees to the Governor. The amendment also requires the nominees to be actively employed as elementary or secondary teachers. The Committee gave the amended bill a do pass recommendation 5-0-1. The Senate approved the amended bill by a vote of 46 – 0 on 1/13. The bill will now move to the House.

[ND Legislative website](#)

MEMORANDUM

TO: TFFR Board

FROM: Fay Kopp

DATE: January 19, 2017

SUBJ: IRS Determination Letter Update

In January 2016, the TFFR plan was submitted to the IRS to request a favorable determination letter. Since that time, the IRS has reviewed TFFR's application and requested additional information.

The most recent request for information was received on January 13, 2017 and is attached. The IRS is asking for more specific definitions of eligible retirement plan, eligible rollover, and other terms relating to the definition of direct rollover.

In reviewing this issue with Jan Murtha, Attorney General's Office, and Melanie Walker, Segal Consulting, they have advised us that these IRS technical clarifications will require changes to state law through the legislative process. It is likely that TFFR's request for a favorable IRS determination letter would be contingent upon making any such changes. Jan has drafted proposed statutory changes which are included in the proposed response to the IRS, also attached.

It is important to note that while TFFR plan statutes may not currently contain the exact terminology with regards to IRC rollover rules, TFFR is operating in compliance with those IRC rollover rules.

Legislative changes could potentially be submitted either now in the 2017 session (through the Delayed Bills process), or in 2019 since the plan has until 90 days after the end of the next legislative session to adopt statutory amendments. Since TFFR did not propose a bill during the 2017 legislative session, we are unable to add such amendments to an already existing TFFR bill.

Board Action Requested: Decide whether to submit IRS technical corrections bill during 2017 or 2019 legislative session.

Attachments



**Department of the Treasury
Internal Revenue Service**

P.O. Box 12192
Covington, KY 41017-0192

RECEIVED

JAN 13 2017

NDRIO

Date:

January 10, 2017

Employer ID number:

45-6002349

Plan name:

North Dakota Teachers Fund for
Retirement

Plan number:

001

Person to contact:

Jennifer Thimmadasaiah

Contact telephone number:

(513) 263-4613

Employee ID number:

#1000203382

Response due date:

1/27/17

North Dakota Teachers Fund for Retirement Board
P.O. Box 7100
Bismarck, ND 58507-7100

Dear Fay L Kopp:

Thank you for sending the additional information we requested about your plan. Unfortunately, we reviewed your reply and found some of the required information is still missing or inadequate. The items we still need are on the enclosed *Information Needed* page. The 270-day period for declaratory judgments defined in Section 7476(b)(3) of the Code will not begin until we receive your complete and correct application.

Please send us the requested information by the response date listed above. To avoid processing delays, be sure you:

- Include all requested information
- Ensure your information is complete and correct
- Include a copy of this letter
- Include a copy of the *Information Needed* page
- Include a copy of the *Applicant Identification Sheet* (AIS), if enclosed

You can send your response to:

Regular mail:

Stop 31
Attention: EP/EO Determination Letters
Internal Revenue Service
P.O. Box 12192
Covington, KY 41012-0192

Express Mail or a delivery service:

Stop 31
Attention: EP/EO Determination Letters
Internal Revenue Service
201 West Rivercenter Boulevard
Covington, KY 41011

Fax:

Send up to 25 pages to (855) 260-3187

If you submitted a Form 2848, *Power of Attorney and Declaration of Representative*, or Form 8821, *Tax Information Authorization*, with your application and asked us to send your authorized representative or appointee copies of written communications, we will send a copy of this letter to him or her.

If you can't meet the response due date listed above or you have questions, you can contact me at the number listed at the top of this letter, or you can contact my manager, Melissa Whelan at (513) 263-3552 . Please keep this letter and the *Information Needed* page for your records.

Thank you for your cooperation.

Sincerely,



Jennifer Thimmadasaiah
Employee Plans Specialist

Enclosure:

Information Needed

Applicant Identification Sheet

cc: Janylyn K Murtha

North Dakota Office of Attorney General

600 E Boulevard Ave Dept 125

Bismarck, ND 58505

Information Needed

Employer name: North Dakota Teachers Fund for Retirement Board

Plan name: North Dakota Teachers Fund for Retirement

Employer ID number: 45-6002349

Plan number: 001

- 1.) Based upon your correspondence, we are thus asking again that the plan spell the definitions of eligible retirement plan, eligible rollover and other terms that relate to the definitions of direct rollover. Since there are various selections within IRC sections 401(a)(31) & 402(c)(2)(B), we do not permit it to be incorporated by reference.

January 27, 2017

VIA FACSIMILE ONLY

Ms. Jennifer Thimmadasaiah
Employee Plans Specialist
Stop 31
Attention: EP/EO Determination Letters
Internal Revenue Service
PO Box 12192
Covington, KY 41012-0192

Dear Ms. Thimmadasaiah:

Please accept this letter in follow-up to the request for additional information faxed to the North Dakota Teachers' Fund for Retirement Board office on January 10, 2017. All citations to specific statutory provisions in this response refer to governing plan document language that has already been provided to the IRS as part of the determination letter application.

The information you requested, as well as our responses, are indicated below:

- 1. Based upon your correspondence, we are thus asking again that the plan spell the definitions of eligible retirement plan, eligible rollover and other terms that relate to the definitions of direct rollover. Since there are various selections within the IRC sections 401(a)(31) & 402(c)(2)(B), we do not permit it to be incorporated by reference.**

Pursuant to your request, we propose to request the North Dakota Legislature amend North Dakota Century Code § 15-39.1-34 by adding the following underscored language regarding rollovers to this section:

15-39.1-34. Internal Revenue Code compliance.

The board shall administer the plan in compliance with section 415, section 401(a)(9), section 401(a)(17), and section 401(a)(31) of the Internal Revenue Code, as amended, and regulations adopted pursuant to those provisions as they apply to governmental plans. Pursuant to the rollover rules under section 401(a)(31) of the Internal Revenue Code, a

Ms. Jennifer Thimmadasaiah
January 27, 2017
Page 2

distributee may elect to have an eligible rollover distribution, as defined in section 402(c)(4) of the Internal Revenue Code, paid in a direct rollover to an eligible retirement plan, as defined in section 402(c)(8)(B) of the Internal Revenue Code, specified by the distributee. For purposes of this section, "distributee" includes a nonspouse beneficiary of a deceased member; provided, however, that in the case of a nonspouse beneficiary, the direct rollover may only be made to an individual retirement account or individual retirement annuity described in section 408 or 408A of the Internal Revenue Code that is established on behalf of the nonspouse beneficiary and will be treated as an inherited individual retirement account or inherited individual retirement annuity pursuant to section 402(c)(11) of the Internal Revenue Code.

Please note that this language is consistent with plan amendments proposed by the North Dakota Public Employees Retirement System Hybrid Plan and North Dakota Highway Patrolmen's Retirement System as part of those plans determination letter process, and for which those plans received favorable determination letters contingent upon adoption of the proposed amendments and is being offered in an effort to maintain consistency with these other state plans. If our responses and Plan document language do not, in your opinion, satisfy the information needed for a favorable determination letter from the IRS, we would appreciate a description of any deficiencies noted by the Service and an additional opportunity to correct any such deficiencies before a final determination is made.

Sincerely,

Janilyn K. Murtha
Assistant Attorney General

cc: Fay Kopp (w/enc)

TFFR Investment Update

For the Periods Ended September 30, 2016

January 17, 2017

Note: This document contains unaudited data as of September 30, 2016, which is deemed to be materially accurate, but is subject to change.

Dave Hunter, Executive Director/CIO
Darren Schulz, Deputy Chief Investment Officer
ND Retirement & Investment Office (RIO)
State Investment Board (SIB)

TFFR Investment Ends – September 30, 2016

SIB clients should receive investment returns consistent with their written investment policies and market variables. This “End” is evaluated based on comparison of each client’s (a) actual net investment return, (b) standard deviation and (c) risk adjusted excess return, to the client’s policy benchmark over 5 years.

	1 Qtr Ended 9/30/2016	1 Yr Ended 9/30/2016	3 Yrs Ended 9/30/2016	5 Yrs Ended 9/30/2016	Risk (as measured by Std. Dev.) 5 Yrs Ended 9/30/2016	Risk Adj Excess Return 5 Yrs Ended 9/30/2016
Net Investment Return	3.69%	9.43%	6.14%	9.64%	5.7%	0.42%
Policy Benchmark Return	3.52%	9.11%	5.45%	8.87%	5.5%	
Excess Return	0.17%	0.32%	0.68%	0.77%	104%	
		\$6.5 million	\$40 million	\$65 million		

Key Point: TFFR investments have averaged over \$1.75 billion during the last 5-years and Excess Return has averaged over **0.75%** per annum. Based on these values, **TFFR’s use of active management has enhanced Net Investment Returns by \$65 million for the 5-years ended Sep. 30, 2016** (or \$1.75 billion × 0.75% = \$13 million × 5 years = \$65 million). This Excess Return has been achieved while adhering to prescribed **Risk** limits (e.g. **104%** versus a policy limit of 115%).

Executive Summary for periods ended Sep. 30, 2016

Investment Performance –

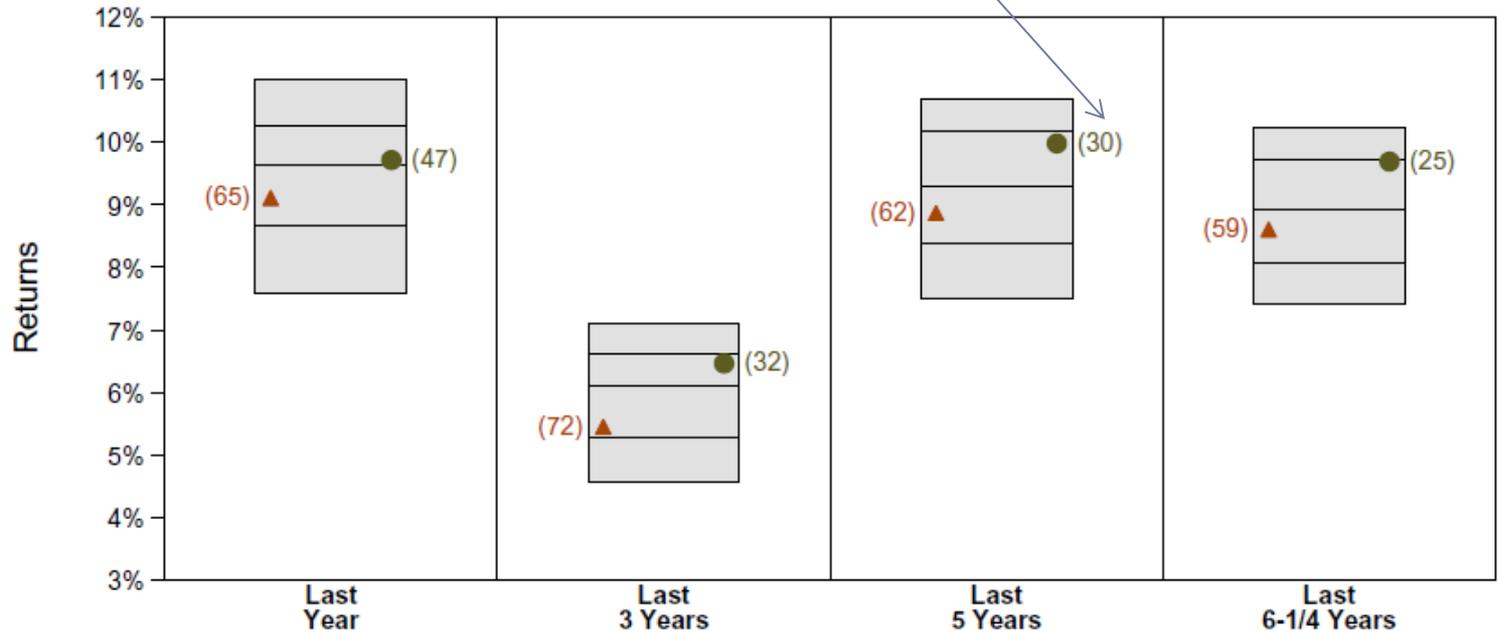
- For the 1-year ended 9/30/2016, TFFR posted a net investment return of **9.4%** versus a policy benchmark of **9.1%**. **Global Equities** performed very well (+10.8% actual vs +10.3% index) with U.S. Equities (up 14.4%) beating International Equities (up 12.1%). Emerging Market Equities (up 18.8%) were the best performing sector, while Private Equity was our worst sector (down 5.8%). **Fixed Income** was mixed with strong absolute returns of +7.9% but below benchmark of +8.3%. **Real Assets** generated solid absolute and relative returns (+6.9% actual vs +5.8% index) largely due to Real Estate (up 10.2%) as Infrastructure results were disappointing (up 1.5%).
- **Asset allocation is the primary driver of investment returns. TFFR generated a net return of 9.6% for the 5-years ended Sep. 30, 2016, which exceeded the policy benchmark (of 8.9%) by over 0.70%.** During the last 5-years, asset allocation and active management generated over **\$780 million** (92%) and **\$65 million**₁ (8%) of TFFR's net investment income, respectively.
- **TFFR's investment returns have consistently ranked in the second quartile of the Callan Public Fund Sponsor Database over the last five years.** On an unadjusted basis, TFFR's returns ranked in the 30th percentile for the 5-year periods ended September 30, 2016.

Risk Update –

- TFFR investment risk (as measured by actual standard deviation divided by the policy benchmark) has declined from over **115%** in 2008 to approximately **104%** for the 5-years ended Sep. 30, 2016.

TFFR's "gross" returns were ranked in the 30th percentile for the 5-years ended Sep. 30, 2016, based on Callan's "Public Fund Sponsor Database".

CAI Public Fund Sponsor Database

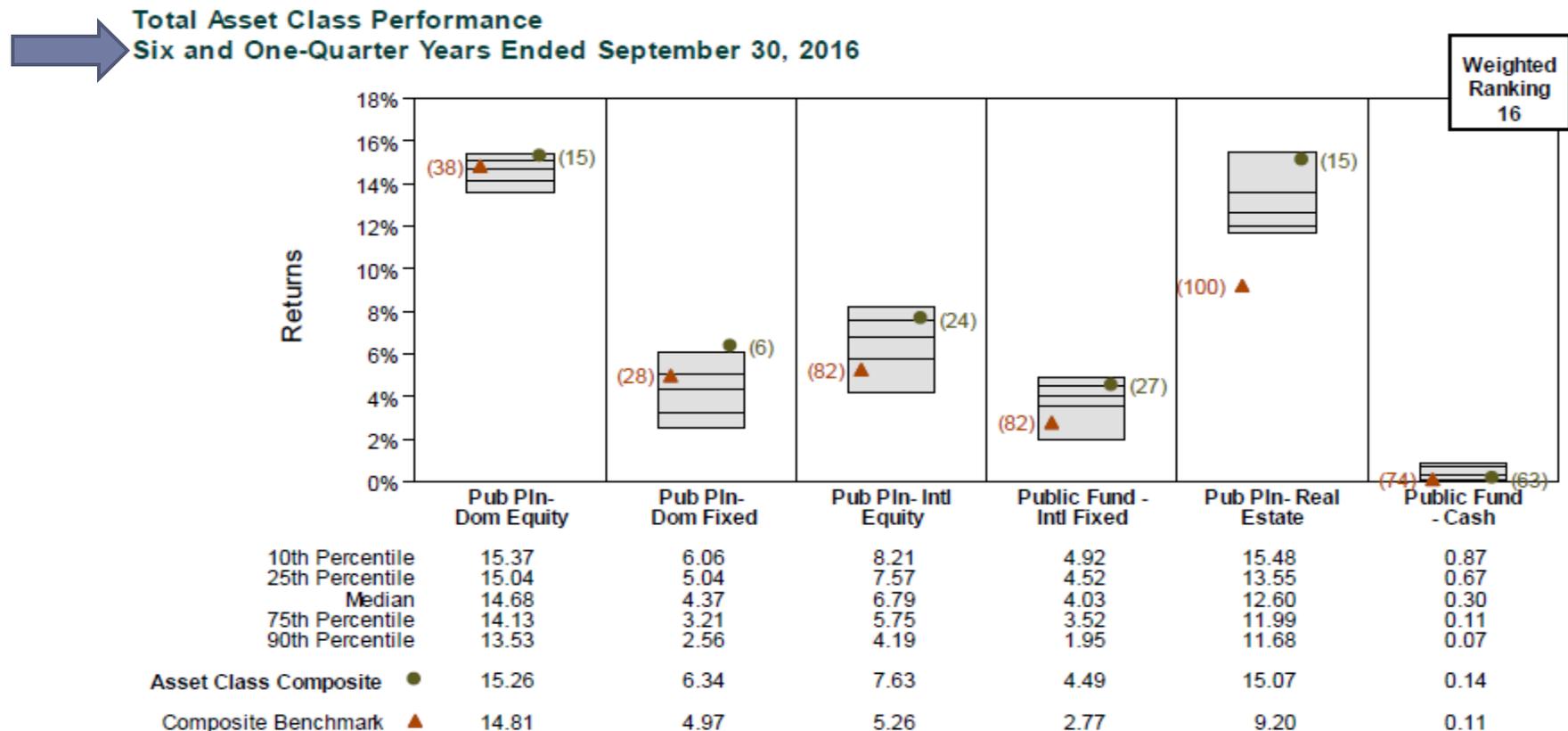


	Last Year	Last 3 Years	Last 5 Years	Last 6-1/4 Years
10th Percentile	11.00	7.11	10.70	10.23
25th Percentile	10.26	6.61	10.19	9.73
Median	9.63	6.12	9.30	8.92
75th Percentile	8.67	5.29	8.38	8.08
90th Percentile	7.58	4.56	7.49	7.40
Total Fund ●	9.72	6.46	9.98	9.69
Policy Target ▲	9.11	5.45	8.87	8.61

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 13.0% Barclays Aggregate Index, 11.8% MSCI EAFE, 10.0% NCREIF Total Index, 6.0% NDSIB TFFR - Private Equity, 6.0% Barclays Global Agg ex-US, 5.0% CPI-W, 4.8% Russell 2000 Index, 4.0% Barclays US HY Corp 2% Cp, 3.0% NCREIF Timberland Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

Asset Class Composite Results

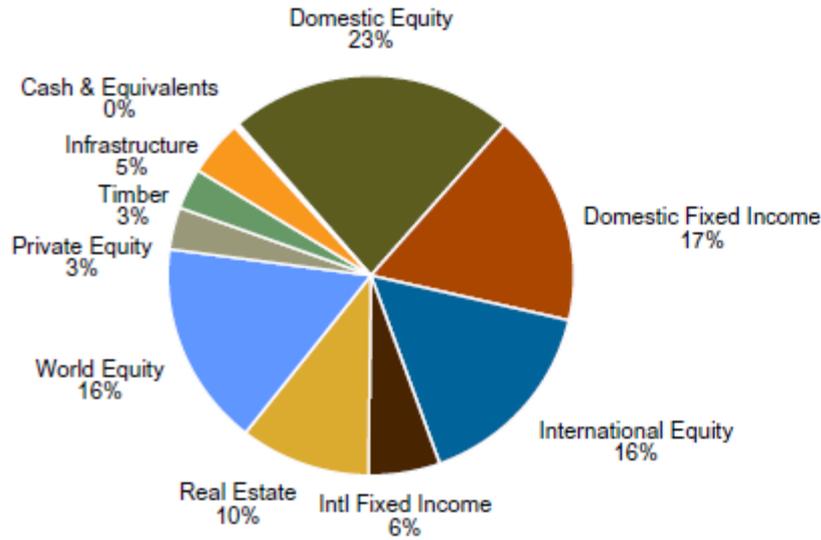
TFFR's asset class results vs other Public Pension Funds



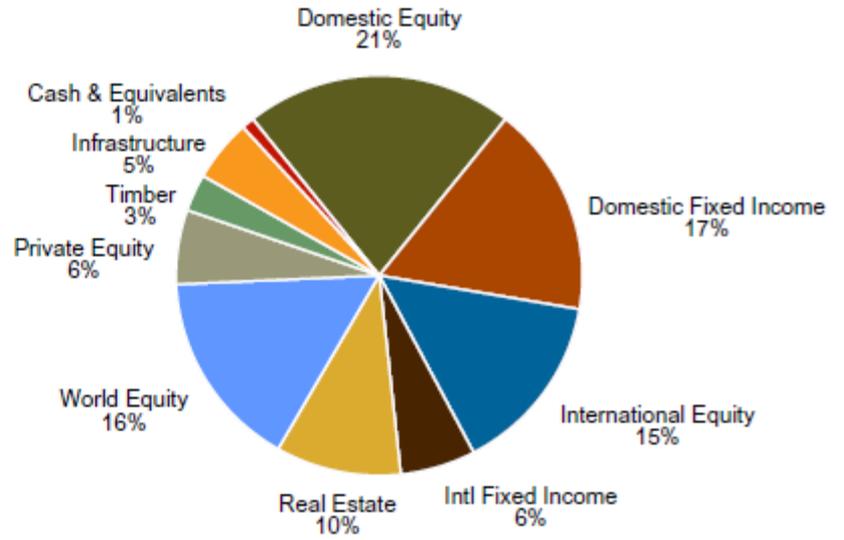
- Public market asset classes are all above their respective medians except cash.
 - Many "cash" funds have exposure to higher return and risk strategies (i.e. credit and longer duration) than NDSIB does.
- U.S. equity and fixed income, international fixed income and real estate returns in top quartile.

TFFR Actual Allocations are within 1% to 3% of Target Allocations

Actual Asset Allocation



Target Asset Allocation



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	488,446	22.8%	21.4%	1.4%	29,518
Domestic Fixed Income	369,209	17.2%	17.0%	0.2%	4,640
International Equity	341,192	15.9%	14.6%	1.3%	28,092
Intl Fixed Income	122,993	5.7%	6.0%	(0.3%)	(5,678)
Real Estate	222,029	10.4%	10.0%	0.4%	7,577
World Equity	352,972	16.5%	16.0%	0.5%	9,848
Private Equity	71,846	3.4%	6.0%	(2.6%)	(56,825)
Timber	69,910	3.3%	3.0%	0.3%	5,575
Infrastructure	96,901	4.5%	5.0%	(0.5%)	(10,325)
Cash & Equivalents	9,025	0.4%	1.0%	(0.6%)	(12,420)
Total	2,144,524	100.0%	100.0%		

Asset Class Performance

Periodic Table of Investment Returns
for Periods Ended September 30, 2016



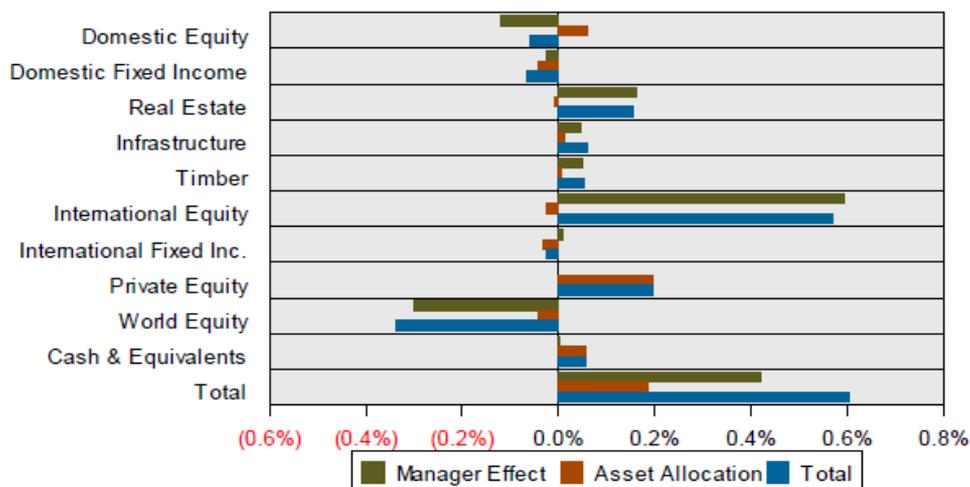
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
MSCI:EM Gross	9.2%	17.2%	S&P:500 11.2%	S&P:500 16.4%	S&P:500 7.2%
Russell:2000 Index	9.0%	15.5%	Russell:2000 Index 6.7%	Russell:2000 Index 15.8%	Russell:2000 Index 7.1%
MSCI:EAFE	6.4%	S&P:500 15.4%	BB Barclays:Aggregate Idx 4.0%	MSCI:EAFE 7.4%	BB Barclays:Aggregate Idx 4.8%
S&P:500	3.9%	MSCI:EAFE 6.5%	MSCI:EAFE 0.5%	MSCI:EM Gross 3.4%	MSCI:EM Gross 4.3%
BB Barclays:Aggregate Idx	0.5%	BB Barclays:Aggregate Idx 5.2%	3 Month T-Bill 0.1%	BB Barclays:Aggregate Idx 3.1%	MSCI:EAFE 1.8%
3 Month T-Bill	0.1%	3 Month T-Bill 0.3%	MSCI:EM Gross (0.2%)	3 Month T-Bill 0.1%	3 Month T-Bill 0.9%
BLMBRG:Commdty Idx (3.9%)	BLMBRG:Commdty Idx (2.8%)	BLMBRG:Commdty Idx (12.4%)	BLMBRG:Commdty Idx (9.5%)	BLMBRG:Commdty Idx (6.1%)	

Year Ended 9/30/16: Emerging Market (EM) and U.S. Equities (Russell 2000 and S&P 500) returned in excess of 15%, while International Equities (MSCI EAFE) and U.S. Fixed Income (Barclays Aggregate) returned 6.5% and 5.2%, respectively, and the Bloomberg Commodity Index declined 2.8% last year.

TFFR Performance and Attribution

As of September 30, 2016

One Year Relative Attribution Effects



1 Year Ended 9/30/16

Gross: 9.72%

Net of fees: 9.43%

Target: 9.11%

Net Added: 0.32%



One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	23%	21%	14.61%	15.10%	(0.12%)	0.06%	(0.06%)
Domestic Fixed Income	17%	17%	7.08%	7.17%	(0.03%)	(0.04%)	(0.07%)
Real Estate	11%	10%	10.81%	9.22%	0.16%	(0.01%)	0.16%
Infrastructure	5%	5%	2.14%	1.22%	0.05%	0.01%	0.06%
Timber	4%	4%	4.32%	3.28%	0.05%	0.00%	0.05%
International Equity	15%	15%	12.31%	8.40%	0.59%	(0.02%)	0.57%
International Fixed Inc.	5%	5%	11.91%	11.67%	0.01%	(0.03%)	(0.02%)
Private Equity	4%	5%	(5.77%)	(5.77%)	0.00%	0.20%	0.20%
World Equity	16%	16%	9.45%	11.36%	(0.30%)	(0.04%)	(0.34%)
Cash & Equivalents	1%	1%	0.39%	0.27%	0.00%	0.06%	0.06%
Total			9.72%	9.11%	+ 0.42%	+ 0.18%	0.60%

TFFR Long Term Results are Near Long-Term Assumptions

The TFFR Pension Plan is a Long Term Investor

Net investment returns for the TFFR Pension Plan have approximated 7.83% for the 30-years ended September 30, 2016, which is materially consistent with the plan’s long term actuarial assumption of 7.75%.

ND RETIREMENT AND INVESTMENT OFFICE
 ND STATE INVESTMENT BOARD
 INVESTMENT PERFORMANCE SUMMARY
 AS OF SEPTEMBER 30, 2016

Investment Performance (net of fees)

Fund Name	Market Values as of 9/30/16	FYTD 2017	Fiscal Years ended June 30					Periods ended 6/30/16 (annualized)				
			2016	2015	2014	2013	2012	3 Years	5 Years	10 Years	20 Years	30 Years
TFFR	2,144,533,865	3.69%	0.28%	3.52%	16.53%	13.57%	-1.12%	6.55%	6.32%	4.45%	6.48%	7.73%

↑
 For 30-years ended June 30, 2016.

**ND TEACHERS FUND FOR RETIREMENT
INVESTMENT PERFORMANCE REPORT AS OF NOVEMBER 30, 2016**

	November-16					October-16		Current Fiscal YTD	
	Market Value	Allocation		Month		Month		Gross ⁽⁴⁾	Net
		Actual	Policy	Gross ⁽⁴⁾	Net	Gross ⁽⁴⁾	Net		
TOTAL FUND	2,121,977,234	100%	100%	0.68%	0.63%	-1.48%	-1.49%	2.93%	2.80%
<i>POLICY TARGET</i>				<i>0.64%</i>	<i>0.64%</i>	<i>-1.39%</i>	<i>-1.39%</i>	<i>2.73%</i>	<i>2.73%</i>
GLOBAL EQUITIES	1,231,251,927 	58%	58%	1.90%	1.85%	-2.15%	-2.15%	5.08%	4.93%
<i>Benchmark</i>			<i>52.0%</i>	<i>2.11%</i>	<i>2.11%</i>	<i>-1.94%</i>	<i>-1.94%</i>	<i>5.28%</i>	<i>5.28%</i>
GLOBAL FIXED INCOME	478,055,716	22.5%	23.0%	-2.23%	-2.27%	-0.65%	-0.65%	-0.79%	-0.91%
<i>Benchmark</i>				<i>-2.79%</i>	<i>-2.79%</i>	<i>-1.45%</i>	<i>-1.45%</i>	<i>-2.78%</i>	<i>-2.78%</i>
GLOBAL REAL ASSETS	395,226,067 	18.6%	18.0%	0.54%	0.54%	-0.46%	-0.49%	0.85%	0.76%
<i>Benchmark</i>				<i>0.30%</i>	<i>0.30%</i>	<i>0.39%</i>	<i>0.39%</i>	<i>1.82%</i>	<i>1.82%</i>
GLOBAL CASH	17,443,525	0.8%	1.0%	0.05%	0.05%	0.06%	0.06%	0.23%	0.23%
<i>Benchmark</i>				<i>0.02%</i>	<i>0.02%</i>	<i>0.03%</i>	<i>0.03%</i>	<i>0.14%</i>	<i>0.14%</i>

Based on interim and unaudited investment results as of Nov. 30, 2016, plus estimated benchmark data for December, TFFR's Net Return is estimated at approximately 4.1% for the six months ended December 31, 2016.

INFORMATIONAL

TO: State Investment Board (“SIB”) Clients
FROM: Dave Hunter, Darren Schulz and Eric Chin
DATE: November 14, 2016
SUBJECT: **Watch List Commentary**

RIO routinely reviews investment manager performance, organizational structure, investing philosophy/style and fund flows of specific investment mandates and the overall operations of our investment firms. These reviews serve as the basis for Staff recommendations to add, maintain or remove individual investment strategies (and/or management firms) from our Watch List.

At our October 28 board meeting, the SIB placed Adams Street Partners on Watch due to transparency concerns and temporarily paused future investments. Based on recent conversations, RIO is pleased to report that it has reached an understanding with Adams Street to obtain modified investment reporting. Upon receiving the modified reporting package for two consecutive quarters, RIO looks forward to recommending that Adams Street Partners be removed from the Watch List.

NDSIB Watch List

As of 9/30/2016

PIMCO MBS (Pen.)		\$184,437,522		
	Returns	Index ¹	Excess	
1 Year	3.82	3.61	0.21	
3 Year	3.59	3.61	(0.02)	
Inception*	2.66	2.62	0.04	

*Funded 3/31/2012

JP Morgan MBS (Pen.)		\$123,474,049		
	Returns	Index ²	Excess	
1 Year	3.65	3.61	0.03	
Inception*	3.68	3.52	0.16	

*Funded 09/30/2014

PIMCO Unconstrained (Pen.)		\$63,626,363		
	Returns	Index ²	Excess	
1 Year	5.93	0.61	5.32	
3 Year	1.90	0.37	1.53	
Inception*	2.53	0.36	2.17	

*Funded 3/12/2012

UBS International Fixed (Pen.)		\$111,580,334		
	Returns	Index ²	Excess	
1 Year	12.22	11.67	0.55	
3 Year	0.66	0.75	(0.09)	
Inception*	6.30	5.99	0.30	

*Funded 07/01/1989

- ¹ Barclays Mortgage Index
- ² Liber 3-Month
- ³ Barclays Global Aggregate ex-US

Note: Return data is gross of fee due to data availability

TO: State Investment Board ("SIB") Clients
 FROM: Retirement and Investment Office – Dave Hunter, Darren Schulz and Eric Chin
 DATE: October 28, 2016
 SUBJECT: [SIB Client Watch List Update](#)

RIO routinely reviews manager performance, organizational structure, investing philosophy/style and fund flows of specific strategies and the firms overall operations. These reviews serve as the basis for Staff recommendations to add, maintain or remove managers from our Watch List.

There are three firms currently on our Watch List including PIMCO (2 strategies), JPMorgan and UBS, all within the Pension Trust's fixed income allocation.

PIMCO	MBS	\$184 million	JPMorgan	MBS	\$123 million
PIMCO	Unconstrained	64 million	UBS	International	116 million

PIMCO has been on Watch since October of 2014 largely due to significant organizational changes including the departure of PIMCO's founder, Bill Gross, in late-September of 2014, and the prior departure of Mohamed El-Arian, PIMCO's former CEO. Since then, there have been additional turnover including the latest announcement that Douglas Hodge, who served as PIMCO's CEO since Mohamed El-Arian left in early-2014, will now step aside so as to allow Emmanuel Roman to become its next CEO on November 1, 2016. Mr. Roman was previously CEO of Man Group Plc, the world's largest publicly traded hedge fund manager, since February 2013.

Despite of the above senior management turnover, PIMCO has generally performed in a satisfactory manner with strong results in less liquid strategies (e.g. DiSCO and Bravo) and moderately weak results in the public sector mandates. As a result, RIO has advised the SIB to keep PIMCO's public mandates on Watch the last two years. During this time, the MBS strategy (\$184 million) has generally provided benchmark returns (after fees), while the Unconstrained Bond mandate has underperformed expectations (generated net returns of approximately 1.9% per annum) although recent performance has been encouraging with a 5.6% net return for the 1-year ended 9/30/2016. Given this mixed performance, Staff recommends that both PIMCO strategies remain on Watch until RIO completes its fixed income manager review in the Pension Trust in the next few months.

The JPMorgan Mortgage Backed Securities (MBS) mandate was placed on Watch at the April 22, 2016, board meeting following the departure Henry Song as Co-Portfolio Manager. This event followed the earlier departure of Doug Swanson as Portfolio Manager in September 2015. Although JPMorgan generally maintains strong bench strength across the board, the departure of two highly tenured portfolio managers within eight months is highly unusual. Since April, RIO has met with the new JPMorgan MBS portfolio management team in addition to Henry Song at his successor firm. Staff continues to believe there is no immediate risk to the overall management of this strategy given JPM's bench strength and relatively conservative risk profile of this specific mandate. As such, RIO recommends that JPMorgan MBS strategy remain on Watch until Staff completes its fixed income manager review in the next few months. The JPMorgan MBS strategy has generally provided benchmark performance since inception although recent returns trailed the MBS index by approximately 10 bps over the last year.

UBS International Debt strategy was placed on Watch in early-2015 when trailing 1-, 3-, and 5-year returns were over 30 bps below benchmark. During the last year, UBS performance has significantly improved such that inception to date results are now flat to the index (after fees) and 1-year returns (of 12%) beat the benchmark by 25 bps (after fees). RIO continues to recommend that UBS remain on Watch until Staff completes its fixed income manager review in the next few months.

Appendix of Supporting Materials

For TFFR Investment Update as of Sep. 30, 2016

Callan's Quarterly Reports of investment performance are available on the following web address:

<http://www.nd.gov/rio/SIB/Publications/default.htm>

Board members can review monthly manager level performance using the following web address:

http://www.nd.gov/rio/RIO_ref/report_type.asp?reportType=performance

Global Equity, Fixed Income and Real Asset Valuations

Asset Class Allocation

	September 30, 2016			Inv. Return	June 30, 2016	
	Market Value	Weight	Net New Inv.		Market Value	Weight
GLOBAL EQUITY	\$1,254,455,689	58.50%	\$(19,159,158)	\$65,227,282	\$1,208,387,564	58.04%
Domestic Equity	\$488,445,613	22.78%	\$(10,255,780)	\$20,579,841	\$478,121,552	22.96%
Large Cap	379,545,786	17.70%	(5,073,845)	13,931,854	370,687,777	17.80%
Small Cap	108,899,827	5.08%	(5,181,935)	6,647,987	107,433,775	5.16%
International Equity	\$341,192,040	15.91%	\$(5,809,900)	\$25,824,983	\$321,176,957	15.43%
Developed Intl Equity	261,190,917	12.18%	(6,034,900)	19,306,734	247,919,083	11.91%
Emerging Markets	80,001,123	3.73%	225,000	6,518,249	73,257,874	3.52%
World Equity	\$352,971,975	16.46%	\$(235,651)	\$17,492,952	\$335,714,674	16.12%
Private Equity	\$71,846,061	3.35%	\$(2,857,826)	\$1,329,506	\$73,374,381	3.52%
GLOBAL FIXED INCOME	\$492,202,113	22.95%	\$(1,201,914)	\$10,254,789	\$483,149,237	23.21%
Fixed Income Comp	\$369,208,792	17.22%	\$(970,625)	\$8,472,830	\$361,706,587	17.37%
Investment Grade Fixed	271,907,587	12.68%	(649,877)	4,176,599	268,380,865	12.89%
Below Inv. Grade Fixed Income	97,301,205	4.54%	(320,748)	4,296,231	93,325,722	4.48%
International Fixed Income	\$122,993,321	5.74%	\$(231,289)	\$1,781,960	\$121,442,651	5.83%
GLOBAL REAL ASSETS	\$388,840,698	18.13%	\$13,884,186	\$2,925,933	\$372,030,580	17.87%
Real Estate	222,028,935	10.35%	14,774,397	3,070,228	204,184,309	9.81%
Timber	69,910,293	3.26%	(348,202)	()	70,258,495	3.37%
Infrastructure	96,901,471	4.52%	(542,010)	(144,295)	97,587,776	4.69%
Cash & Equivalents	\$9,025,033	0.42%	\$(9,515,489)	\$18,229	\$18,522,293	0.89%
Securities Lending Income	\$0	0.00%	\$(57,084)	\$57,084	-	-
Total Fund	\$2,144,523,533	100.0%	\$(16,049,458)	\$78,483,318	\$2,082,089,674	100.0%

Actual versus Benchmark Return Comparisons – Equity

Returns for Periods Ended September 30, 2016

Global Equities generally exceeded their respective policy benchmarks for the 3- and 5-year periods ended Sep. 30, 2016, although U.S. Small Cap Equity, World Equity and Private Equity returns were disappointing last year.

	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Global Equity				
Gross	5.39%	11.10%	6.09%	-
Net	5.30%	10.85%	5.76%	-
Wtd Avg Global Equity Benchmark	5.14%	10.32%	5.15%	-
Domestic Equity				
Gross	4.30%	14.61%	10.61%	17.23%
Net	4.17%	14.40%	10.41%	17.00%
Wtd Avg Domestic Equity Benchmark	5.14%	15.10%	9.92%	16.33%
Large Cap Equity				
Gross	3.76%	15.00%	12.06%	17.52%
Net	3.69%	14.83%	11.87%	17.30%
Benchmark(1)	4.03%	14.93%	10.78%	16.40%
Small Cap Equity				
Gross	6.19%	12.89%	5.61%	15.92%
Net	5.85%	12.54%	5.36%	15.63%
Russell 2000 Index	9.05%	15.47%	6.71%	15.82%
International Equity				
Gross	8.04%	12.31%	2.56%	8.54%
Net	8.00%	12.10%	2.35%	8.25%
Wtd Avg Intl Equity Benchmark	6.82%	8.40%	0.33%	6.60%
Developed Intl Equity				
Gross	7.79%	10.36%	2.45%	9.24%
Net	7.74%	10.10%	2.20%	8.95%
Benchmark(2)	6.29%	6.38%	0.43%	7.36%
Emerging Markets				
Gross	8.89%	18.79%	2.11%	4.96%
Net	8.89%	18.79%	2.02%	4.67%
Benchmark(3)	9.03%	16.78%	(0.56%)	3.03%
World Equity				
Gross	5.21%	9.45%	5.38%	-
Net	5.08%	9.04%	4.69%	-
MSCI World Index	4.87%	11.36%	5.85%	11.63%
Private Equity				
Net	1.71%	(5.78%)	(2.11%)	0.69%

Returns for Periods Ended September 30, 2016

**Actual vs
Benchmark
Returns –
Fixed
Income and
Real Assets**

**Net returns for
Fixed Income
and Real Assets
generally
exceeded
stated policy
benchmarks for
the 3- and 5-
year periods
ended Sep. 30,
2016, excluding
Timber.**

	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Global Fixed Income				
Gross	2.12%	8.12%	4.74%	-
Net	2.06%	7.86%	4.48%	-
Wtd Avg Global Fixed Inc. Benchmark	1.48%	8.26%	3.57%	-
Domestic Fixed Income				
Gross	2.34%	7.08%	5.51%	6.25%
Net	2.29%	6.85%	5.28%	6.17%
Wtd Avg Domestic FI Benchmark	1.64%	7.17%	4.35%	4.59%
Inv. Grade Fixed Income				
Gross	1.56%	5.70%	5.13%	5.30%
Net	1.52%	5.56%	5.00%	5.17%
BB Barclays Aggregate Index	0.46%	5.19%	4.03%	3.08%
Below Inv. Grade Fixed Income				
Gross	4.61%	10.53%	6.42%	9.17%
Net	4.50%	10.08%	5.97%	8.71%
BB Barclays HY Corp 2% Issue	5.55%	12.74%	5.30%	8.34%
International Fixed Income				
Gross	1.47%	11.91%	1.85%	2.45%
Net	1.38%	11.52%	1.49%	2.08%
Wtd Avg Intl Fixed Income Benchmark	1.03%	11.67%	0.75%	0.70%
Global Real Assets				
Gross	0.78%	7.38%	9.49%	-
Net	0.71%	6.92%	9.04%	-
Wtd Avg Global Real Assets Benchmark	1.12%	5.75%	7.68%	-
Real Estate				
Gross	1.49%	10.81%	14.42%	13.54%
Net	1.36%	10.27%	13.85%	13.00%
NCREIF Total Index	1.77%	9.22%	11.31%	11.18%
Timber				
Net	0.00%	4.32%	3.63%	1.35%
NCREIF Timberland Index	0.67%	3.28%	7.59%	6.91%
Infrastructure				
Gross	(0.15%)	2.14%	4.36%	5.59%
Net	(0.15%)	1.51%	3.77%	4.89%
CPI-W	0.09%	1.22%	0.71%	1.03%
Cash & Equivalents - Net	0.12%	0.39%	0.17%	0.13%
3-month Treasury Bill	0.10%	0.27%	0.11%	0.10%
Total Fund				
Gross	3.77%	9.72%	6.46%	9.98%
Net	3.69%	9.43%	6.14%	9.64%
Target*	3.52%	9.11%	5.45%	8.87%

MEMORANDUM

TO: TFFR Board
FROM: Shelly Schumacher
DATE: January 13, 2017
SUBJ: 2016 GASB 67 & 68 Report

Attached is the July 1, 2016 GASB 67 and 68 Report prepared by TFFR's actuary, Segal Company, and audited by the plan's auditor, CliftonLarsonAllen.

An overview of the information contained in the report will be presented.

After review and acceptance by the Board, the report will be posted to the TFFR website for use in employer financial statements (June 30, 2017).

Board Action Requested: Accept the July 1, 2016 GASB 67 & 68 Report.

North Dakota Teachers' Fund for Retirement

**Governmental Accounting Standards Board (GASB)
Statement Nos. 67 and 68
Actuarial Valuation as of July 1, 2016**





101 North Wacker Drive, Suite 500, Chicago, IL 60606
T 312.984.8500 www.segalco.com

November 4, 2016

Board of Trustees

North Dakota Teachers' Fund for Retirement

1930 Burnt Boat Drive, P.O. Box 7100

Bismarck, ND 58507-7100

Dear Trustees:

We are pleased to submit the following report intended to be used for satisfying certain reporting requirements by Governmental Accounting Standards Board (GASB) Statement Nos. 67 and 68 as of June 30, 2016.

This report was prepared in accordance with generally accepted actuarial principles and practices. The census and financial information on which our calculations were based was supplied by the staff of the Retirement and Investment Office. That assistance is gratefully acknowledged. The actuarial calculations were completed under the supervision of Matthew Strom, FSA, MAAA, Enrolled Actuary.

The measurements shown in this actuarial valuation may not be applicable for other purposes. 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); and changes in plan provisions or applicable law.

We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and expectations for the Fund.

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

Sincerely,

Segal Consulting, a Member of The Segal Group, Inc.

By:

A handwritten signature in black ink that reads "Kim Nicholl".

Kim Nicholl, FSA, EA, MAAA

Senior Vice President and Actuary

A handwritten signature in black ink that reads "Matthew A. Strom".

Matthew A. Strom, FSA, EA, MAAA

Vice President and Actuary

SECTION 1

VALUATION SUMMARY

Purpose	i
Significant Issues in Valuation Year.....	i
Summary of Key Valuation Results.....	iii

SECTION 2

GASB 67 AND 68 INFORMATION

EXHIBIT 1 Membership Data.....	1
EXHIBIT 2 Net Pension Liability	2
EXHIBIT 3 Schedule of Changes in Net Pension Liability	5
EXHIBIT 4 Schedule of Employer Contributions	6

SECTION 3

ADDITIONAL INFORMATION FOR GASB 68

EXHIBIT A Reconciliation of Collective Net Pension Liability	8
EXHIBIT B Collective Deferred Outflows of Resources and Deferred Inflows of Resources.....	9
EXHIBIT C Collective Pension Expense	11
EXHIBIT D Schedule of Employer Allocations	13
EXHIBIT E Schedule of Pension Amounts by Employer.....	17

SECTION 1: Valuation Summary for the North Dakota Teachers' Fund for Retirement

Purpose

This report has been prepared by Segal Consulting to present certain disclosure information required by Governmental Accounting Standards Board (GASB) Statement Nos. 67 and 68 as of June 30, 2016. This valuation is based on:

- The benefit provisions of the Fund, as administered by the Board;
- The characteristics of covered active members, terminated vested members, and retired members and beneficiaries as of July 1, 2016;
- The assets of the Fund as of June 30, 2016;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

Significant Issues in Valuation Year

The following key findings were the result of this actuarial valuation:

- Governmental Accounting Standards Board (GASB) Statements 67 and 68 contain rules for the reporting of pension liabilities for accounting purposes. Statement 67 was effective with the fiscal year ending June 30, 2014, for Plan reporting. Statement 68 was effective with the fiscal year ending June 30, 2015, for employer reporting. The information contained in this valuation is intended to be used (along with other information) in order to comply with both Statements 67 and 68.
- It is important to note that the GASB rules only redefine pension liability and expense for financial reporting purposes, and do not apply to contribution amounts for actual pension funding purposes. Plans can still develop and adopt funding policies under current practices.
- When measuring pension liability for GASB purposes, the same actuarial cost method (Entry Age method) is used to determine the funded status of the Plan, the actuarially determined contribution rate, and the effective amortization period. In addition, the GASB blended discount rate calculation results in the same discount rate (expected return on assets) as used for funding purposes. This means that the total pension liability (TPL) measure for financial reporting shown in this report is determined on the same basis as the actuarial accrued liability (AAL) measure for funding.

SECTION 1: Valuation Summary for the North Dakota Teachers' Fund for Retirement

- The net pension liability (NPL) is equal to the difference between the TPL and the plan fiduciary net position. The plan fiduciary net position is equal to the market value of assets and therefore, the NPL measure is very similar to an unfunded actuarial accrued liability (UAAL) on a market value basis. The NPL increased from \$1.31 billion as of June 30, 2015, to \$1.47 billion as of June 30, 2016. Changes in these values during the prior fiscal year ending June 30, 2016, can be found in Exhibit 3.
- Changes were made effective with the July 1, 2016, actuarial valuation as a result of the independent review that Cavanaugh Macdonald Consulting performed in 2016. The changes had a minimal impact on the valuation and are as follows:
 - The calculation of the death benefit liability for deferred vested members was modified.
 - Dates of hire were adjusted for members who had a break in service.

Additional information is included in the July 1, 2016 actuarial valuation report.

- The discount rate used to determine the TPL and NPL was 7.75% as of both June 30, 2016 and 2015. The detailed calculations used in this derivation were provided under separate cover. Various information that is required to be disclosed can be found throughout Section 2 and Section 3.

SECTION 1: Valuation Summary for the North Dakota Teachers' Fund for Retirement

Summary of Key Valuation Results

	2016	2015
Disclosure elements for fiscal year ending June 30:		
Service cost	\$68,239,440	\$60,617,900
Total pension liability	3,589,393,851	3,449,775,982
Plan fiduciary net position	2,124,335,288	2,141,920,800
Net pension liability	1,465,058,563	1,307,855,182
Plan fiduciary net position as a percentage of total pension liability	59.2%	62.1%
Schedule of contributions for fiscal year ending June 30:		
Actuarially determined contributions	\$84,724,122	\$71,167,632
Actual contributions	82,839,932	78,422,098
Contribution deficiency (excess)	1,884,190	(7,254,466)
Demographic data as of July 1:		
Number of retirees and beneficiaries	8,249	8,025
Number of inactive vested members	1,601	1,607
Number of inactive non-vested members	779	660
Number of active members	10,813	10,514
Key assumptions:		
Single equivalent discount rate	7.75%	7.75%
Municipal bond index	2.85%	3.73%
Inflation rate	2.75%	2.75%
Projected salary increases	4.25% to 14.50%, varying by service	4.25% to 14.50%, varying by service

SECTION 2: GASB 67 and 68 Information for North Dakota Teachers' Fund for Retirement

EXHIBIT 1

Membership Data

	July 1, 2016	July 1, 2015
Retired members and beneficiaries	8,249	8,025
Vested inactive members	1,601	1,607
Non-vested inactive members	779	660
Active members:		
Vested	7,433	7,369
Non-vested	<u>3,380</u>	<u>3,145</u>
Total active members	10,813	10,514
Total membership	21,442	20,806

Active Membership By Plan Eligibility

	July 1, 2016	July 1, 2015
Tier 1 Grandfathered	2,559	2,869
Tier 1 Non-grandfathered	3,272	3,312
Tier 2	<u>4,982</u>	<u>4,333</u>
Total active membership	10,813	10,514

SECTION 2: GASB 67 and 68 Information for North Dakota Teachers' Fund for Retirement

EXHIBIT 2

Net Pension Liability

	June 30, 2016	June 30, 2015
The components of the net pension liability are as follows:		
Total pension liability	\$3,589,393,851	\$3,449,775,982
Plan fiduciary net position	<u>(2,124,335,288)</u>	<u>(2,141,920,800)</u>
Net pension liability	\$1,465,058,563	\$1,307,855,182
Plan fiduciary net position as a percentage of the total pension liability	59.2%	62.1%

Plan provisions. The plan provisions used in the measurement of the net pension liability are the same as those used in the actuarial valuation as of July 1, 2016.

Actuarial assumptions. The total pension liability was determined by an actuarial valuation as of July 1, 2016, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.75%
Salary increases	4.25% to 14.50%, varying by service, including inflation and productivity
Investment rate of return	7.75%, net of investment expenses
Cost-of-living adjustments	None

For active and inactive members, mortality rates were based on the RP-2014 Employee Mortality Table, projected generationally using Scale MP-2014. For healthy retirees, mortality rates were based on the RP-2014 Healthy Annuitant Mortality Table set back one year, multiplied by 50% for ages under 75 and grading up to 100% by age 80, projected generationally using Scale MP-2014. For disabled retirees, mortality rates were based on the RP-2014 Disabled Mortality Table set forward four years.

The actuarial assumptions used were based on the results of an experience study dated April 30, 2015. They are the same as the assumptions used in the July 1, 2016, funding actuarial valuation for TFFR.

SECTION 2: GASB 67 and 68 Information for North Dakota Teachers' Fund for Retirement

The long-term expected investment rate of return assumption was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the Fund's target asset allocation are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Global Equities	58%	7.30%
Global Fixed Income	23%	0.88%
Global Real Assets	18%	5.32%
Cash Equivalents	<u>1%</u>	0.00%
Total	100%	

Discount rate: The long-term expected rate of return on pension plan investments is 7.75%. The high quality tax-exempt general obligation municipal bond rate (20-Bond GO Index) as of the closest date prior to the valuation date of June 30, 2016, is 2.85%, as published by the Board of Governors of the Federal Reserve System.

The discount rate used to measure the total pension liability was 7.75% as of June 30, 2016. The projection of cash flows used to determine the discount rate assumes that member and employer contributions will be made at rates equal to those based on the July 1, 2016, Actuarial Valuation Report. For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs of future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments for current plan members as of June 30, 2016. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability as of June 30, 2016.

SECTION 2: GASB 67 and 68 Information for North Dakota Teachers' Fund for Retirement

Sensitivity of the net pension liability to changes in the discount rate. The following presents the net pension liability as of June 30, 2016, and June 30, 2015, calculated using the discount rate of 7.75%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.75%) or 1-percentage-point higher (8.75%) than the current rate:

	1% Decrease	Current Discount Rate	1% Increase
Net pension liability as of June 30, 2015	\$1,728,392,470	\$1,307,855,182	\$957,135,967
Net pension liability as of June 30, 2016	\$1,900,291,033	\$1,465,058,563	\$1,102,551,032

SECTION 2: GASB 67 and 68 Information for North Dakota Teachers' Fund for Retirement

EXHIBIT 3

Schedule of Changes in Net Pension Liability

	2016	2015
Total pension liability		
Service cost	\$68,239,440	\$60,617,900
Interest	265,439,909	249,063,837
Change of benefit terms	0	0
Differences between expected and actual experience	(8,092,800)	2,209,258
Changes of assumptions	0	171,324,647*
Benefit payments, including refunds of employee contributions	<u>(185,968,680)</u>	<u>(172,239,433)</u>
Net change in total pension liability	\$139,617,869	\$310,976,209
Total pension liability – beginning	<u>3,449,775,982</u>	<u>3,138,799,773</u>
Total pension liability – ending (a)	<u>\$3,589,393,851</u>	<u>\$3,449,775,982</u>
Plan fiduciary net position		
Contributions – employer	\$82,839,932	\$78,422,098
Contributions – member	76,342,685	72,268,451
Contributions – purchased service credit	2,768,245	1,600,739
Contributions – other	44,966	172,474
Net investment income	8,238,996	73,204,806
Benefit payments, including refunds of employee contributions	(185,968,680)	(172,239,433)
Administrative expense	<u>(1,851,656)</u>	<u>(1,923,392)</u>
Net change in plan fiduciary net position	(\$17,585,512)	\$51,505,743
Plan fiduciary net position – beginning	<u>2,141,920,800</u>	<u>2,090,415,057**</u>
Plan fiduciary net position – ending (b)	\$2,124,335,288	\$2,141,920,800
Net pension liability – ending (a) – (b)	<u>\$1,465,058,563</u>	<u>\$1,307,855,182</u>
Plan fiduciary net position as a percentage of the total pension liability	59.2%	62.1%
Actual covered employee payroll	\$649,724,868	\$615,104,860
Plan net pension liability as percentage of covered employee payroll	225.5%	212.6%

* Increase in net pension liability due to changes in assumptions resulted primarily from a decrease in the investment return assumption and an updated mortality improvement scale.

** Restated due to GASB implementation

SECTION 2: GASB 67 and 68 Information for North Dakota Teachers' Fund for Retirement

EXHIBIT 4

Schedule of Employer Contributions

Year Ended June 30	Actuarially Determined Contributions	Contributions in Relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Actual Covered Employee Payroll	Contributions as a Percentage of Covered Employee Payroll
2013	\$52,396,153	\$59,300,720	\$(6,904,567)	\$551,655,590	10.75%
2014	59,513,485	62,355,146	(2,841,661)	580,053,235	10.75%
2015	71,167,632	78,422,098	(7,254,466)	615,104,860	12.75%
2016	84,724,122	82,839,932	1,884,190	649,724,868	12.75%

SECTION 2: GASB 67 and 68 Information for North Dakota Teachers' Fund for Retirement

Notes to Exhibit 4

Valuation date	Actuarially determined contribution rates are calculated as of June 30, with appropriate interest to the middle of the fiscal year.
Methods and assumptions used to establish actuarially determined contribution rates:	
Actuarial cost method	Entry Age Actuarial cost method
Amortization method	Level percentage of pay, closed
Remaining amortization period	27 years as of July 1, 2016. The amortization of unfunded actuarial accrued liability (UAAL) within the actuarially determined contribution rate calculation is based on the level percentage of pay required to amortize the UAAL over the 30-year closed period that began July 1, 2013. For this calculation, payroll is assumed to increase 3.25% per year.
Asset valuation method	The market value of assets with a five-year phase-in of actual return in excess of (or less than) expected investment income. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year).
Actuarial assumptions:	
Investment rate of return	7.75%, net of investment expenses
Inflation rate	2.75%
Projected salary increases	4.25% to 14.50%, varying by service, includes inflation and productivity
Mortality*	Post-retirement Non-Disabled: RP-2014 Healthy Annuitant Mortality Table set back one year, multiplied by 50% for ages under 75 and grading up to 100% by age 80, projected generationally using Scale MP-2014. Pre-retirement Non-Disabled: RP-2014 Employee Mortality Table, projected generationally using Scale MP-2014. Disabled: RP-2014 Disabled Mortality table set forward 4 years.
Other assumptions:	Same as those used in the July 1, 2016, and July 1, 2015, actuarial funding valuations.

* The mortality rates were based on historical and current demographic data, as used in the experience study dated April 30, 2015. The underlying tables reasonably reflect the mortality experience of the Fund as of the measurement date.

SECTION 3: Additional Information for GASB 68 for North Dakota Teachers' Fund for Retirement

Changes in the collective net pension liability from the beginning of the year to the end of the year arise from the net difference between changes in the total pension liability and plan fiduciary net position that occurred during the year. Changes in net pension liability will be recognized immediately as pension expense, or reported as deferred outflows of resources related to pensions or deferred inflows of resources related to pensions, depending on the nature of the change.

Differences between actual and expected investment-related experience are recognized over a closed five-year period. Differences between actual and expected non-investment-related experience and changes of assumptions are recognized over the average of the expected remaining service lives of all members who are provided with pensions through the pension plan (active employees and inactive employees). The amounts below that are not included in pension expense for the current year are included in deferred outflows of resources or deferred inflows of resources related to pensions.

EXHIBIT A

Reconciliation of Collective Net Pension Liability

	Increase/(Decrease) For Fiscal Year Ending June 30, 2016		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) – (b)
Balances at beginning of year	\$3,449,775,982	\$2,141,920,800	\$1,307,855,182
Changes for the year			
Service cost	68,239,440		68,239,440
Interest	265,439,909		265,439,909
Differences between expected and actual experience	(8,092,800)		(8,092,800)
Contributions – employer		82,839,932	(82,839,932)
Contributions – member		76,342,685	(76,342,685)
Contributions – purchased service credit		2,768,245	(2,768,245)
Contributions – other		44,966	(44,966)
Net investment income		8,238,996	(8,238,996)
Benefit payments, including refunds of employee contributions	(185,968,680)	(185,968,680)	0
Administrative expense		(1,851,656)	1,851,656
Changes of assumptions	--		--
Change of benefit terms			0
Net changes	<u>139,617,869</u>	<u>(17,585,512)</u>	<u>157,203,381</u>
Balances at end of year	<u>\$3,589,393,851</u>	<u>\$2,124,335,288</u>	<u>\$1,465,058,563</u>

SECTION 3: Additional Information for GASB 68 for North Dakota Teachers' Fund for Retirement

As shown in Exhibit A, during the plan year that ended June 30, 2016, the changes in net pension liability due to differences between expected and actual demographic experience is a decrease of \$8,092,800. The average expected remaining service lives of all members is 7 years, determined as of July 1, 2015. Therefore, of the \$8,092,800 demographic gain, \$1,156,114 is recognized in pension expense in the current year and \$6,936,686 is reflected as a deferred inflow of resources related to pensions.

Based on the assumed investment return of 7.75%, the expected net investment income for the year was \$164,998,162. As shown in Exhibit A, the actual net investment income for the year was \$8,238,996. The difference between actual and expected investment experience is an increase in net pension liability of \$156,759,166, which is recognized over a 5-year period. Of this amount, \$31,351,833 is reflected in the current year and \$125,407,333 is reflected as a deferred outflow of resources related to pensions.

EXHIBIT B

Collective Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

	Year Established	Original Balance	Original Amortization Period	Amortization Amount	Outstanding Balance at June 30, 2016
Outflows					
Demographic	2014	\$9,347,346	7 years	\$1,335,335	\$5,341,341
Demographic	2015	2,209,258	7 years	315,608	1,578,042
Assumptions	2015	171,324,647	7 years	24,474,950	122,374,747
Investment	2015	93,160,436	5 years	18,632,087	55,896,262
Investment	2016	156,759,166	5 years	31,351,833	125,407,333
Total outflows				\$76,109,813	\$310,597,725
Inflows					
Investment	2014	\$148,793,866	5 years	\$29,758,773	\$59,517,547
Demographic	2016	8,092,800	7 years	1,156,114	6,936,686
Total inflows				\$30,914,887	\$66,454,233

SECTION 3: Additional Information for GASB 68 for North Dakota Teachers' Fund for Retirement

EXHIBIT B (continued)

Collective Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

At June 30, 2016, deferred outflows of resources and deferred inflows of resources related to pensions are:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$6,919,383	\$6,936,686
Changes of assumptions	122,374,747	0
Net difference between projected and actual earnings on pension plan investments	<u>121,786,048</u>	<u>0</u>
Total	<u>\$251,080,178</u>	<u>\$6,936,686</u>

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Year Ended June 30:

2017	\$45,194,926
2018	45,194,925
2019	74,953,700
2020	56,321,614
2021	23,634,443
Thereafter	<u>(1,156,116)</u>

SECTION 3: Additional Information for GASB 68 for North Dakota Teachers' Fund for Retirement

Exhibit C below shows the individual components of collective pension expense, which totaled \$136,571,873 for the fiscal year that ended June 30, 2016.

Annual pension expense for the year can also be viewed as the change in net pension liability, plus employer contributions for the year, less the change in outstanding balances of deferred outflows and deferred inflows of resources from the end of the prior fiscal year to end of the current fiscal year. From Exhibit A, the change in net pension liability during the year was \$157,203,381 and employer contributions were \$82,839,932. The net value of deferred outflows and deferred inflows of resources as of the end of the current fiscal year is \$244,143,492 compared to the net value as of the end of the prior fiscal of \$140,672,052 for a change of \$103,471,440. Therefore, the pension expense for the fiscal year that ended June 30, 2016, is \$157,203,381 + \$82,839,932 – \$103,471,440, or \$136,571,873.

EXHIBIT C

Collective Pension Expense

	Fiscal Year Ending June 30, 2016	Fiscal Year Ending June 30, 2015
Components of pension expense		
Service cost	\$68,239,440	\$60,617,900
Interest on the total pension liability	265,439,909	249,063,837
Projected earnings on plan investments	(164,998,162)	(166,365,242)
Contributions – member	(76,342,685)	(72,268,451)
Contributions – purchased service credit	(2,768,245)	(1,600,739)
Contributions – other	(44,966)	(172,474)
Administrative expense	1,851,656	1,923,392
Current year recognition of:		
Changes of assumptions	24,474,950	24,474,950
Difference between expected and actual experience	494,829	1,650,943
Difference between projected and actual earnings on pension plan investments	20,225,147	(11,126,686)
Change of benefit terms	0	0
Restatement of Plan Fiduciary Net Position	<u>N/A</u>	<u>561,999</u>
Total pension expense	<u>\$136,571,873</u>	<u>\$86,759,429</u>

SECTION 3: Additional Information for GASB 68 for North Dakota Teachers' Fund for Retirement

TFFR is classified as a cost-sharing multiple-employer defined benefit pension plan for GASB accounting purposes. As specified in GASB 68, employers that participate in TFFR are required to recognize their proportionate share of the collective pension amounts for all benefits provided through the Fund. Pension amounts to be recognized by employers include the net pension liability, deferred outflows of resources related to pensions, deferred inflows of resources related to pensions, and pension expense. In addition, the effects of (1) a change in the employer's proportion of the collective net pension liability and (2) differences during the measurement period between the employer's contributions and its proportionate share of the total of contributions from employers included in the collective net pension liability are required to be determined and recognized.

The basis of an employer's allocation of the collective pension amounts should be consistent with the manner in which contributions to the plan are determined. Since contributions to TFFR are collected as a percentage of payroll, covered employee payroll for the fiscal year ending June 30, 2016, is used as the proportionate share allocation basis. Retirement and Investment Office staff supplied covered employee payroll for each employer.

The net effect of the change on an employer's proportionate share of the collective net pension liability and collective deferred outflows of resources and deferred inflows of resources is recognized over the average of the expected remaining service lives of all members who are provided with pensions through TFFR.

In addition, the difference between the actual employer contributions and the proportionate share of the employer contributions during the measurement period ended June 30, 2016, is recognized over the same period. However, since TFFR contributions are collected on the same basis as the proportionate share allocation, there is no difference between the actual employer contributions and the proportionate share of the employer contributions. If employers no longer report to TFFR, they will continue to remain on the schedule until their deferral balances are depleted.

Exhibits D and E that follow show the proportionate share information for employers of TFFR for the fiscal year ending June 30, 2016.

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EXHIBIT D
Schedule of Employer Allocations as of June 30, 2016

Employer Name	Covered Employee Payroll	Employer's Proportionate Share Allocation
Alexander School	\$ 1,174,850	0.18082264%
Anamoose School	721,897	0.11110816%
Apple Creek Elem School	345,214	0.05313226%
Ashley School	950,933	0.14635934%
Bakker Elem School	34,500	0.00530994%
Barnes County North	1,587,049	0.24426476%
Beach School	2,138,290	0.32910704%
Belcourt School	8,310,828	1.27913029%
Belfield Public School	1,480,772	0.22790756%
Beulah School	3,422,543	0.52676803%
Billings Co. School Dist.	758,055	0.11667315%
Bismarck Public Schools	69,221,921	10.65403601%
Bismarck State College	-	0.00000000%
Blessed John Paul II Catholic Sch Network	-	0.00000000%
Bottineau School	3,759,574	0.57864088%
Bowbells School	553,570	0.08520072%
Bowman School	2,758,160	0.42451206%
Burke Central School	954,834	0.14695981%
Burleigh County Spec. Ed.	85,938	0.01322689%
Carrington School	2,963,661	0.45614091%
Cavalier School	2,232,972	0.34367967%
Center Stanton School	1,453,696	0.22374025%
Central Cass School	3,458,213	0.53225813%
Central Elementary School	62,919	0.00968396%
Central Valley School	1,231,138	0.18948599%
Dakota Prairie School	1,866,318	0.28724742%
Devils Lake School	10,315,055	1.58760361%
Dickinson School	18,433,992	2.83719976%
Divide School	2,329,371	0.35851646%
Drake School	504,034	0.07757658%
Drayton School	1,238,308	0.19058956%
Dunseith School	2,919,917	0.44940822%
E Central Ctr Exc Childn	772,971	0.11896896%
Earl Elem. School	31,500	0.00484820%
Edgeley School	1,281,117	0.19717837%
Edmore School	725,488	0.11166082%
Eight Mile School	1,544,356	0.23769386%
Elgin-New Leipzig School	1,130,691	0.17402614%
Ellendale School	1,731,625	0.26651659%
Emerado Elementary School	568,168	0.08744740%
Enderlin Area School District	2,017,580	0.31052838%
Fairmount School	971,080	0.14946017%
Fargo Public Schools	69,044,120	10.62667033%
Fessenden-Bowdon School	1,036,712	0.15956168%
Finley-Sharon School	986,519	0.15183640%
Flasher School	1,073,725	0.16525835%
Fordville Lankin School	584,838	0.09001321%
Fort Ransom Elem School	161,022	0.02478304%
Fort Totten School	1,530,700	0.23559199%
Fort Yates School	1,155,786	0.17788847%
Gackle-Streeter Pub Sch	777,812	0.11971402%
Garrison School	2,299,673	0.35394570%
Glen Ullin School	1,168,141	0.17979002%
Glenburn School	1,868,386	0.28756569%
Goodrich School	289,211	0.04451287%
Grafton School	4,477,799	0.68918388%
Grand Forks School	45,889,133	7.06285618%
Great North West Cooperative	178,220	0.02743007%
Grenora School	1,138,249	0.17518945%
Griggs County Central Sch	1,586,343	0.24415605%
Gst Educational Services	1,595,284	0.24553228%
Halliday School	446,155	0.06866837%
Hankinson School	1,442,217	0.22197355%
Harvey School	2,338,460	0.35991541%
Hatton Eielson Psd	1,131,379	0.17413199%
Hazelton - Moffit School	830,095	0.12776106%
Hazen School	2,881,712	0.44352809%
Hebron School	1,153,324	0.17750965%

EXHIBIT D
Schedule of Employer Allocations as of June 30, 2016

Employer Name	Covered Employee Payroll	Employer's Proportionate Share Allocation
Hettinger School	1,432,947	0.22054668%
Hillsboro School	2,456,998	0.37815974%
Hope School	671,562	0.10336098%
Horse Creek Elem. School	26,250	0.00404017%
James River Multidistrict Spec Ed Unit	1,336,061	0.20563488%
Jamestown School	13,078,614	2.01294651%
Kenmare School	1,730,269	0.26630798%
Kensal School	449,639	0.06920446%
Kidder County School District	2,169,113	0.33385103%
Killdeer School	2,636,155	0.40573407%
Kindred School	3,117,666	0.47984406%
Kulm School	1,066,482	0.16414361%
Lake Region Spec Ed	1,676,065	0.25796530%
Lakota School	1,151,669	0.17725483%
Lamoure School	1,557,013	0.23964192%
Langdon Area School	1,756,152	0.27029165%
Larimore School	2,107,946	0.32443670%
Leeds School	1,065,298	0.16396137%
Lewis And Clark School	2,631,930	0.40508382%
Lidgerwood School	1,168,186	0.17979704%
Linton School	1,651,466	0.25417932%
Lisbon School	3,480,999	0.53576506%
Litchville-Marion School	854,113	0.13145766%
Little Heart Elem. School	101,500	0.01562197%
Logan County	4,079	0.00062785%
Lone Tree Elem. School	256,697	0.03950858%
Lonetree Spec Ed Unit	158,056	0.02432653%
Maddock School	983,360	0.15135015%
Mandan Public Schools	19,302,655	2.97089678%
Mandaree School	1,666,376	0.25647410%
Manning Elem School	84,820	0.01305475%
Marvel Elem. School	803,290	0.12363539%
Maple Valley School	1,585,477	0.24402277%
Mapleton Elem. School	674,068	0.10374674%
Marmarth Elem. School	179,428	0.02761603%
Max School	1,184,279	0.18227395%
May-Port C-G School	2,747,734	0.42290734%
Mcclusky School	742,177	0.11422947%
Mckenzie County	40,223	0.00619078%
Mckenzie County School	6,556,916	1.00918344%
Medina School	1,035,829	0.15942583%
Menoken Elem School	156,600	0.02410251%
Midkota	975,732	0.15017616%
Midway School	1,467,239	0.22582465%
Milnor School	1,374,805	0.21159804%
Minnewaukan School	1,709,119	0.26305272%
Minot School	43,566,502	6.70537700%
Minto School	1,160,831	0.17866504%
Mohall Lansford Sherwood	2,162,738	0.33286989%
Montpelier School	762,833	0.11740855%
Morton County	30,550	0.00470195%
Mott-Regent School	1,543,257	0.23752476%
Mt Pleasant School	1,648,775	0.25376515%
Munich School	936,292	0.14410593%
N Central Area Career And Tech Center	145,350	0.02237102%
Napoleon School	1,484,611	0.22849835%
Naughton Rural School	74,133	0.01140988%
Nd Center For Distance Education	1,319,021	0.20301221%
Nd Dept Of Public Instruction	185,860	0.02860595%
Nd School For Blind	713,194	0.10976865%
Nd School For Deaf	882,660	0.13585131%
Nd United	312,194	0.04805011%
Nd Youth Correctional Cnt	1,228,635	0.18910081%
Nedrose School	2,454,896	0.37783627%
Nelson County	12,233	0.00188281%
Nesson School	1,628,018	0.25057042%
New England School	1,373,415	0.21138408%
New Public School	2,032,789	0.31286915%

EXHIBIT D
Schedule of Employer Allocations as of June 30, 2016

Employer Name	Covered Employee Payroll	Employer's Proportionate Share Allocation
New Rockford Sheyenne School	1,706,324	0.26262259%
New Salem-Almont	1,698,527	0.26142243%
New Town School	4,303,882	0.66241609%
Newburg United District	657,869	0.10125347%
North Border School	2,889,141	0.44467142%
North Sargent School	1,514,698	0.23312921%
North Star	1,678,868	0.25839675%
North Valley Area Career	513,027	0.07896064%
Northern Cass School Dist	2,784,812	0.42861399%
Northern Plains Spec Ed	265,629	0.04088332%
Northwood School	1,534,870	0.23623388%
Oakes School	2,016,337	0.31033702%
Oberon Elem School	279,029	0.04294572%
Oliver - Mercer Spec Ed	997,173	0.15347626%
Page School	678,436	0.10441896%
Park River Area School District	2,036,594	0.31345477%
Parshall School	1,694,763	0.26084321%
Peace Garden Spec Ed	534,749	0.08230387%
Pembina Spec Ed Coop	106,000	0.01631460%
Pingree - Buchanan School	824,499	0.12689965%
Pleasant Valley Elem	-	0.00000000%
Powers Lake School	1,128,303	0.17365859%
Richardton-Taylor	1,715,144	0.26397999%
Richland School	1,448,543	0.22294717%
Robinson School	-	0.00000000%
Rolette County	-	0.00000000%
Rolette School	1,204,811	0.18543398%
Roosevelt School	425,487	0.06548723%
Roughrider Area Career And Tech Center	95,425	0.01468699%
Roughrider Service Program	302,882	0.04661696%
Rugby School	3,216,322	0.49502824%
Rural Cass Spec Ed	1,083,147	0.16670854%
Sargent Central School	1,432,224	0.22043540%
Sawyer School	876,443	0.13489443%
Scranton School	1,084,034	0.16684501%
Se Region Career And Tech	1,428,830	0.21991312%
Selfridge School	874,264	0.13455905%
Sheyenne Valley Area Voc	744,005	0.11451072%
Sheyenne Valley Spec Ed	1,491,949	0.22962775%
Slope County	24,651	0.00379406%
Solen - Cannonball School	1,543,013	0.23748720%
Souris Valley Spec Ed	1,492,745	0.22975038%
South Cent. Prairie Sp Ed	100,291	0.01543586%
South Heart School	1,540,194	0.23705334%
South Prairie Elem School	1,999,849	0.30779943%
South Valley Spec Ed	434,031	0.06680222%
Southwest Special Education Unit	63,336	0.00974813%
St. John'S School	2,492,018	0.38354979%
St. Thomas School	645,774	0.09939188%
Stanley School	3,242,061	0.49898983%
Starkweather School	572,884	0.08817332%
Sterling School	249,520	0.03840395%
Strasburg School District	810,454	0.12473803%
Surrey School	2,377,864	0.36598010%
Sweet Briar Elem School	83,760	0.01289161%
Tgu School District	2,703,863	0.41615506%
Thompson School	2,085,482	0.32097929%
Tioga School	3,021,747	0.46508097%
Turtle Lake-Mercer School	1,149,145	0.17686637%
Twin Buttes Elem. School	401,385	0.06177770%
Underwood School	1,532,169	0.23581820%
United School	2,928,781	0.45077245%
Upper Valley Spec Ed	2,414,953	0.37168858%
Valley - Edinburg School	1,703,831	0.26223887%
Valley City School	6,035,942	0.92899971%
Velva School	2,480,059	0.38170909%
Wahpeton School	6,702,203	1.03154471%
Ward County	28,267	0.00435064%

EXHIBIT D
Schedule of Employer Allocations as of June 30, 2016

Employer Name	Covered Employee Payroll	Employer's Proportionate Share Allocation
Warwick School	1,722,089	0.26504901%
Washburn School	1,656,329	0.25492780%
West Fargo School	53,554,062	8.24257540%
West River Student Services	691,314	0.10640107%
Westhope School	1,067,860	0.16435580%
White Shield School	1,403,919	0.21607894%
Williston School	18,388,340	2.83017340%
Wilmac Special Education	3,327,347	0.51211632%
Wilton School	1,286,438	0.19799737%
Wing School	659,051	0.10143541%
Wishek School	1,208,061	0.18593429%
Wolford School	517,855	0.07970381%
Wyndmere School	1,405,123	0.21626430%
Yellowstone Elem. School	504,704	0.07767971%
Zeeland School	375,113	0.05773417%
Grand Totals:	649,724,868	100%

EXHIBIT E
Schedule of Pension Amounts by Employer as of June 30, 2016

Employer Name	Employer's Proportionate Share Allocation	Net Pension Liability	Covered Employee Payroll	Discount Rate Sensitivity			Schedule of Contributions				Pension Expense		
				1% Decrease (6.75%)	Current Discount Rate (7.75%)	1% Increase (8.75%)	Statutory Required Contribution	Contributions In Relation to the Statutory Required Contribution	Contribution Deficiency/ (Excess)	Contributions as a Percentage of Covered Employee Payroll	Proportionate Share of Plan Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Employer Pension Expense
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Alexander School	0.18082264%	\$ 2,649,158	\$ 1,174,850	\$ 3,436,156	\$ 2,649,158	\$ 1,993,662	\$ 149,793	\$ (149,793)	\$ -	12.75%	\$ 246,953	\$ 62,539	\$ 309,492
Anamoose School	0.11110816%	1,627,800	721,897	2,111,378	1,627,800	1,225,024	92,042	(92,042)	-	12.75%	151,742	7,307	159,049
Apple Creek Elem School	0.05313226%	778,419	345,214	1,009,668	778,419	585,810	44,015	(44,015)	-	12.75%	72,564	(8,627)	63,937
Ashley School	0.14635934%	2,144,250	950,933	2,781,253	2,144,250	1,613,686	121,244	(121,244)	-	12.75%	199,886	(8,121)	191,765
Bakker Elem School	0.00530994%	77,794	34,500	100,904	77,794	58,545	4,399	(4,399)	-	12.75%	7,252	(774)	6,478
Barnes County North	0.24426476%	3,578,622	1,587,049	4,641,741	3,578,622	2,693,144	202,349	(202,349)	-	12.75%	333,597	(75,773)	257,824
Beach School	0.32910704%	4,821,611	2,138,290	6,253,992	4,821,611	3,628,573	272,632	(272,632)	-	12.75%	449,468	(42,234)	407,234
Belcourt School	1.27913029%	18,740,008	8,310,828	24,307,198	18,740,008	14,103,064	1,059,631	(1,059,631)	-	12.75%	1,746,932	(104,202)	1,642,730
Belfield Public School	0.22790756%	3,338,979	1,480,772	4,330,907	3,338,979	2,512,797	188,798	(188,798)	-	12.75%	311,258	14,646	325,904
Beulah School	0.52676803%	7,717,460	3,422,543	10,010,126	7,717,460	5,807,886	436,374	(436,374)	-	12.75%	719,417	(51,022)	668,395
Billings Co. School Dist.	0.11667315%	1,709,330	758,055	2,217,129	1,709,330	1,286,381	96,652	(96,652)	-	12.75%	159,343	(15,170)	144,173
Bismarck Public Schools	10.65403601%	156,087,867	69,221,921	202,457,691	156,087,867	117,466,184	8,825,796	(8,825,796)	-	12.75%	14,550,416	18,369	14,568,785
Bismarck State College	0.00000000%	-	-	-	-	-	-	-	-	12.75%	-	(8,930)	(8,930)
Blessed John Paul II Catholic Sch Network	0.00000000%	-	-	-	-	-	-	-	-	12.75%	-	(8,788)	(8,788)
Bottineau School	0.57864088%	8,477,428	3,759,574	10,995,861	8,477,428	6,379,811	479,346	(479,346)	-	12.75%	790,261	(46,198)	744,063
Bowbells School	0.08520072%	1,248,240	553,570	1,619,062	1,248,240	939,381	70,580	(70,580)	-	12.75%	116,360	(3,521)	112,839
Bowman School	0.42451206%	6,219,350	2,758,160	8,066,965	6,219,350	4,680,462	351,666	(351,666)	-	12.75%	579,764	(36,128)	543,636
Burke Central School	0.14695981%	2,153,047	954,834	2,792,664	2,153,047	1,620,307	121,741	(121,741)	-	12.75%	200,706	5,322	206,028
Burleigh County Spec. Ed.	0.01322689%	193,782	85,938	251,349	193,782	145,833	10,957	(10,957)	-	12.75%	18,064	2,642	20,706
Carrington School	0.45614091%	6,682,731	2,963,661	8,668,005	6,682,731	5,029,186	377,867	(377,867)	-	12.75%	622,960	(1,944)	621,016
Cavalier School	0.34367967%	5,035,108	2,232,972	6,530,914	5,035,108	3,789,244	284,704	(284,704)	-	12.75%	469,370	5,128	474,498
Center Stanton School	0.22374025%	3,277,926	1,453,696	4,251,716	3,277,926	2,466,850	185,346	(185,346)	-	12.75%	305,566	(6,088)	299,478
Central Cass School	0.53225813%	7,797,893	3,458,213	10,114,454	7,797,893	5,868,418	440,922	(440,922)	-	12.75%	726,915	(66,339)	660,576
Central Elementary School	0.00968396%	141,876	62,919	184,023	141,876	106,771	8,022	(8,022)	-	12.75%	13,226	(1,293)	11,933
Central Valley School	0.18948599%	2,776,081	1,231,138	3,600,785	2,776,081	2,089,180	156,970	(156,970)	-	12.75%	258,785	(32,790)	225,995
Dakota Prairie School	0.28724742%	4,208,343	1,866,318	5,458,537	4,208,343	3,167,049	237,956	(237,956)	-	12.75%	392,299	6,904	399,203
Devils Lake School	1.58760361%	23,259,323	10,315,055	30,169,089	23,259,323	17,504,140	1,315,170	(1,315,170)	-	12.75%	2,168,220	(203,896)	1,964,324
Dickinson School	2.83719976%	41,566,638	18,433,992	53,915,053	41,566,638	31,281,575	2,350,334	(2,350,334)	-	12.75%	3,874,817	400,987	4,275,804
Divide School	0.35851646%	5,252,476	2,329,371	6,812,856	5,252,476	3,952,827	296,995	(296,995)	-	12.75%	489,633	(21,187)	468,446
Drake School	0.07757658%	1,136,542	504,034	1,474,181	1,136,542	855,321	64,264	(64,264)	-	12.75%	105,948	(23,327)	82,621
Drayton School	0.19058956%	2,792,249	1,238,308	3,621,756	2,792,249	2,101,347	157,884	(157,884)	-	12.75%	260,292	9,073	269,365
Dunseith School	0.44940822%	6,584,094	2,919,917	8,540,064	6,584,094	4,954,955	372,289	(372,289)	-	12.75%	613,765	54,335	668,100
E Central Ctr Exc Childn	0.11896896%	1,742,965	772,971	2,260,756	1,742,965	1,311,693	98,554	(98,554)	-	12.75%	162,478	(18,161)	144,317
Earl Elem. School	0.00484820%	71,029	31,500	92,130	71,029	53,454	4,016	(4,016)	-	12.75%	6,621	(681)	5,940
Edgeley School	0.19717837%	2,888,779	1,281,117	3,746,963	2,888,779	2,173,992	163,342	(163,342)	-	12.75%	269,290	(4,515)	264,775
Edmore School	0.11166082%	1,635,896	725,488	2,121,881	1,635,896	1,231,118	92,500	(92,500)	-	12.75%	152,497	3,229	155,726
Eight Mile School	0.23769386%	3,482,354	1,544,356	4,516,875	3,482,354	2,620,696	196,905	(196,905)	-	12.75%	324,623	52,656	377,279
Elgin-New Leipzig School	0.17402614%	2,549,585	1,130,691	3,307,003	2,549,585	1,918,727	144,163	(144,163)	-	12.75%	237,671	15,195	252,866
Ellendale School	0.26651659%	3,904,624	1,731,625	5,064,591	3,904,624	2,938,481	220,782	(220,782)	-	12.75%	363,987	(45,514)	318,473
Emerado Elementary School	0.08744740%	1,281,156	568,168	1,661,755	1,281,156	964,152	72,441	(72,441)	-	12.75%	119,429	(7,304)	112,125
Enderlin Area School District	0.31052838%	4,549,423	2,017,580	5,900,943	4,549,423	3,423,734	257,241	(257,241)	-	12.75%	424,094	812	424,906
Fairmount School	0.14946017%	2,189,679	971,080	2,840,178	2,189,679	1,647,875	123,813	(123,813)	-	12.75%	204,121	(20,519)	183,602
Fargo Public Schools	10.62667033%	155,686,944	69,044,120	201,937,663	155,686,944	117,164,463	8,803,126	(8,803,126)	-	12.75%	14,513,043	(443,216)	14,069,827
Fessenden-Bowdon School	0.15956168%	2,337,672	1,036,712	3,032,136	2,337,672	1,759,249	132,181	(132,181)	-	12.75%	217,916	10,125	228,041
Finley-Sharon School	0.15183640%	2,224,492	986,519	2,885,333	2,224,492	1,674,074	125,781	(125,781)	-	12.75%	207,366	(59,951)	147,415
Flasher School	0.16525835%	2,421,132	1,073,725	3,140,390	2,421,132	1,822,058	136,900	(136,900)	-	12.75%	225,696	(26,485)	199,211
Fordville Lankin School	0.09001321%	1,318,746	584,838	1,710,513	1,318,746	992,442	74,567	(74,567)	-	12.75%	122,933	(6,002)	116,931
Fort Ransom Elem School	0.02478304%	363,086	161,022	470,950	363,086	273,246	20,530	(20,530)	-	12.75%	33,847	(2,340)	31,507
Fort Totten School	0.23559199%	3,451,561	1,530,700	4,476,933	3,451,561	2,597,522	195,164	(195,164)	-	12.75%	321,752	(46,229)	275,523
Fort Yates School	0.17788847%	2,606,170	1,155,786	3,380,399	2,606,170	1,961,311	147,363	(147,363)	-	12.75%	242,946	4,392	247,338
Gackle-Streeter Pub Sch	0.11971402%	1,753,881	777,812	2,274,915	1,753,881	1,319,908	99,171	(99,171)	-	12.75%	163,496	(5,707)	157,789
Garrison School	0.35394570%	5,185,512	2,299,673	6,725,998	5,185,512	3,902,432	293,208	(293,208)	-	12.75%	483,390	4,349	487,739
Glen Ullin School	0.17979002%	2,634,029	1,168,141	3,416,534	2,634,029	1,982,277	148,938	(148,938)	-	12.75%	245,543	15,638	261,181
Glenburn School	0.28756569%	4,213,006	1,868,386	5,464,585	4,213,006	3,170,558	238,219	(238,219)	-	12.75%	392,734	51,022	443,756
Goodrich School	0.04451287%	652,140	289,211	845,874	652,140	490,777	36,874	(36,874)	-	12.75%	60,792	(5,314)	55,478
Grafton School	0.68918388%	10,096,947	4,477,799	13,096,499	10,096,947	7,598,604	570,919	(570,919)	-	12.75%	941,231	1,105	942,336
Grand Forks School	7.06285618%	103,474,979	45,889,133	134,214,823	103,474,979	77,871,594	5,850,865	(5,850,865)	-	12.75%	9,645,875	(218,616)	9,427,259
Great North West Cooperative	0.02743007%	401,867	178,220	521,251	401,867	302,431	22,723	(22,723)	-	12.75%	37,462	8,910	46,372
Grønora School	0.17518945%	2,566,628	1,138,249	3,329,109	2,566,628	1,931,553	145,127	(145,127)	-	12.75%	239,260	13,203	252,463
Griggs County Central Sch	0.24415605%	3,577,029	1,586,343	4,639,676	3,577,029	2,691,945	202,259	(202,259)	-	12.75%	333,448	(77,940)	255,508
Gst Educational Services	0.24553228%	3,597,192	1,595,284	4,665,828	3,597,192	2,707,119	203,399	(203,399)	-	12.75%	335,328	(5,640)	329,688
Halliday School	0.06866837%	1,006,032	446,155	1,304,899	1,006,032	757,104	56,885	(56,885)	-	12.75%	93,782	(4,673)	89,109
Hankinson School	0.22197355%	3,252,043	1,442,217	4,218,143	3,252,043	2,447,372	183,883	(183,883)	-	12.75%	303,153	(76,180)	226,973
Harvey School	0.35991541%	5,272,972	2,338,460	6,839,440	5,272,972	3,968,251	298,154	(298,154)	-	12.75%	491,543	198	491,741
Hatton Eielson Psd	0.17413199%	2,551,136	1,131,379	3,309,015	2,551,136	1,919,894	144,251	(144,251)	-	12.75%	237,815	(12,971)	224,844
Hazleton - Moffit School	0.12776106%	1,871,774	830,095	2,427,832	1,871,774	1,408,631	105,837	(105,837)	-	12.75%	174,486	(6,629)	167,857
Hazen School	0.44352809%	6,497,946	2,881,712	8,428,325	6,497,946	4,890,124	367,418	(367,418)	-	12.75%	605,735	(1,753)	603,982
Hebron School	0.17750965%	2,600,620	1,153,324	3,373,200	2,600,620	1,957,134	147,049	(147,049)	-	12.75%	242,428	(17,524)	224,904

EXHIBIT E
Schedule of Pension Amounts by Employer as of June 30, 2016

Employer Name	Discount Rate Sensitivity						Schedule of Contributions				Pension Expense		
	Employer's Proportionate Share Allocation	Net Pension Liability	Covered Employee Payroll	1% Decrease (6.75%)	Current Discount Rate (7.75%)	1% Increase (8.75%)	Statutory Required Contribution	Contributions In Relation to the Statutory Required Contribution	Contribution Deficiency/ (Excess)	Contributions as a Percentage of Covered Employee Payroll	Proportionate Share of Plan Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Employer Pension Expense
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Hettinger School	0.22054668%	3,231,138	1,432,947	4,191,029	3,231,138	2,431,640	182,701	(182,701)	-	12.75%	301,205	(73,189)	228,016
Hillsboro School	0.37815974%	5,540,262	2,456,998	7,186,136	5,540,262	4,169,404	313,267	(313,267)	-	12.75%	516,460	20,917	537,377
Hope School	0.10336098%	1,514,299	671,562	1,964,159	1,514,299	1,139,608	85,624	(85,624)	-	12.75%	141,162	3,023	144,185
Horse Creek Elem. School	0.00404017%	59,191	26,250	76,775	59,191	44,545	3,347	(3,347)	-	12.75%	5,518	(3,177)	2,341
James River Multidistrict Spec Ed Unit	0.20563488%	3,012,671	1,336,061	3,907,661	3,012,671	2,267,229	170,348	(170,348)	-	12.75%	280,839	17,097	297,936
Jamestown School	2.01294651%	29,490,845	13,078,614	38,251,842	29,490,845	22,193,763	1,667,524	(1,667,524)	-	12.75%	2,749,119	(261,072)	2,488,047
Kenmare School	0.26630798%	3,901,568	1,730,269	5,060,627	3,901,568	2,936,181	220,609	(220,609)	-	12.75%	363,702	(45,564)	318,138
Kensal School	0.06920446%	1,013,886	449,639	1,315,086	1,013,886	763,014	57,329	(57,329)	-	12.75%	94,514	7,664	102,178
Kidder County School District	0.33385103%	4,891,113	2,169,113	6,344,141	4,891,113	3,680,878	276,562	(276,562)	-	12.75%	455,947	(55,132)	400,815
Killdeer School	0.40573407%	5,944,242	2,636,155	7,710,128	5,944,242	4,473,425	336,110	(336,110)	-	12.75%	554,119	8,748	562,867
Kindred School	0.47984406%	7,029,996	3,117,666	9,118,434	7,029,996	5,290,526	397,502	(397,502)	-	12.75%	655,332	(41,273)	614,059
Kulm School	0.16414361%	2,404,800	1,066,482	3,119,206	2,404,800	1,809,767	135,976	(135,976)	-	12.75%	224,174	(21,082)	203,092
Lake Region Spec Ed	0.25796530%	3,779,343	1,676,065	4,902,091	3,779,343	2,844,199	213,698	(213,698)	-	12.75%	352,308	(51,591)	300,717
Lakota School	0.17725483%	2,596,887	1,151,669	3,368,358	2,596,887	1,954,325	146,838	(146,838)	-	12.75%	242,080	(31,060)	211,020
Lamoure School	0.23964192%	3,510,894	1,557,013	4,553,894	3,510,894	2,642,174	198,519	(198,519)	-	12.75%	327,283	(2,561)	324,722
Langdon Area School	0.27029165%	3,959,931	1,756,152	5,136,328	3,959,931	2,980,103	223,909	(223,909)	-	12.75%	369,142	(111,062)	258,080
Larimore School	0.32443670%	4,753,188	2,107,946	6,165,242	4,753,188	3,577,080	268,763	(268,763)	-	12.75%	443,089	(52,998)	390,091
Leeds School	0.16396137%	2,402,130	1,065,298	3,115,743	2,402,130	1,807,758	135,825	(135,825)	-	12.75%	223,925	(14,198)	209,727
Lewis And Clark School	0.40508382%	5,934,715	2,631,930	7,697,772	5,934,715	4,466,256	335,571	(335,571)	-	12.75%	553,231	(1,712)	551,519
Lidgerwood School	0.17979704%	2,634,132	1,168,186	3,416,667	2,634,132	1,982,354	148,944	(148,944)	-	12.75%	245,552	(11,875)	233,677
Linton School	0.25417932%	3,723,876	1,651,466	4,830,147	3,723,876	2,802,457	210,562	(210,562)	-	12.75%	347,137	(30,187)	316,950
Lisbon School	0.53576506%	7,849,272	3,480,999	10,181,095	7,849,272	5,907,083	443,827	(443,827)	-	12.75%	731,704	(31,024)	700,680
Litchville-Marion School	0.13145766%	1,925,932	854,113	2,498,078	1,925,932	1,449,388	108,899	(108,899)	-	12.75%	179,534	(12,665)	166,869
Little Heart Elem. School	0.01562197%	228,871	101,500	296,863	228,871	172,240	12,941	(12,941)	-	12.75%	21,335	(941)	20,394
Logan County	0.00062785%	9,198	4,079	11,931	9,198	6,922	520	(520)	-	12.75%	857	(101)	756
Lone Tree Elem. School	0.03950858%	578,824	256,697	750,778	578,824	435,602	32,729	(32,729)	-	12.75%	53,958	10,023	63,981
Lonetree Spec Ed Unit	0.02432653%	356,398	158,056	462,275	356,398	268,212	20,152	(20,152)	-	12.75%	33,223	869	34,092
Maddock School	0.15135015%	2,217,368	983,360	2,876,093	2,217,368	1,668,713	125,378	(125,378)	-	12.75%	206,702	(11,180)	195,522
Mandan Public Schools	2.97089678%	43,525,378	19,302,655	56,455,685	43,525,378	32,755,653	2,461,089	(2,461,089)	-	12.75%	4,057,409	248,823	4,306,232
Mandaree School	0.25647410%	3,757,496	1,666,376	4,830,147	3,757,496	2,827,758	212,463	(212,463)	-	12.75%	350,271	(32,855)	317,416
Manning Elem. School	0.01305475%	191,260	84,820	248,078	191,260	143,935	10,815	(10,815)	-	12.75%	17,829	2,267	20,096
Manvel Elem. School	0.12363539%	1,811,331	803,290	2,349,432	1,811,331	1,363,143	102,419	(102,419)	-	12.75%	168,851	(4,802)	164,049
Maple Valley School	0.24402277%	3,575,076	1,585,477	4,637,143	3,575,076	2,690,476	202,148	(202,148)	-	12.75%	333,266	(34,246)	299,020
Mapleton Elem. School	0.10374674%	1,519,950	674,068	1,971,490	1,519,950	1,143,861	85,944	(85,944)	-	12.75%	141,689	(6,655)	135,034
Marmarth Elem. School	0.02761603%	404,591	179,428	524,785	404,591	304,481	22,877	(22,877)	-	12.75%	37,716	2,319	40,035
Max School	0.18227395%	2,670,420	1,184,279	3,463,736	2,670,420	2,009,663	150,996	(150,996)	-	12.75%	248,935	(2,015)	246,920
May-Port C-G School	0.42290734%	6,195,840	2,747,734	8,036,470	6,195,840	4,662,769	350,336	(350,336)	-	12.75%	577,572	9,628	587,200
Mcclusky School	0.11422947%	1,673,529	742,177	2,170,692	1,673,529	1,259,438	94,628	(94,628)	-	12.75%	156,005	(19,180)	136,825
Mckenzie County	0.00619078%	90,699	40,223	117,643	90,699	68,257	5,128	(5,128)	-	12.75%	8,455	(4,614)	3,841
Mckenzie County School	1.00918344%	14,785,128	6,556,916	19,177,422	14,785,128	11,126,762	836,007	(836,007)	-	12.75%	1,378,261	401,444	1,779,705
Medina School	0.15942583%	2,335,682	1,035,829	3,029,555	2,335,682	1,757,751	132,068	(132,068)	-	12.75%	217,731	2,880	220,611
Menoken Elem. School	0.02410251%	353,116	156,600	458,018	353,116	265,742	19,967	(19,967)	-	12.75%	32,917	6,864	39,781
Midkota	0.15017616%	2,200,169	975,732	2,853,784	2,200,169	1,655,769	124,406	(124,406)	-	12.75%	205,098	(37,076)	168,022
Midway School	0.22582465%	3,308,463	1,467,239	4,291,326	3,308,463	2,489,832	187,073	(187,073)	-	12.75%	308,413	(6,606)	301,807
Milnor School	0.21159804%	3,100,035	1,374,805	4,020,979	3,100,035	2,332,976	175,288	(175,288)	-	12.75%	288,983	(47,794)	241,189
Minnewaukan School	0.26305272%	3,853,876	1,709,119	4,998,767	3,853,876	2,900,290	217,913	(217,913)	-	12.75%	359,256	(25,082)	334,174
Minot School	6.70537700%	98,237,700	43,566,502	127,421,678	98,237,700	73,930,203	5,554,730	(5,554,730)	-	12.75%	9,157,659	(342,986)	8,814,673
Minto School	0.17866504%	2,617,547	1,160,831	3,395,156	2,617,547	1,969,873	148,006	(148,006)	-	12.75%	244,006	(8,318)	235,688
Mohall Lansford Sherwood	0.33286989%	4,876,739	2,162,738	6,325,497	4,876,739	3,670,060	275,749	(275,749)	-	12.75%	454,607	(81,583)	373,024
Montpelier School	0.11740855%	1,720,104	762,833	2,231,104	1,720,104	1,294,489	97,261	(97,261)	-	12.75%	160,347	6,455	166,802
Morton County	0.00470195%	68,886	30,550	89,351	68,886	51,841	3,895	(3,895)	-	12.75%	6,422	399	6,821
Mott-Regent School	0.23752476%	3,479,877	1,543,257	4,513,662	3,479,877	2,618,832	196,765	(196,765)	-	12.75%	324,392	(17,480)	306,912
Mt Pleasant School	0.25376515%	3,717,808	1,648,775	4,822,276	3,717,808	2,797,890	210,219	(210,219)	-	12.75%	346,572	9,427	355,999
Munich School	0.14410593%	2,111,236	936,292	2,738,432	2,111,236	1,588,841	119,377	(119,377)	-	12.75%	196,808	24,464	221,272
N Central Area Career And Tech Center	0.02237102%	327,749	145,350	425,114	327,749	246,652	18,532	(18,532)	-	12.75%	30,553	(2,311)	28,242
Napoleon School	0.22849835%	3,347,635	1,484,611	4,342,134	3,347,635	2,519,311	189,288	(189,288)	-	12.75%	312,064	(18,656)	293,408
Naughton Rural School	0.01140988%	167,161	74,133	216,821	167,161	125,800	9,452	(9,452)	-	12.75%	15,583	195	15,778
Nd Center For Distance Education	0.20301221%	2,974,248	1,319,021	3,857,823	2,974,248	2,238,313	168,175	(168,175)	-	12.75%	277,258	84,381	361,639
Nd Dept Of Public Instruction	0.02860595%	419,094	185,860	543,596	419,094	315,395	23,697	(23,697)	-	12.75%	39,068	16,029	55,097
Nd School For Blind	0.10976865%	1,608,175	713,194	2,085,924	1,608,175	1,210,255	90,932	(90,932)	-	12.75%	149,913	(1,415)	148,498
Nd School For Deaf	0.13585131%	1,990,301	882,660	2,581,570	1,990,301	1,497,830	112,539	(112,539)	-	12.75%	185,535	(6,858)	178,677
Nd United	0.04805011%	703,962	312,194	913,092	703,962	529,777	39,805	(39,805)	-	12.75%	65,623	(4,228)	61,395
Nd Youth Correctional Cnt	0.18910081%	2,770,438	1,228,635	3,593,466	2,770,438	2,084,933	156,651	(156,651)	-	12.75%	258,259	(9,815)	248,444
Nedrose School	0.37783627%	5,535,523	2,454,896	7,179,989	5,535,523	4,165,838	312,999	(312,999)	-	12.75%	516,018	255,781	771,799
Nelson County	0.00188281%	27,584	12,233	35,779	27,584	20,759	1,560	(1,560)	-	12.75%	2,571	89	2,660
Nesson School	0.25057042%	3,671,003	1,628,018	4,761,567	3,671,003	2,762,667	207,572	(207,572)	-	12.75%	342,209	31,481	373,690
New England School	0.21138408%	3,096,901	1,373,415	4,016,913	3,096,901	2,330,617	175,110	(175,110)	-	12.75%	288,691	39,687	328,378
New Public School	0.31286915%	4,583,716	2,032,789	5,945,424	4,583,716	3,449,542	259,181	(259,181)	-	12.75%	427,291	(51,640)	375,651

EXHIBIT E
Schedule of Pension Amounts by Employer as of June 30, 2016

Employer Name	Employer's Proportionate Share Allocation	Net Pension Liability	Covered Employee Payroll	Discount Rate Sensitivity			Schedule of Contributions				Pension Expense		
				1% Decrease (6.75%)	Current Discount Rate (7.75%)	1% Increase (8.75%)	Statutory Required Contribution	Contributions In Relation to the Statutory Required Contribution	Contribution Deficiency/ (Excess)	Contributions as a Percentage of Covered Employee Payroll	Proportionate Share of Plan Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Employer Pension Expense
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
New Rockford Sheyenne School	0.26262259%	3,847,575	1,706,324	4,990,594	3,847,575	2,895,548	217,556	(217,556)	-	12.75%	358,669	(30,072)	328,597
New Salem-Almont	0.26142243%	3,829,992	1,698,527	4,967,787	3,829,992	2,882,316	216,562	(216,562)	-	12.75%	357,030	(8,980)	348,050
New Town School	0.66241609%	9,704,784	4,303,882	12,587,834	9,704,784	7,303,475	548,745	(548,745)	-	12.75%	904,674	18,014	922,688
Newburg United District	0.10125347%	1,483,423	657,869	1,924,111	1,483,423	1,116,371	83,878	(83,878)	-	12.75%	138,284	1,812	140,096
North Border School	0.44467142%	6,514,697	2,889,141	8,450,051	6,514,697	4,902,729	368,366	(368,366)	-	12.75%	607,296	(19,622)	587,674
North Sargent School	0.23312921%	3,415,479	1,514,698	4,430,133	3,415,479	2,570,369	193,124	(193,124)	-	12.75%	318,389	46,979	365,368
North Star	0.25839675%	3,785,664	1,678,868	4,910,290	3,785,664	2,848,956	214,056	(214,056)	-	12.75%	352,897	20,097	372,994
North Valley Area Career	0.07896064%	1,156,820	513,027	1,500,482	1,156,820	870,581	65,411	(65,411)	-	12.75%	107,838	(37,067)	70,771
Northern Cass School Dist	0.42861399%	6,279,446	2,784,812	8,144,913	6,279,446	4,725,688	355,064	(355,064)	-	12.75%	585,366	31,260	616,626
Northern Plains Spec Ed	0.04088332%	598,965	265,629	776,902	598,965	450,759	33,868	(33,868)	-	12.75%	55,835	14,006	69,841
Northwood School	0.23623388%	3,460,965	1,534,870	4,489,131	3,460,965	2,604,599	195,696	(195,696)	-	12.75%	322,629	22,024	344,653
Oakes School	0.31033702%	4,546,619	2,016,337	5,897,307	4,546,619	3,421,624	257,083	(257,083)	-	12.75%	423,833	(28,708)	395,125
Oberon Elem School	0.04294572%	629,180	279,029	816,094	629,180	473,498	35,576	(35,576)	-	12.75%	58,652	(54,121)	4,531
Oliver - Mercer Spec Ed	0.15347626%	2,248,517	997,173	2,916,496	2,248,517	1,692,154	127,140	(127,140)	-	12.75%	209,605	10,466	220,071
Page School	0.10441896%	1,529,799	678,436	1,984,264	1,529,799	1,151,272	86,501	(86,501)	-	12.75%	142,607	(17,547)	125,060
Park River Area School District	0.31345477%	4,592,296	2,036,594	5,956,553	4,592,296	3,455,999	259,666	(259,666)	-	12.75%	428,091	(50,679)	377,412
Parshall School	0.26084321%	3,821,506	1,694,763	4,956,780	3,821,506	2,875,930	216,082	(216,082)	-	12.75%	356,238	(38,941)	317,297
Peace Garden Spec Ed	0.08230387%	1,205,800	534,749	1,564,013	1,205,800	907,442	68,180	(68,180)	-	12.75%	112,404	11,284	123,688
Pembina Spec Ed Coop	0.01631460%	239,018	106,000	310,025	239,018	179,877	13,515	(13,515)	-	12.75%	22,281	(20,919)	1,362
Pingree - Buchanan School	0.12689965%	1,859,154	824,499	2,411,463	1,859,154	1,399,133	105,124	(105,124)	-	12.75%	173,309	(6,630)	166,679
Pleasant Valley Elem	0.00000000%	-	-	-	-	-	-	-	-	12.75%	-	(4,753)	(4,753)
Powers Lake School	0.17365859%	2,544,200	1,128,303	3,300,019	2,544,200	1,914,675	143,859	(143,859)	-	12.75%	237,169	19,725	256,894
Richardson-Taylor	0.26397999%	3,867,461	1,715,144	5,016,388	3,867,461	2,910,514	218,681	(218,681)	-	12.75%	360,522	(3,586)	356,936
Richland School	0.22294717%	3,266,307	1,448,543	4,236,645	3,266,307	2,458,106	184,689	(184,689)	-	12.75%	304,483	(60,826)	243,657
Robinson School	0.00000000%	-	-	-	-	-	-	-	-	12.75%	-	(20,228)	(20,228)
Rolette County	0.00000000%	-	-	-	-	-	-	-	-	12.75%	-	(1,137)	(1,137)
Rolette School	0.18543398%	2,716,716	1,204,811	3,523,785	2,716,716	2,044,504	153,613	(153,613)	-	12.75%	253,251	13,591	266,842
Roosevelt School	0.06548723%	959,426	425,487	1,244,448	959,426	722,030	54,250	(54,250)	-	12.75%	89,437	(737)	88,700
Roughrider Area Career And Tech Center	0.01468699%	215,173	95,425	279,096	215,173	161,932	12,167	(12,167)	-	12.75%	20,058	(21,413)	(1,355)
Roughrider Service Program	0.04661696%	682,966	302,882	885,858	682,966	513,976	38,617	(38,617)	-	12.75%	52,492	63,666	116,158
Rugby School	0.49502824%	7,252,454	3,216,322	9,406,977	7,252,454	5,457,939	410,081	(410,081)	-	12.75%	676,069	(9,483)	666,586
Rural Cass Spec Ed	0.16670854%	2,442,378	1,083,147	3,167,947	2,442,378	1,838,047	138,101	(138,101)	-	12.75%	227,677	(9,389)	218,288
Sargent Central School	0.22043540%	3,229,508	1,432,224	4,188,914	3,229,508	2,430,413	182,609	(182,609)	-	12.75%	301,053	(12,925)	288,128
Sawyer School	0.13489443%	1,976,282	876,443	2,563,387	1,976,282	1,487,280	111,746	(111,746)	-	12.75%	184,228	(3,869)	180,359
Scranton School	0.16684501%	2,444,377	1,084,034	3,170,541	2,444,377	1,839,551	138,214	(138,214)	-	12.75%	227,863	(9,635)	218,228
Se Region Career And Tech	0.21991312%	3,221,856	1,428,830	4,178,989	3,221,856	2,424,654	182,176	(182,176)	-	12.75%	300,339	5,174	305,513
Selfridge School	0.13455905%	1,971,369	874,264	2,557,014	1,971,369	1,483,582	111,469	(111,469)	-	12.75%	183,770	(1,368)	182,402
Sheyenne Valley Area Voc	0.11451072%	1,677,649	744,005	2,176,037	1,677,649	1,262,539	94,861	(94,861)	-	12.75%	156,389	(2,760)	153,629
Sheyenne Valley Spec Ed	0.22962775%	3,364,181	1,491,949	4,363,596	3,364,181	2,531,763	190,223	(190,223)	-	12.75%	313,607	(42,709)	270,898
Slope County	0.00379406%	55,585	24,651	72,098	55,585	41,831	3,143	(3,143)	-	12.75%	5,182	(224)	4,958
Solen - Cannonball School	0.23748720%	3,479,327	1,543,013	4,512,948	3,479,327	2,618,418	196,734	(196,734)	-	12.75%	324,341	(75,902)	248,439
Souris Valley Spec Ed	0.22975038%	3,265,978	1,492,745	4,365,926	3,265,978	2,533,115	190,325	(190,325)	-	12.75%	313,774	(73,795)	275,979
South Cent. Prairie Sp Ed	0.01543586%	226,144	100,291	293,326	226,144	170,188	12,787	(12,787)	-	12.75%	21,081	(877)	20,204
South Heart School	0.23705334%	3,472,970	1,540,194	4,504,703	3,472,970	2,613,634	196,375	(196,375)	-	12.75%	323,748	40,724	364,472
South Prairie Elem School	0.30779943%	4,509,442	1,999,849	5,849,085	4,509,442	3,393,646	254,981	(254,981)	-	12.75%	420,367	170,400	590,767
South Valley Spec Ed	0.06680222%	978,692	434,031	1,269,437	978,692	736,529	55,339	(55,339)	-	12.75%	91,233	(69,342)	21,891
Southwest Special Education Unit	0.00974813%	142,816	63,336	185,243	142,816	107,478	8,075	(8,075)	-	12.75%	13,313	(1,078)	12,235
St. John'S School	0.38354979%	5,619,229	2,492,018	7,288,562	5,619,229	4,228,832	317,732	(317,732)	-	12.75%	523,821	(13,100)	510,721
St. Thomas School	0.09939188%	1,456,149	645,774	1,888,735	1,456,149	1,095,846	82,336	(82,336)	-	12.75%	135,741	(16,749)	118,992
Stanley School	0.49898983%	7,310,493	3,242,061	9,482,259	7,310,493	5,501,618	413,363	(413,363)	-	12.75%	681,480	23,948	705,428
Starkweather School	0.08817332%	1,291,791	572,884	1,675,550	1,291,791	972,156	73,043	(73,043)	-	12.75%	120,420	(12,489)	107,931
Sterling School	0.03840395%	562,640	249,520	729,787	562,640	423,423	31,814	(31,814)	-	12.75%	52,449	5,048	57,497
Strasburg School District	0.12473803%	1,827,485	810,454	2,370,386	1,827,485	1,375,300	103,333	(103,333)	-	12.75%	170,357	(25,301)	145,056
Surrey School	0.36598010%	5,361,823	2,377,864	6,954,687	5,361,823	4,035,117	303,178	(303,178)	-	12.75%	499,826	(3,291)	496,535
Sweet Briar Elem School	0.01289161%	188,870	83,760	244,978	188,870	142,137	10,679	(10,679)	-	12.75%	17,606	797	18,403
Tgu School District	0.41615506%	6,096,915	2,703,863	7,908,157	6,096,915	4,588,322	344,743	(344,743)	-	12.75%	568,351	(23,625)	544,726
Thompson School	0.32097929%	4,702,535	2,085,482	6,099,541	4,702,535	3,538,960	265,899	(265,899)	-	12.75%	438,367	(238)	438,129
Tioga School	0.46508097%	6,813,709	3,021,747	8,837,892	6,813,709	5,127,755	385,273	(385,273)	-	12.75%	635,170	100,765	735,935
Turtle Lake-Mercer School	0.17686637%	2,591,196	1,149,145	3,360,976	2,591,196	1,950,042	146,516	(146,516)	-	12.75%	241,550	(51,433)	190,117
Twin Buttes Elem. School	0.06177770%	905,079	401,385	1,173,956	905,079	681,131	51,177	(51,177)	-	12.75%	84,371	(23,634)	60,737
Underwood School	0.23581820%	3,454,875	1,532,169	4,481,232	3,454,875	2,600,016	195,352	(195,352)	-	12.75%	322,061	(16,253)	305,808
United School	0.45077245%	6,604,080	2,928,781	8,565,988	6,604,080	4,969,996	373,420	(373,420)	-	12.75%	615,628	(44,615)	571,013
Upper Valley Spec Ed	0.37168858%	5,445,455	2,414,953	7,063,165	5,445,455	4,098,056	307,907	(307,907)	-	12.75%	507,622	12,773	520,395
Valley - Edinburg School	0.26223887%	3,841,953	1,703,831	4,983,302	3,841,953	2,891,317	217,239	(217,239)	-	12.75%	358,145	34,371	392,516
Valley City School	0.9289971%	13,610,390	6,035,942	17,653,698	13,610,390	10,242,696	769,583	(769,583)	-	12.75%	1,268,752	(124,205)	1,144,547
Velva School	0.38170909%	5,592,262	2,480,059	7,253,584	5,592,262	4,208,538	316,208	(316,208)	-	12.75%	521,307	(29,147)	492,160
Wahpeton School	1.03154471%	15,112,734	6,702,203	19,602,352	15,112,734	11,373,307	854,531	(854,531)	-	12.75%	1,408,800	(71,926)	1,336,874
Ward County	0.00435064%	63,739	28,267	82,675	63,739	47,968	3,604	(3,604)	-	12.75%	5,942	(229)	5,713

EXHIBIT E
Schedule of Pension Amounts by Employer as of June 30, 2016

Employer Name	Discount Rate Sensitivity						Schedule of Contributions				Pension Expense		
	Employer's Proportionate Share Allocation	Net Pension Liability	Covered Employee Payroll	1% Decrease (6.75%)	Current Discount Rate (7.75%)	1% Increase (8.75%)	Statutory Required Contribution	Contributions In Relation to the Statutory Required Contribution	Contribution Deficiency/ (Excess)	Contributions as a Percentage of Covered Employee Payroll	Proportionate Share of Plan Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Employer Pension Expense
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Warwick School	0.26504901%	3,883,123	1,722,089	5,036,703	3,883,123	2,922,301	219,566	(219,566)	-	12.75%	361,982	4,026	366,008
Washburn School	0.25492780%	3,734,842	1,656,329	4,844,370	3,734,842	2,810,709	211,182	(211,182)	-	12.75%	348,160	14,338	362,498
West Fargo School	8.24257540%	120,758,557	53,554,062	156,632,921	120,758,557	90,878,600	6,828,144	(6,828,144)	-	12.75%	11,257,040	1,241,183	12,498,223
West River Student Services	0.10640107%	1,558,838	691,314	2,021,930	1,558,838	1,173,126	88,143	(88,143)	-	12.75%	145,314	11,363	156,677
Westhope School	0.16435580%	2,407,909	1,067,860	3,123,239	2,407,909	1,812,107	136,152	(136,152)	-	12.75%	224,464	4,948	229,412
White Shield School	0.21607894%	3,165,683	1,403,919	4,106,129	3,165,683	2,382,381	179,000	(179,000)	-	12.75%	295,103	(33,654)	261,449
Williston School	2.83017340%	41,463,698	18,388,340	53,781,531	41,463,698	31,204,106	2,344,514	(2,344,514)	-	12.75%	3,865,221	724,655	4,589,876
Wilmac Special Education	0.51211632%	7,502,804	3,327,347	9,731,701	7,502,804	5,646,344	424,237	(424,237)	-	12.75%	699,407	144,484	843,891
Wilton School	0.19799737%	2,900,777	1,286,438	3,762,526	2,900,777	2,183,022	164,021	(164,021)	-	12.75%	270,409	4,224	274,633
Wing School	0.10143541%	1,486,088	659,051	1,927,568	1,486,088	1,118,377	84,029	(84,029)	-	12.75%	138,532	(11,680)	126,852
Wishek School	0.18593429%	2,724,046	1,208,061	3,533,293	2,724,046	2,050,020	154,028	(154,028)	-	12.75%	253,934	(3,511)	250,423
Wolford School	0.07970381%	1,167,707	517,855	1,514,604	1,167,707	878,775	66,027	(66,027)	-	12.75%	108,853	1,143	109,996
Wyndmere School	0.21626430%	3,168,399	1,405,123	4,109,651	3,168,399	2,384,424	179,153	(179,153)	-	12.75%	295,356	(31,646)	263,710
Yellowstone Elem. School	0.07767971%	1,138,053	504,704	1,476,141	1,138,053	856,458	64,350	(64,350)	-	12.75%	106,089	(2,960)	103,129
Zeeland School	0.05773417%	845,839	375,113	1,097,117	845,839	636,549	47,827	(47,827)	-	12.75%	78,849	(32,073)	46,776
Grand Totals:	100%	1,465,058,563	649,724,868	1,900,291,033	1,465,058,563	1,102,551,032	82,839,932	(82,839,932)	-	12.75%	136,571,873	-	136,571,873

Note: Columns may not foot due to rounding.

EXHIBIT E (continued)

Schedule of Pension Amounts by Employer as of June 30, 2016

Employer Name	Deferred Outflows of Resources					Deferred Inflows of Resources					Deferred (Inflows)/Outflows Recognized In Future Pension Expense (Year Ended June 30):					
	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	2017	2018	2019	2020	2021	Thereafter	
										(14)	(15)	(16)	(17)	(18)	(19)	(20)
Alexander School	\$ 12,512	\$ 220,217	\$ 221,281	\$ 358,801	\$ 812,811	\$ 12,543	\$ -	\$ -	\$ 12,543	\$ 144,263	\$ 144,263	\$ 198,073	\$ 164,382	\$ 105,273	\$ 44,013	
Anamoose School	7,688	135,314	135,968	59,572	338,542	7,707	-	27,651	35,358	57,521	57,521	90,586	69,884	33,563	(5,891)	
Apple Creek Elem School	3,676	64,708	65,020	9,187	142,591	3,686	-	50,791	54,477	15,386	15,386	31,198	21,298	3,930	918	
Ashley School	10,127	178,245	179,107	14,022	381,501	10,152	-	65,556	75,708	58,026	58,025	101,580	74,310	26,471	(12,618)	
Bakker Elem School	367	6,467	6,498	-	13,332	368	-	4,366	4,734	1,626	1,626	3,206	2,217	482	(558)	
Barnes County North	16,902	297,480	298,918	-	613,300	16,944	-	419,493	436,437	34,621	34,621	107,311	61,800	(18,040)	(43,450)	
Beach School	22,772	400,806	402,744	-	826,322	22,829	-	223,403	246,232	106,506	106,506	204,444	143,124	35,548	(16,037)	
Belcourt School	88,508	1,557,802	1,565,332	-	3,211,642	88,729	-	567,449	656,178	473,900	473,900	854,553	616,225	198,114	(61,228)	
Belfield Public School	15,770	277,560	278,901	85,445	657,676	15,809	-	-	15,809	117,649	117,649	185,471	143,007	68,513	9,578	
Beulah School	36,449	641,530	644,631	-	1,322,610	36,540	-	294,889	331,429	187,050	187,050	343,810	245,662	73,478	(45,870)	
Billings Co. School Dist.	8,073	142,092	142,778	139,383	432,326	8,093	-	192,004	200,097	37,560	37,560	72,281	50,542	12,406	21,879	
Bismarck Public Schools	737,194	12,975,129	13,037,850	1,172,156	27,922,329	739,037	-	1,296,374	2,035,411	4,833,453	4,833,453	8,003,963	6,018,894	2,536,392	(339,237)	
Bismarck State College	-	0	-	-	-	-	-	44,648	44,648	(8,930)	(8,930)	(8,930)	(8,930)	(8,928)	-	
Blessed John Paul II Catholic Sch Network	-	0	-	-	-	-	-	52,304	52,304	(8,788)	(8,788)	(8,788)	(8,788)	(8,785)	(8,367)	
Bottineau School	40,038	704,704	708,110	-	1,452,852	40,139	-	265,037	305,176	215,318	215,318	387,515	279,702	90,561	(40,737)	
Bowbells School	5,895	103,763	104,264	3,388	217,310	5,910	-	20,428	26,338	34,985	34,985	60,340	44,465	16,618	(422)	
Bowman School	29,374	516,996	519,496	-	1,065,866	29,447	-	212,165	241,612	155,730	155,730	282,059	202,964	64,201	(36,431)	
Burke Central School	10,169	179,842	179,842	256,761	625,749	10,194	-	187,361	197,555	71,740	71,740	115,474	88,092	40,054	41,092	
Burleigh County Spec. Ed.	915	16,109	16,186	21,447	54,657	918	-	9,885	10,803	8,620	8,619	12,555	10,091	5,769	(1,798)	
Carrington School	31,562	555,516	558,201	52,835	1,198,114	31,641	-	75,064	106,705	204,209	204,209	339,950	254,962	105,862	(17,783)	
Cavalier School	23,781	418,554	420,577	71,492	934,404	23,840	-	55,028	78,868	160,454	160,453	262,728	198,693	86,356	(13,146)	
Center Stanton School	15,481	272,484	273,802	24,377	586,144	15,520	-	65,787	81,307	95,030	95,030	161,613	119,925	46,788	(13,549)	
Central Cass School	36,829	648,216	651,350	-	1,336,395	36,921	-	373,423	410,344	174,215	174,215	332,608	233,437	59,458	(47,883)	
Central Elementary School	670	11,794	11,851	-	24,315	672	-	7,648	8,320	3,084	3,084	5,965	4,161	997	(1,296)	
Central Valley School	13,111	230,767	231,883	-	475,761	13,144	-	182,852	195,996	52,848	52,848	109,237	73,932	11,997	(21,096)	
Dakota Prairie School	19,876	349,827	351,518	37,003	758,224	19,925	-	-	19,925	136,725	136,724	222,206	168,685	74,794	(835)	
Devils Lake School	109,852	1,933,480	1,942,826	-	3,986,158	110,127	-	1,130,740	1,240,867	513,620	513,620	986,072	690,268	171,324	(129,614)	
Dickinson School	196,317	3,455,313	3,472,016	2,035,073	9,158,719	196,808	-	-	196,808	1,683,257	1,683,257	2,527,573	1,998,944	1,071,544	(2,664)	
Divide School	24,807	436,623	438,734	-	900,164	24,869	-	106,651	131,520	140,844	140,844	247,534	180,735	63,547	(4,862)	
Drake School	5,368	94,477	94,934	-	194,779	5,381	-	128,258	133,639	11,734	11,734	34,820	20,365	(4,990)	(12,522)	
Drayton School	13,188	232,111	233,233	132,382	610,914	13,221	-	104,421	117,642	95,209	95,209	151,926	116,415	54,119	(19,604)	
Dunseith School	31,096	547,317	549,962	319,173	1,447,548	31,174	-	-	31,174	257,446	257,446	391,184	307,450	160,550	42,298	
E Central Ctr Exc Childn	8,232	144,888	145,588	6,796	305,504	8,253	-	117,123	125,376	35,606	35,606	71,010	48,843	9,957	(20,893)	
Earl Elem. School	335	5,904	5,933	-	12,172	336	-	3,696	4,032	1,510	1,511	2,954	2,051	464	(350)	
Edgeley School	13,644	240,136	241,297	-	495,077	13,678	-	24,838	38,516	84,600	84,600	143,277	106,539	42,086	(4,542)	
Edmore School	7,726	135,987	136,645	29,244	309,602	7,746	-	15,719	23,465	53,694	53,694	86,923	66,118	29,618	(3,910)	
Eight Mile School	16,447	289,478	290,877	286,437	883,239	16,488	-	-	16,488	160,082	160,082	230,816	186,529	108,831	20,412	
Elgin-New Leipzig School	12,042	211,940	212,964	142,615	579,561	12,072	-	42,869	54,941	93,846	93,846	145,634	113,209	56,326	21,758	
Ellendale School	18,441	324,580	326,149	-	669,170	18,487	-	250,373	268,860	74,937	74,937	154,249	104,591	17,477	(25,881)	
Emerado Elementary School	6,051	106,499	107,014	-	219,564	6,066	-	41,919	47,985	32,218	32,218	58,241	41,948	13,365	(6,411)	
Enderlin Area School District	21,487	378,180	380,008	29,417	809,092	21,540	-	30,429	51,969	141,155	141,155	233,565	175,707	74,201	(8,659)	
Fairmount School	10,342	182,022	182,902	-	375,266	10,368	-	119,797	130,165	47,029	47,029	91,507	63,659	14,807	(18,932)	
Fargo Public Schools	735,300	12,941,802	13,004,361	-	26,681,463	737,139	-	2,236,622	2,973,761	4,359,500	4,359,500	7,521,867	5,541,896	2,068,337	(143,398)	
Fessenden-Bowdon School	11,041	194,324	195,263	67,647	468,275	11,068	-	5,744	16,812	82,240	82,240	129,723	99,994	47,839	9,427	
Finley-Sharon School	10,506	184,916	185,809	-	381,231	10,532	-	350,909	361,441	8,671	8,671	53,856	25,566	(24,062)	(52,912)	
Flasher School	11,435	201,262	202,234	9,777	424,708	11,463	-	140,577	152,040	48,203	48,203	97,382	66,591	12,571	(284)	
Fordville Lankin School	6,228	109,624	110,153	-	226,005	6,244	-	34,333	40,577	34,679	34,679	61,466	44,695	15,274	(5,366)	
Fort Ransom Elem School	1,715	30,182	30,328	7,383	69,608	1,719	-	22,899	24,618	8,861	8,861	16,236	11,618	3,515	(4,101)	
Fort Totten School	16,302	286,918	288,305	-	591,525	16,342	-	256,759	273,101	60,247	60,247	130,356	86,460	9,451	(28,337)	
Fort Yates School	12,309	216,643	217,691	55,367	502,010	12,340	-	40,093	52,433	84,789	84,789	137,726	104,582	46,432	(8,740)	
Gackie-Streeter Pub Sch	8,283	145,795	146,500	19,228	319,806	8,304	-	44,557	52,861	48,398	48,398	84,024	61,719	22,586	1,819	
Garrison School	24,491	431,056	433,140	107,697	996,384	24,552	-	103,149	127,701	164,313	164,313	269,643	203,696	87,998	(21,281)	
Glen Ullin School	12,440	218,959	220,018	79,265	530,682	12,471	-	1,290	13,761	96,894	96,894	150,397	116,899	58,130	(2,294)	
Glenburn School	19,898	350,215	351,908	371,301	1,093,322	19,948	-	54,308	74,256	180,987	180,987	266,563	212,984	118,989	58,556	
Goodrich School	3,080	54,210	54,473	-	111,763	3,088	-	28,609	31,697	14,803	14,804	28,050	19,756	5,204	(2,552)	
Grafton School	47,687	839,330	843,387	82,386	1,812,790	47,807	-	92,232	140,039	312,581	312,581	517,674	389,264	163,991	(23,340)	
Grand Forks School	488,706	8,601,573	8,643,152	769,022	18,502,453	489,928	-	1,733,932	2,223,860	2,973,437	2,973,437	5,075,256	3,759,299	1,450,649	46,517	
Great North West Cooperative	1,898	33,406	33,567	46,840	115,711	1,903	-	-	1,903	21,307	21,307	29,470	24,359	15,391	1,975	
Grenora School	12,122	213,356	214,388	97,947	537,813	12,152	-	38,323	50,475	92,380	92,380	144,514	111,873	54,605	(8,413)	
Griggs County Central Sch	16,894	297,348	298,785	-	613,027	16,936	-	450,889	467,825	32,406	32,406	105,064	59,573	(20,237)	(64,010)	
Gst Educational Services	16,989	299,024	300,470	143,526	760,009	17,032	-	147,802	164,834	105,328	105,329	178,397	132,649	52,389	21,082	
Halliday School	4,751	83,628	84,033	5,935	178,34											

EXHIBIT E (continued)

Schedule of Pension Amounts by Employer as of June 30, 2016

Employer Name	Deferred Outflows of Resources					Deferred Inflows of Resources				Deferred (Inflows)/Outflows Recognized In Future Pension Expense (Year Ended June 30):					
	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	2017	2018	2019	2020	2021	Thereafter
										(23)	(24)	(25)	(26)	(27)	(28)
(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	
Hettinger School	15,260	268,595	269,893	-	553,748	15,299	-	396,829	412,128	26,487	26,487	92,119	51,026	(21,063)	(33,435)
Hillsboro School	26,166	460,546	462,772	116,142	1,065,626	26,232	-	13,869	40,101	191,825	191,825	304,361	233,902	110,294	(6,681)
Hope School	7,152	125,879	126,488	64,518	324,037	7,170	-	38,647	45,817	49,737	49,738	80,497	61,239	27,451	9,558
Horse Creek Elem. School	280	4,920	4,944	-	10,144	280	-	18,501	18,781	(1,351)	(1,351)	(149)	(902)	(2,223)	(2,662)
James River Multidistrict Spec Ed Unit	14,229	250,435	251,645	88,822	605,131	14,264	-	-	14,264	110,034	110,034	171,228	132,914	65,697	961
Jamestown School	139,283	2,451,488	2,463,338	-	5,054,109	139,632	-	1,431,666	1,571,298	648,678	648,678	1,247,706	872,652	214,676	(149,577)
Kenmare School	18,427	324,326	325,894	-	668,647	18,473	-	233,089	251,562	74,794	74,794	154,044	104,425	17,376	(8,348)
Kensal School	4,789	84,281	84,689	40,803	214,562	4,800	-	-	4,800	38,941	38,940	59,534	46,640	24,021	1,686
Kidder County School District	23,100	406,584	408,549	-	838,233	23,158	-	291,833	314,991	95,751	95,751	195,101	132,897	23,771	(20,028)
Killdeer School	28,074	494,127	496,516	120,851	1,139,568	28,144	-	92,530	120,674	192,119	192,119	312,861	237,264	104,642	(20,111)
Kindred School	33,202	584,383	587,208	-	1,204,793	33,285	-	234,137	267,422	175,592	175,592	318,388	228,983	72,136	(33,321)
Kulm School	11,358	199,904	200,870	-	412,132	11,386	-	116,270	127,656	53,103	53,104	101,951	71,367	17,711	(12,761)
Lake Region Spec Ed	17,850	314,166	315,684	-	647,700	17,894	-	289,932	307,826	64,996	64,996	141,764	93,699	9,378	(34,959)
Lakota School	12,265	215,872	216,915	18,466	463,518	12,296	-	170,690	182,986	49,050	49,050	101,799	68,773	10,833	1,027
Lamoure School	16,582	291,850	293,261	57,545	659,238	16,623	-	84,418	101,041	105,745	105,745	177,059	132,409	54,077	(16,839)
Langdon Area School	18,703	329,178	330,769	-	678,650	18,749	-	658,690	677,439	11,096	11,097	91,533	41,172	(47,181)	(106,508)
Larimore School	22,449	395,119	397,029	79,332	893,929	22,505	-	331,098	353,603	93,631	93,631	190,179	129,730	23,683	9,471
Leeds School	11,345	199,682	200,647	27,217	438,891	11,373	-	117,849	129,222	59,903	59,903	108,696	78,147	24,554	(21,535)
Lewis And Clark School	28,029	493,336	495,720	48,266	1,065,351	28,099	-	68,192	96,291	181,365	181,365	301,913	226,438	94,028	(16,050)
Lidgerwood School	12,441	218,968	220,026	48,872	500,307	12,472	-	100,099	112,571	69,384	69,384	122,890	89,390	30,620	6,068
Linton School	17,588	309,555	311,051	-	638,194	17,632	-	158,927	176,559	84,689	84,689	160,330	112,971	29,888	(10,932)
Lisbon School	37,072	652,487	655,641	107,589	1,452,789	37,164	-	244,772	281,936	211,116	211,116	370,553	270,729	95,605	11,735
Litchville-Marion School	9,096	160,097	160,871	9,791	339,855	9,119	-	71,484	80,603	46,747	46,747	85,867	61,374	18,405	111
Little Heart Elem. School	1,081	19,025	19,117	3,774	42,997	1,084	-	10,175	11,259	6,119	6,119	10,768	7,858	2,750	(1,876)
Logan County	43	765	768	-	1,576	44	-	558	602	183	184	371	254	46	(63)
Lone Tree Elem. School	2,734	48,116	48,349	55,763	154,962	2,741	-	-	2,741	27,879	27,878	39,635	32,274	19,362	5,194
Lonetree Spec Ed Unit	1,683	29,626	29,770	8,519	69,598	1,687	-	2,757	4,444	11,863	11,863	19,103	14,570	6,616	1,138
Maddock School	10,472	184,323	185,214	-	380,009	10,499	-	66,840	77,339	57,223	57,224	102,264	74,064	24,590	(12,693)
Mandan Public Schools	205,568	3,618,138	3,635,627	1,289,551	8,748,884	206,082	-	-	206,082	1,591,519	1,591,519	2,475,621	1,922,081	950,981	11,082
Mandaree School	17,746	312,350	313,860	52,815	696,771	17,791	-	208,286	226,077	83,059	83,059	159,383	111,596	27,761	5,835
Manning Elem. School	903	15,899	15,976	16,712	49,490	906	-	6,455	7,361	8,167	8,167	12,052	9,620	5,349	(1,226)
Marvel Elem. School	8,555	150,571	151,298	33,319	343,743	8,576	-	51,776	60,352	51,075	51,075	87,867	64,831	24,418	4,125
Maple Valley School	16,885	297,186	298,622	-	612,693	16,927	-	189,117	206,044	76,040	76,040	148,658	103,192	23,425	(20,706)
Mapleton Elem. School	7,179	126,349	126,960	17,201	277,689	7,197	-	60,569	67,766	40,233	40,233	71,107	51,777	17,866	(11,293)
Marmarth Elem. School	1,911	33,632	33,795	59,437	128,775	1,916	-	37,936	39,852	14,800	14,800	23,018	17,873	8,845	9,588
Max School	12,612	221,984	223,057	19,378	477,031	12,644	-	26,222	38,866	80,364	80,364	134,606	100,645	41,067	1,121
May-Port C-G School	29,263	515,042	517,532	67,917	1,129,754	29,336	-	23,727	53,063	200,761	200,761	326,613	247,816	109,582	(8,841)
Mcclusky School	7,904	139,116	139,788	66,394	353,202	7,924	-	151,229	159,153	32,446	32,446	66,439	45,156	7,818	9,743
Mckenzie County	428	7,540	7,576	-	15,544	429	-	25,968	26,397	(1,816)	(1,816)	26	(1,127)	(3,149)	(2,972)
Mckenzie County School	69,829	1,229,045	1,234,986	2,173,914	4,707,774	70,004	-	-	70,004	857,544	857,543	1,157,863	969,831	639,960	155,030
Medina School	11,031	194,158	195,097	106,745	507,031	11,059	-	74,555	85,614	74,932	74,932	122,376	92,671	40,559	15,947
Menoken Elem. School	1,668	29,353	29,495	40,111	100,627	1,672	-	-	1,672	17,758	17,758	24,931	20,440	12,561	5,507
Midkota	10,391	182,894	183,778	-	377,063	10,417	-	205,297	215,714	30,796	30,796	75,487	47,506	(1,584)	(21,652)
Midway School	15,626	275,023	276,352	76,620	643,621	15,665	-	96,879	112,544	95,455	95,455	162,658	120,582	46,767	10,159
Milnor School	14,641	257,697	258,943	-	531,281	14,678	-	279,690	294,368	47,838	47,838	110,807	110,807	71,381	(43,169)
Minnewaukan School	18,202	320,362	321,910	1,738	662,212	18,247	-	126,861	145,108	93,804	93,804	172,086	123,074	37,088	(2,753)
Minot School	463,971	8,166,214	8,205,688	-	16,835,873	465,131	-	1,860,554	2,325,685	2,687,503	2,687,504	4,682,942	3,433,591	1,241,791	(223,144)
Minto School	12,363	217,589	218,641	7,027	455,620	12,393	-	58,346	70,739	72,430	72,429	125,597	92,308	33,909	(11,792)
Mohall Lansford Sherwood	23,033	405,389	407,349	-	835,771	23,090	-	467,253	490,343	68,857	68,857	167,915	105,895	(2,910)	(63,187)
Montpelier School	8,124	142,987	143,678	38,093	332,882	8,144	-	-	8,144	59,518	59,517	94,456	72,580	34,205	4,464
Morton County	325	5,726	5,754	2,096	13,901	326	-	-	326	2,524	2,523	3,922	3,046	1,511	50
Mott-Regent School	16,435	289,272	290,670	-	596,377	16,476	-	94,676	111,152	89,869	89,869	160,554	116,298	38,659	(10,023)
Mt Pleasant School	17,559	309,051	310,544	48,399	685,553	17,603	-	-	17,603	124,117	124,117	199,634	152,353	69,403	(1,674)
Munich School	9,971	175,501	176,349	138,025	499,846	9,996	-	89,594	89,594	105,628	105,628	132,478	58,523	14,035	14,035
N Central Area Career And Tech Center	1,548	27,245	27,376	-	56,169	1,552	-	13,176	14,728	7,800	7,800	14,457	10,289	2,974	(1,878)
Napoleon School	15,811	278,279	279,624	-	573,714	15,850	-	107,801	123,651	84,614	84,614	152,612	110,038	35,347	(17,162)
Naughton Rural School	789	13,896	13,963	3,210	31,858	791	-	1,697	2,488	5,352	5,353	8,748	6,622	2,891	403
Nd Center For Distance Education	14,047	247,241	248,436	595,457	1,105,181	14,082	-	208,260	222,342	176,132	176,132	236,546	198,721	132,364	(37,057)
Nd Dept Of Public Instruction	1,979	34,838	35,006	101,584	173,407	1,984	-	4,512	6,496	28,957	28,957	37,470	32,140	22,788	16,598
Nd School For Blind	7,595	133,683	134,329	35,742	311,349	7,614	-	36,859	44,473	48,195	48,195	80,861	60,408	24,529	4,688
Nd School For Deaf	9,400	165,448	166,248	26,861	367,957	9,424	-	73,379	82,803	54,540	54,540	94,968	69,656	25,251	(13,800)
Nd United	3,325	58,518	58,801	-	120,644	3,333	-	23,992	27,325	17,487	17,487	31,786	22,834	7,127	(3,403)
Nd Youth Correctional Cnt	13,085	230,298	231,412	23,559	498,354	13,117	-	68,702	81,819	75,650	75,650	131,924	96,691	34,882	1,738
Nedrose School	26,144	460,152	462,376	1,527,675	2,476,347	26,209	-	-	26,209	426,544	426,544	538,983	468,584	345,082	244,400
Nelson County	130	2,293	2,304	459	5,186	131	-	-	131	940	940	1,500	1,149	535	(9)
Nesson School	17,338	305,160	306,635	178,823	807,956	17,381	-	-	17,381	144,726	144,726	219,293	172,606	90,699	18,524
New England School	14,626	257,436	258,681	219,052	749,795	14,663	-	-	14,663	135,222	135,222	198,127	158,742	89,648	18,171
New Public School	21,649	381,031	382,873	-	785,553	21,703	-	283,678	305,381	89,761	89,761	182,867	124,573	22,308	(29,098)

EXHIBIT E (continued)

Schedule of Pension Amounts by Employer as of June 30, 2016

Employer Name	Deferred Outflows of Resources					Deferred Inflows of Resources					Deferred (Inflows)/Outflows Recognized In Future Pension Expense (Year Ended June 30):					
	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	2017	2018	2019	2020	2021	Thereafter	
										(23)	(24)	(25)	(26)	(27)	(28)	
(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)		
New Rockford Sheyenne School	18,172	319,838	321,384	4,668	664,062	18,217	-	186,036	204,253	88,620	88,620	166,773	117,841	31,995	(34,042)	
New Salem-Almont	18,089	318,376	319,915	138,482	794,862	18,134	-	220,063	238,197	109,170	109,169	186,965	138,256	52,807	(39,700)	
New Town School	45,835	806,730	810,630	274,298	1,937,493	45,950	-	221,077	267,027	317,392	317,392	514,519	391,097	174,570	(44,505)	
Newburg United District	7,006	123,313	123,909	21,354	275,582	7,024	-	8,732	15,756	47,573	47,574	77,706	58,841	25,742	2,388	
North Border School	30,769	541,548	544,166	308,961	1,425,444	30,845	-	355,575	386,420	181,348	181,348	313,677	230,825	85,475	46,350	
North Sargent School	16,131	283,919	285,291	279,268	864,609	16,171	-	-	16,171	152,342	152,342	221,718	178,281	102,076	41,680	
North Star	17,879	314,691	316,212	113,399	762,181	17,924	-	-	17,924	136,879	136,878	213,774	165,629	81,169	9,930	
North Valley Area Career	5,464	96,163	96,628	-	198,255	5,477	-	195,116	200,593	(1,381)	(1,381)	22,117	7,405	(18,406)	(10,693)	
Northern Cass School Dist	29,657	521,992	524,515	181,143	1,257,307	29,732	-	-	29,732	224,972	224,971	352,521	272,661	132,562	19,891	
Northern Plains Spec Ed	2,829	49,790	50,031	82,841	185,491	2,836	-	15,374	18,210	32,483	32,483	44,650	37,032	23,670	(3,037)	
Northwood School	16,346	287,700	289,091	131,112	724,249	16,387	-	-	16,387	128,791	128,790	199,090	155,075	77,859	18,259	
Oakes School	21,473	377,947	379,774	-	779,194	21,527	-	156,980	178,507	111,549	111,549	203,901	146,079	44,638	(17,028)	
Oberon Elem School	2,972	52,302	52,555	-	107,829	2,979	-	314,281	317,260	(34,713)	(34,712)	(21,932)	(29,933)	(43,973)	(44,171)	
Oliver - Mercer Spec Ed	10,620	186,913	187,816	52,460	437,809	10,646	-	-	10,646	79,829	79,829	125,502	96,906	46,736	(1,641)	
Page School	7,225	127,168	127,782	-	262,175	7,243	-	101,880	109,123	29,645	29,646	60,720	41,264	7,131	(15,355)	
Park River Area School District	21,689	381,744	383,589	-	787,022	21,743	-	274,946	296,689	90,987	90,987	184,267	125,864	23,407	(25,178)	
Parshall School	18,049	317,671	319,206	-	654,926	18,094	-	204,583	222,677	78,947	78,947	156,571	107,970	22,709	(12,895)	
Peace Garden Spec Ed	5,695	100,235	100,719	57,042	263,691	5,709	-	-	5,709	48,481	48,480	72,973	57,638	30,737	(327)	
Pembina Spec Ed Coop	1,129	19,869	19,965	-	40,963	1,132	-	104,928	106,060	(13,546)	(13,546)	(8,691)	(11,730)	(17,061)	(524)	
Pingree - Buchanan School	8,781	154,546	155,293	15,623	334,243	8,803	-	46,172	54,975	50,722	50,722	88,486	64,842	23,360	1,136	
Pleasant Valley Elem	-	0	-	-	-	-	-	23,764	23,764	(4,753)	(4,753)	(4,753)	(4,753)	(4,752)	-	
Powers Lake School	12,016	211,492	212,514	111,818	547,840	12,046	-	-	12,046	98,210	98,210	149,889	117,532	60,765	11,188	
Richardton-Taylor	18,266	321,491	323,045	78,644	741,446	18,311	-	115,892	134,203	115,720	115,720	194,277	145,092	58,803	(22,369)	
Richland School	15,427	271,519	272,831	-	559,777	15,465	-	357,582	373,047	39,935	39,935	106,281	64,741	(8,131)	(56,033)	
Robinson School	-	0	-	-	-	-	-	111,232	111,232	(20,228)	(20,228)	(20,228)	(20,228)	(20,228)	(10,092)	
Rolette County	-	0	-	-	-	-	-	5,687	5,687	(1,137)	(1,137)	(1,137)	(1,137)	(1,139)	-	
Rolette School	12,831	225,833	226,924	86,591	552,179	12,863	-	22,360	35,223	97,398	97,398	152,581	118,030	57,418	(5,869)	
Roosevelt School	4,531	79,754	80,140	36,598	201,023	4,543	-	34,186	38,729	28,860	28,860	48,348	36,146	14,740	5,341	
Roughrider Area Career And Tech Center	1,016	17,887	17,973	-	36,876	1,019	-	125,986	127,005	(14,775)	(14,775)	(10,405)	(13,141)	(17,943)	(19,090)	
Roughrider Service Program	3,226	56,773	57,047	288,326	405,372	3,234	-	-	3,234	73,561	73,561	87,433	63,508	25,329	(2,679)	
Rugby School	34,253	602,875	605,790	-	1,242,918	34,339	-	55,762	90,101	214,245	214,245	361,560	269,326	107,513	(14,073)	
Rural Cass Spec Ed	11,535	203,028	204,009	-	418,572	11,564	-	47,111	58,675	65,955	65,955	115,565	84,504	30,011	(2,092)	
Sargent Central School	15,253	268,460	269,757	-	553,470	15,291	-	64,754	80,045	86,701	86,701	152,299	111,228	39,176	(2,679)	
Sawyer School	9,334	164,283	165,077	48,597	387,291	9,357	-	81,531	90,888	57,096	57,095	97,238	72,105	28,014	(15,146)	
Scranton School	11,545	203,194	204,176	22,217	441,132	11,574	-	84,467	96,041	65,770	65,770	115,422	84,335	29,800	(16,006)	
Se Region Career And Tech	15,217	267,823	269,118	29,369	581,527	15,255	-	-	15,255	104,564	104,564	170,007	129,033	57,147	959	
Selfridge School	9,311	163,874	164,666	19,399	357,250	9,334	-	23,002	32,336	59,446	59,446	99,489	74,418	30,437	1,678	
Sheyenne Valley Area Voc	7,923	139,458	140,132	16,155	303,668	7,943	-	27,257	35,200	48,994	48,995	83,072	61,736	24,304	1,366	
Sheyenne Valley Spec Ed	15,889	279,655	281,006	50,724	627,274	15,929	-	317,123	333,052	61,071	61,071	129,405	86,621	11,561	(55,508)	
Slope County	263	4,621	4,643	-	9,527	263	-	1,221	1,484	1,491	1,491	2,620	1,913	672	(144)	
Solen - Cannonball School	16,433	289,226	290,624	-	596,283	16,474	-	385,230	401,704	31,430	31,430	102,103	57,855	(19,775)	(8,464)	
Souris Valley Spec Ed	15,897	279,804	281,156	-	576,857	15,937	-	223,603	239,540	66,041	66,041	134,411	91,604	16,505	(37,284)	
South Cent. Prairie Sp Ed	1,068	18,799	18,890	-	38,757	1,071	-	4,659	5,730	6,099	6,099	10,693	7,817	2,774	(455)	
South Heart School	16,403	288,698	290,093	220,134	815,328	16,444	-	-	16,444	147,860	147,860	218,404	174,236	96,752	13,771	
South Prairie Elem School	21,298	374,857	376,669	996,750	1,769,574	21,351	-	-	21,351	309,510	309,510	401,107	343,758	243,149	141,189	
South Valley Spec Ed	4,622	81,356	81,749	44,972	212,699	4,634	-	470,016	474,650	(39,151)	(39,151)	(19,271)	(31,718)	(53,552)	(79,108)	
Southwest Special Education Unit	675	11,872	11,929	-	24,476	676	-	5,487	6,163	3,327	3,327	6,228	4,411	1,227	(207)	
St. John'S School	26,539	467,110	469,368	29,294	992,311	26,606	-	113,752	140,358	160,245	160,245	274,385	202,921	77,549	(23,391)	
St. Thomas School	6,877	121,045	121,631	596	250,149	6,895	-	101,206	108,101	28,171	28,171	57,749	39,230	6,743	(18,015)	
Stanley School	34,527	607,700	610,638	169,606	1,422,471	34,613	-	59,838	94,451	249,466	249,466	397,959	304,987	141,882	(15,742)	
Starkweather School	6,101	107,383	107,902	-	221,386	6,116	-	70,126	76,242	27,361	27,361	53,600	37,172	8,351	(8,701)	
Sterling School	2,657	46,771	46,997	25,838	122,263	2,664	-	-	2,664	22,405	22,405	33,833	26,678	14,127	152	
Strasburg School District	8,631	151,914	152,648	19,219	332,412	8,653	-	142,522	151,175	31,074	31,074	68,195	44,953	4,178	1,762	
Surrey School	25,324	445,713	447,867	19,998	938,902	25,387	-	43,749	69,136	162,112	162,112	271,024	202,834	83,203	(11,520)	
Sweet Briar Elem School	892	15,700	15,776	4,607	36,975	894	-	-	894	6,623	6,623	10,460	8,058	3,843	474	
Tgu School District	28,795	506,819	509,269	-	1,044,883	28,867	-	128,378	157,245	164,456	164,456	288,299	210,760	74,734	(15,067)	
Thompson School	22,210	390,908	392,798	101,127	907,043	22,265	-	85,465	107,730	144,828	144,828	240,348	180,543	75,624	13,141	
Tioga School	32,181	566,404	569,142	528,153	1,695,880	32,261	-	-	32,261	310,958	310,958	449,360	362,706	210,683	18,952	
Turtle Lake-Mercer School	12,238	215,399	216,440	-	444,077	12,269	-	276,050	288,319	28,501	28,501	81,134	48,180	(9,631)	(20,927)	
Twin Buttes Elem. School	4,275	75,237	75,600	-	155,112	4,285	-	136,633	140,918	4,286	4,286	22,671	11,160	(9,034)	(19,176)	
Underwood School	16,317	287,194	288,582	-	592,093	16,358	-	91,890	108,248	90,324	90,324	160,500	116,563	39,482	(13,348)	
United School	31,191	548,978	551,632	1,055	1,132,856	31,269	-	223,955	255,224	159,111	159,111	293,256	209,267	61,923	(5,036)	
Upper Valley Spec Ed	25,719	452,665	454,853	109,867	1,043,104	25,783	-	55,209	80,992	180,756	180,755	291,365	222,112	100,620	(13,496)	
Valley - Edinburg School	18,145	319,370	320,914	272,379	930,808	18,191	-	55,127	73,318	152,890	152,890	230,929	182,068	96,353	42,362	
Valley City School	64,281	1,131,392	1,136,861	142,270	2,474,804	64,442	-	739,583	804,025	295,656	295,656	572,115	399,023	95,361	12,970	
Velva School	26,412	464,868	467,116	-	958,396	26,478	-	150,178	176,656	143,366	143,366	256,958	185,838	61,071	(8,859)	
Wahpeton School	71,377	1,256,278	1,262,350	-	2,590,005	71,555	-	414,685	486,240	394,280	394,280	701,255	509,057	171,873	(66,980)	
Ward County	301	5,298	5,324	-	10,923	302	-	1,335	1,637	1,737	1,737	3,032	2,221	798	(239)	

EXHIBIT E (continued)

Schedule of Pension Amounts by Employer as of June 30, 2016

Employer Name	Deferred Outflows of Resources					Deferred Inflows of Resources				Deferred (Inflows)/Outflows Recognized In Future Pension Expense (Year Ended June 30):						
	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions		Differences Between Expected and Actual Experience	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions		Total Deferred Inflows of Resources	2017	2018	2019	2020	2021	Thereafter
				Proportionate Share of Contributions	Total Deferred Outflows of Resources			Proportionate Share of Contributions	Total Deferred Inflows of Resources							
(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)		
Warwick School	18,340	322,793	324,353	223,997	889,483	18,386	-	244,638	263,024	123,815	123,815	202,690	153,306	66,671	(43,837)	
Washburn School	17,639	310,466	311,967	104,595	744,667	17,684	-	15,471	33,155	129,553	129,553	205,417	157,918	74,589	14,483	
West Fargo School	570,335	10,038,307	10,086,831	6,902,055	27,597,528	571,762	-	-	571,762	4,966,410	4,966,410	7,419,299	5,883,536	3,189,273	600,839	
West River Student Services	7,362	129,582	130,208	85,167	352,319	7,381	-	34,024	41,405	59,451	59,450	91,114	71,289	36,511	(6,899)	
Westhope School	11,372	200,162	201,130	89,712	502,376	11,401	-	77,967	89,368	79,227	79,227	128,138	97,515	43,794	(14,892)	
White Shield School	14,951	263,154	264,426	-	542,531	14,989	-	186,781	201,770	64,003	64,003	128,305	88,045	17,414	(21,008)	
Williston School	195,831	3,446,756	3,463,418	3,884,063	10,990,068	196,320	-	-	196,320	2,003,751	2,003,751	2,845,976	2,318,655	1,393,553	228,062	
Wilmac Special Education	35,435	623,686	626,701	791,504	2,077,326	35,524	-	-	35,524	375,936	375,936	528,335	432,917	265,518	63,161	
Wilton School	13,700	241,133	242,299	24,013	521,145	13,734	-	-	13,734	93,709	93,708	152,629	115,738	51,021	607	
Wing School	7,019	123,534	124,131	-	254,684	7,036	-	65,918	72,954	34,164	34,164	64,350	45,450	12,297	(8,694)	
Wishek School	12,866	226,442	227,537	17,151	483,996	12,898	-	41,645	54,543	80,522	80,522	135,854	101,210	40,435	(9,090)	
Wolford School	5,515	97,068	97,537	33,333	233,453	5,529	-	33,147	38,676	37,164	37,164	60,883	46,032	19,978	(6,443)	
Wyndmere School	14,964	263,380	264,653	-	542,997	15,002	-	172,056	187,058	66,094	66,095	130,453	90,159	19,466	(16,329)	
Yellowstone Elem. School	5,375	94,603	95,060	41,826	236,864	5,388	-	67,953	73,341	32,146	32,146	55,263	40,789	15,399	(12,221)	
Zeeland School	3,995	70,312	70,652	-	144,959	4,005	-	185,337	189,342	(5,981)	(5,980)	11,201	444	(18,430)	(25,637)	
Grand Totals:	6,919,383	121,786,048	122,374,747	32,631,925	283,712,103	6,936,686	-	32,631,925	39,568,611	45,194,926	45,194,925	74,953,700	56,321,614	23,634,443	(1,156,116)	

Note: Columns may not foot due to rounding.

MEMORANDUM

TO: TFFR Board
FROM: Fay Kopp
DATE: January 19, 2017
SUBJ: Actuarial Contract

As fiduciaries, the TFFR Board has a duty to select plan service providers prudently, and, once selected, to monitor the quality of their work regularly. Trustees also have an obligation to review the fees paid to those service providers periodically to ensure that the fees are reasonable.

Over the last 10 years, actuarial fees paid have averaged about \$131,000 per year. For the fiscal year ending June 30, 2016, actuarial fees paid (\$144,633) were about .007% (OR 7/1000 of 1%) of market value (\$2.1 billion). As you know, actuarial costs are largely impacted by legislative proposals, special studies, technical compliance issues, GASB requirements, and board initiatives.

Segal has been TFFR's actuarial consultant for the past six years. Kim Nicholl and Matt Strom have been the two primary consultants for TFFR, and have appeared before the Board and legislative committees to present [actuarial valuations](#) and [experience studies](#). Melanie Walker has also provided assistance regarding technical compliance issues and recently helped TFFR submit an application to the IRS for a determination on the qualification status of the plan. These individuals are backed by a strong Segal team of actuaries, analysts, and research staff in an actuarial consulting firm that has a solid reputation and large presence in the public sector.

Last year, the TFFR Board hired Cavanaugh Macdonald Consulting to conduct an [actuarial audit](#) of the annual valuation conducted by Segal. Results were very positive, with only a few minor recommendations. This provides assurance that Segal is accurately performing TFFR actuarial calculations and valuations and their work is being done in accordance with actuarial standards.

In 2011, the TFFR Board requested bids for the actuarial consulting contract. Segal was awarded the contract for the July 1, 2011- June 30, 2013 time period, with the option to renew the contract. The Board subsequently approved two-year contracts with Segal for 2013 - 15 and 2015 - 17. Segal's current contract will expire June 30, 2017.

Board action is requested to direct staff to:

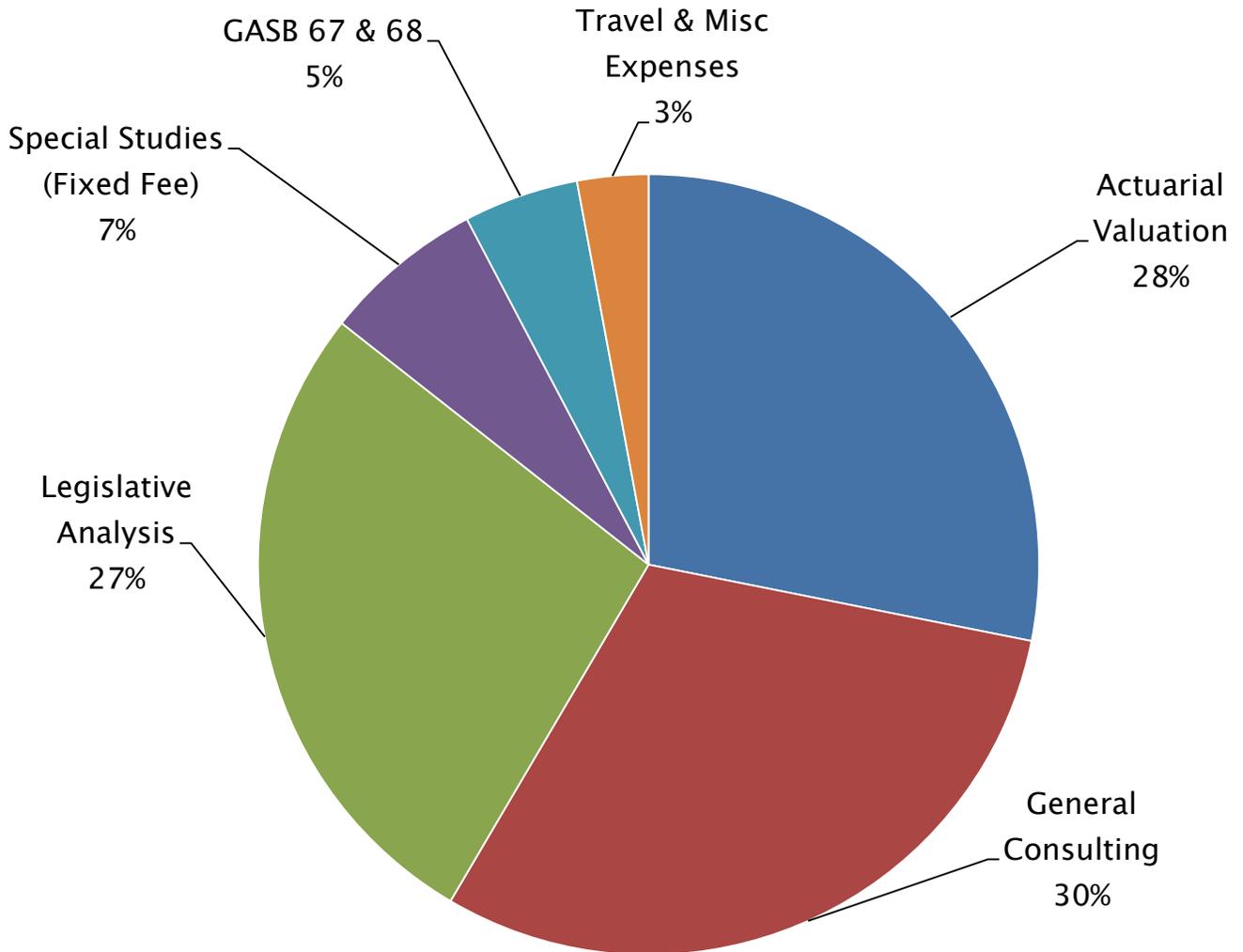
- 1) Request cost proposal from Segal for another 2-year term. Decide at future meeting whether to accept Segal's cost proposal and renew contract.
- 2) Conduct full search for actuarial consultant through the RFP process
- 3) Other

Attachment

**ND TEACHERS' FUND FOR RETIREMENT
SUMMARY OF ACTUARY FEES PAID
July 1, 2006 - June 30, 2016**

Fiscal Year End 6/30	Total Bill	Actuarial Valuation	General Consulting	Legislative Analysis	Special Studies (Fixed Fee)	GASB 67 & 68	Travel & Misc. Expenses
2007	\$ 118,261	\$ 31,000	\$ 38,400	\$ 33,389	\$ 13,165		\$ 2,307
2008	\$ 132,108	\$ 32,000	\$ 75,836	\$ 21,724			\$ 2,548
2009	\$ 81,542	\$ 34,500	\$ 28,538	\$ 14,767			\$ 3,737
2010	\$ 196,991	\$ 36,000	\$ 35,141	\$ 84,736	\$ 37,000		\$ 4,114
2011	\$ 254,292	\$ 37,400	\$ 26,986	\$ 183,988			\$ 5,918
2012	\$ 93,777	\$ 40,584	\$ 43,112	\$ 1,855			\$ 8,226
2013	\$ 94,848	\$ 35,946	\$ 39,551	\$ 14,381			\$ 4,970
2014	\$ 71,264	\$ 40,380	\$ 8,050	\$ 140		\$ 16,894	\$ 5,800
2015	\$ 123,367	\$ 39,355	\$ 20,207	\$ 980	\$ 37,470	\$ 24,430	\$ 925
2016	\$ 144,633	\$ 41,720	\$ 81,820	-0-	-0-	\$ 21,093	-0-
Totals	\$ 1,311,083	\$ 368,885	\$ 397,641	\$ 355,960	\$ 87,635	\$ 62,417	\$ 38,545

ND TFFR Consulting Fees Paid 7-1-2006 - 6-30-2016



MEMORANDUM

TO: TFFR Board
FROM: Fay Kopp
DATE: January 19, 2017
SUBJ: Eligible Salary Discussion

A question has come up regarding whether certain salary payments made to TFFR members who are LEA (local education association) presidents and granted contract release time to perform union related duties are eligible retirement salary for TFFR purposes as defined in NDCC 15-39.1-04(10). We are aware of two school districts in which the school district contracts and pays a TFFR member their full contract salary, and the LEA reimburses the school district for the 40% contract release time granted to perform union related duties.

RIO staff has gathered information from the school districts regarding this question, and we have had some initial discussions with those members who could potentially be affected. I have forwarded the question to TFFR's legal counsel for review. Depending on the outcome of the legal review and any Board discussion at the January meeting, I plan to draft a board policy for your consideration.

This is for board information only. No board action is requested at this time. This topic will likely be on the agenda of the March 2017 TFFR Board meeting.

NDCC 15-39.1-04 (10)

"Salary" means a member's earnings in eligible employment under this chapter for teaching, supervisory, administrative, and extracurricular services during a plan year 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, 132(f), 401(k), 403(b), 414(h), or 457, as amended. "Salary" includes amounts paid to members for performance of duties, unless amounts are conditioned on or made in anticipation of an individual member's retirement or termination. The annual salary of each member taken into account in determining benefit accruals and contributions may not exceed the annual compensation limits established under 26 U.S.C. 401(a)(17)(B), as amended, as adjusted for increases in the cost of living in accordance with 26 U.S.C. 401(a)(17)(B), as amended. A salary maximum is not applicable to members whose participation began before July 1, 1996.

"Salary" does not include:

- a. Fringe benefits or side, nonwage, benefits that accompany or are in addition to a member's employment, including insurance programs, annuities, transportation allowances, housing allowances, meals, lodging, or expense allowances, or other benefits provided by employer.
- b. Insurance programs, including medical, dental, vision, disability, life, long-term care, workforce safety and insurance, or other insurance premiums or benefits.
- c. Payments for unused sick leave, personal leave, vacation leave, or other unused leave.
- d. Early retirement incentive pay, severance pay, or other payments conditioned on or made in anticipation of retirement or termination.
- e. Teacher's aide pay, referee pay, bus driver pay, or janitorial pay.
- f. Amounts received by a member in lieu of previously employer-provided benefits or payments that are made on an individual selection basis.
- g. Signing bonuses as defined under section 15.1-09-33.1.
- h. Other benefits or payments not defined in this section which the board determines to be ineligible teachers' fund for retirement salary.**

NDCC 15-39.1-04 (12)

"Teacher" means:

- a. All persons licensed by the education standards and practices board who are contractually employed in teaching, supervisory, administrative, or extracurricular services by a state institution, multidistrict special education unit, area career and technology center, regional education association, school board, or other governing body of a school district of this state**, including superintendents, assistant superintendents, business managers, principals, assistant principals, and special teachers. For purposes of this subdivision, "teacher" includes persons contractually employed by one of the above employers to provide teaching, supervisory, administrative, or extracurricular services to a separate state institution, state agency, multidistrict special education unit, area career and technology center, regional education association, school board, or other governing body of a school district of this state under a third-party contract.

b. The superintendent of public instruction, assistant superintendents of public instruction, county superintendents, assistant superintendents, supervisors of instruction, the professional staff of the department of career and technical education, the professional staff of the center for distance education, **the executive director and professional staff of the North Dakota education association who are members of the fund on July 1, 1995**, the professional staff of an interim school district, and the professional staff of the North Dakota high school activities association who are members of the fund on July 1, 1995.

c. The executive director and professional staff of the North Dakota council of school administrators who are members of the fund on July 1, 1995, and licensed staff of teachers centers, but only if the person was previously a member of and has credits in the fund.

d. Employees of institutions under the control and administration of the state board of higher education who are members of the fund on July 16, 1989.

NDCC 15-39.1-24. Purchase of additional credit.

6. A teacher who is elected president of a professional educational organization recognized by the board and who serves in a full-time capacity in lieu of teaching may purchase service credit for the time spent serving as president. As an alternative to purchasing service credit under this subsection, a teacher and the governmental body employing the teacher may enter into an agreement under which payment for service credit for the time spent as president of the professional educational organization is made pursuant to section 15-39.1-09. The agreement must provide that contributions made pursuant to section 15-39.1-09 are calculated based on the teacher's annual salary as president.

NDAC 82-02-01-01 Definitions.

3. Administrative – means to manage, direct, or superintend a program, service, or school district or other participating employer.

10. Extracurricular – means outside of the regular curriculum of a school district or other participating employer which includes advising, directing, monitoring, or coaching athletics, music, drama, journalism, and other supplemental programs.

18. Supervisory – means to have general oversight or authority over students or teachers, or both, of a school district or other participating employer.

19. Teaching – means to impart knowledge or skills to students or teachers, or both, by means of oral or written lessons, instructions, and information.

MEMORANDUM

TO: TFFR Board
FROM: Fay Kopp
DATE: January 19, 2017
SUBJ: TFFR BOARD POLICIES

The following draft policies are being submitted for TFFR Board consideration.

- **2nd Reading and Final Adoption (1st reading October 2016 meeting)**

C-23 Board Policy Introduction/Amendment/Passage
C-24 In-staff Subbing Contract Period

Board Action Requested: Final approval of two board policies.

Attachments

NEW POLICY – 2nd READING

Policy Type: TFFR Program

Polity Title: Board Policy Introduction/Amendment/Passage (Similar to SIB B-10)

New policies or policy amendments may be proposed by the Chief Retirement Officer or a Board member. All new policies or amendments must be submitted to the Board's legal counsel at the Attorney General's office for review prior to Board approval.

Upon request of the Chief Retirement Officer or a Board member, a new policy or amendment shall be placed on the Board's agenda for action as follows:

1. Introduction and first reading. A brief explanation or summary of the new policy or amendment shall be presented to the Board. Upon approval of introduction and first reading, the policy shall be placed on the agenda of the next scheduled meeting of the Board for second reading and adoption. When appropriate, the policy shall be distributed to interested parties.
2. Second reading and adoption. Interested parties and the public shall be allowed an opportunity to comment on the policy or amendment before final action by the Board. The policy shall take effect immediately following second reading and adoption by the Board, unless a different effective date is stated.
3. Amendments. Amendments may be proposed at any time before final adoption of the policy. Upon determination by the Board that adoption of an amendment constitutes a substantive change that significantly changes the meaning or effect of the policy, the Board shall continue consideration of second reading and adoption to the next meeting to permit further review and comment.

Emergency measures. Upon determination that an emergency or other circumstances calling for expeditious action exists, the Board may waive the requirement of a second reading and immediately approve the new policy or amendment following introduction and first reading.

TFFR Board Adopted: _____, 2016

NEW POLICY – 2nd READING

Policy Type: TFFR Program

Polity Title: In-staff Subbing Contract Period

It is the policy of the TFFR Board of Trustees that the following guidelines apply for the purpose of determining the contract period for in-staff subbing for active members and re-employed retirees as provided for in NDCC 15-39.1-04 (4) and (12), 15-39.1-19.1, 15-39.1-19.2, and NDAC 82-05-06-01.

- 1) In-staff subbing is defined as substitute teaching duties performed by a contracted teacher for the contracting TFFR participating employer.
- 2) If the active member or re-employed retiree has a contract or written agreement with the participating employer for full or part time work, TFFR will view the beginning and ending calendar dates indicated on the contract as the contract term to determine the contract period.
 - If substitute teaching duties are performed during the contract term, those duties are considered in-staff subbing, and retirement contributions are required to be paid on the substitute teaching pay. The in-staff subbing hours are reported as compensated hours for active members and are counted toward the annual hour limit for re-employed retirees (700 – 1000 hours depending upon length of contract).
 - If substitute teaching duties are performed before the beginning calendar date or after the ending calendar date of the contract term, those duties are not considered in-staff subbing, and no retirement contributions are required to be paid on the substitute teaching pay. The subbing hours are not reported as compensated hours for active members and are not counted toward the annual hour limit for re-employed retirees.
- 3) If the active member or re-employed retiree does not have a contract or written agreement with the participating employer, then no retirement contributions are required to be paid on the substitute teaching pay. The subbing hours are not reported as compensated hours for active members and are not counted toward the annual hour limit for re-employed retirees.

TFFR Board Adopted: _____, 2016

**TFFR Ends
Annual Review
Year Ended June 30, 2016**

The information provided below indicates that the TFFR ends policies formally adopted by the TFFR Board and accepted by the SIB are being implemented.

Ends Policy: Membership Data and Contributions

Ends: Ensure the security and accuracy of the members' permanent records and the collection of member and employer contributions from every governmental body employing a teacher.

▪ **Member and Employer Information**

The CPAS pension administration software and FileNet document management software has been used for eleven years and both continue to meet our needs. In the past year the benefit option factors and the cost to purchase service factors were updated in the CPAS system. These changes incorporated the new investment return assumption and improvements in mortality. The CPAS procedure manuals were also reviewed and updated. Retirement and IT staff continue work with CPAS staff on our Member Online Services application. Testing is 90% complete. Security of TFFR data is a high priority and staff annually completes cyber security training.

▪ **Collections and Payments**

Collected member and employer contributions totaling \$159.2 million from 214 employers and \$2.8 million from members for the purchase of service credit.

Paid out \$180.6 million in pension benefits and \$5.4 million in refunds and rollovers totaling \$186.0 million for the year.

About 81% of employers electronically report contributions to TFFR. This comprises over 97% of the active membership.

As of June 30, 2016, 175 employers are reporting using TFFR Employer Online Services.

Assessed 26 reporting penalties and withheld foundation payments from no school districts. TFFR waived 11 of the 26 penalties. Employer reporting penalties include late reporting of contributions and failure to provide documentation in a timely manner (e.g. new member forms, return to teach forms, employer compliance audit documentation.)

13 employers modified employer payment plan model election.

▪ **Employer Summary Report and Member Statements**

Mailed 12,690 annual benefits statements to non-retired members in August

Mailed 8,519 annual statements to retired members in December

Mailed FY2016 Employer Summary Report to each employer in August 2016

- **Employer Outreach Programs & Communications**

Met with school board members, business managers, and software vendors at the 2015 School Board and School Business Manager Association Annual Conference. A presentation to school board attendees was also provided.

Presented TFFR employer reporting requirements to school district business managers at a statewide workshop.

A new business manager workshop was held in June 2016 and attended by Powers Lake, Surrey, and Minnewaukan schools.

GASB 68 2015 data updated and added to website

Updated Employer Guide on the website and emailed all employers

Briefly employer newsletter (4 publications sent electronically)

Ends Policy: Member Services

Ends: Provide direct services and public information to members of TFFR.

- **Outreach Program Statistics**

973 attended outreach programs (plus convention participants)
Retirement Services staff traveled 3,521 miles

- **Retirement Education Workshops**

105 attended
2 locations – Grand Forks & Bismarck

Retirement Education Workshops are generally held at two sites each year in July and rotate between Bismarck, Minot, Fargo, and Grand Forks. Additional workshops will be added if requested by an employer and minimum attendance can be met.

- **Individual Benefits Counseling Sessions**

Statewide – 48 attended
4 locations – Williston, Dickinson, Devils Lake, and Jamestown

- **Group Counseling Sessions**

160 attended
3 locations – Fargo, Minot, and Grand Forks

- **Local Office Counseling** – 372 members

- **Group Presentations**

288 attended

- NDRTA Convention
- NDCEL Conferences
- SBA Convention
- CTE Director's Meeting

- **Conferences and Conventions**

- ND Retired Teachers Convention – Minot
- ND School Board Convention – Bismarck
- ND Career and Technical Education Convention – Bismarck
- NDCEL Annual Conference – Bismarck

- **Member Communications**

- Report Card non-retired newsletter (2 publications)
- Retirement Today retiree newsletter (2 publications)
- Updated brochures and forms
- How to Apply for Retirement Benefits webcast added to website
- TFFR Fast Facts handout printed and added to website

- **NDRIO Website**

NDRIO web site was visited by 13,199 people a total of 25,988 times. The average length of each visit was three minutes.

Ends Policy: Account Claims

Ends: Ensure the payment of claims to members of TFFR.

- **Annuity Payments**

Distributed \$180.6 million in pension benefits to 8,249 retired members and beneficiaries. Of the total, about 99% of the payments were deposited via electronic funds transfer.

- **Monthly Payroll Deductions** (July 1, 2016 payroll – total 8,223)

Federal tax withholding	6,336	77%
ND state tax withholding	5,106	62%
PERS health insurance	712	9%
PERS dental insurance	404	5%
PERS vision insurance	181	2%
PERS life insurance	32	<1%

- **Refunds, Rollovers & Transfers**

Distributed refund and rollover payments of \$5.4 million to 275 participants during the fiscal year. Approximately 41% of the refunding members rolled over their refund payment to an IRA or another eligible plan.

- **Processed Claims for Benefits**

Refunds	163
Rollovers	112
Retirements	354
Disabilities	5
Survivor annuitants	3
Continuing annuitants	65

- **Member Account Activity**

New members	1,148
Deaths	207
Pop ups	36
Purchase requests	232
Retiree Payroll Notices	1,459

Ends Policy: Trust Fund Evaluation/Monitoring

Ends: Ensure actuarial consulting and accounting services are provided to the retirement program. The TFFR Board of Trustees will select the independent actuary for consulting and actuarial purposes and direct a contract to be executed.

- **Actuarial Services**

The annual actuarial valuation for July 1, 2016 was presented to the TFFR Board by Segal on October 27, 2016.

An actuarial audit was completed by Cavanaugh MacDonald Consulting and presented to the TFFR Board on July 21, 2016. Results were positive and the auditor was able to validate the work done by the plan's actuary, with only a few minor recommendations.

- **External Audit**

An unqualified opinion was issued by independent auditors, Clifton Larson Allen, LLP, regarding RIO's financial statements for the year ending June 30, 2016. Clifton Larson Allen, LLP presented the report to the SIB Audit Committee on November 17, 2016.

- **Internal Audit**

The annual audit activities report was presented to the TFFR Board on October 27, 2016. The report included information about TFFR employer compliance audits, benefit payments audit, file maintenance audit, cost effective benefit payments/benefit recalculation audit, and the salary verification project.

- **Other**

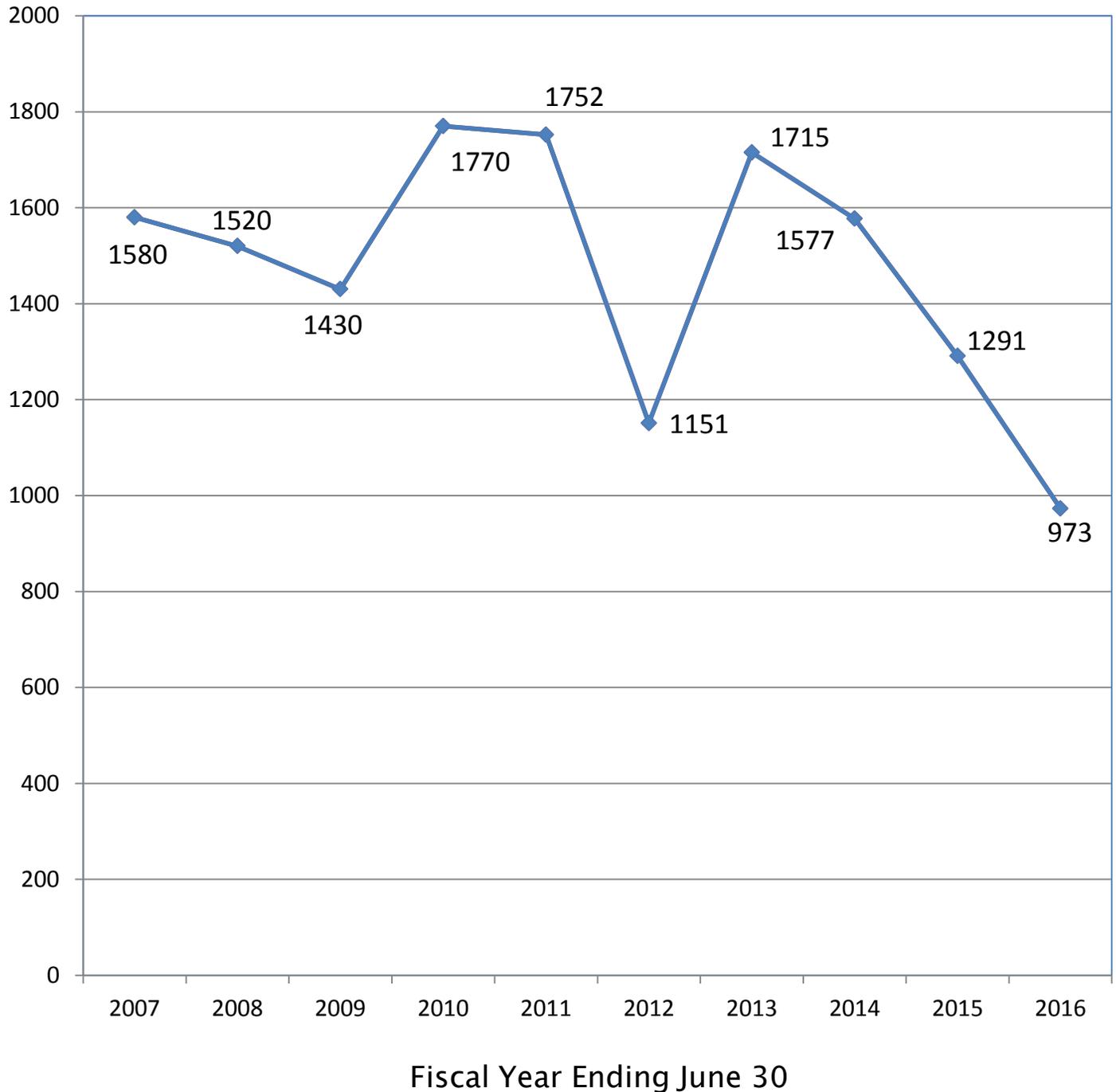
Received Certificate of Achievement in Financial Reporting from GFOA for June 30, 2015, Annual Financial Report.

Received 2016 recognition award for pension plan administration from the Public Pension Coordinating Council.

TFFR Retirement Statistics

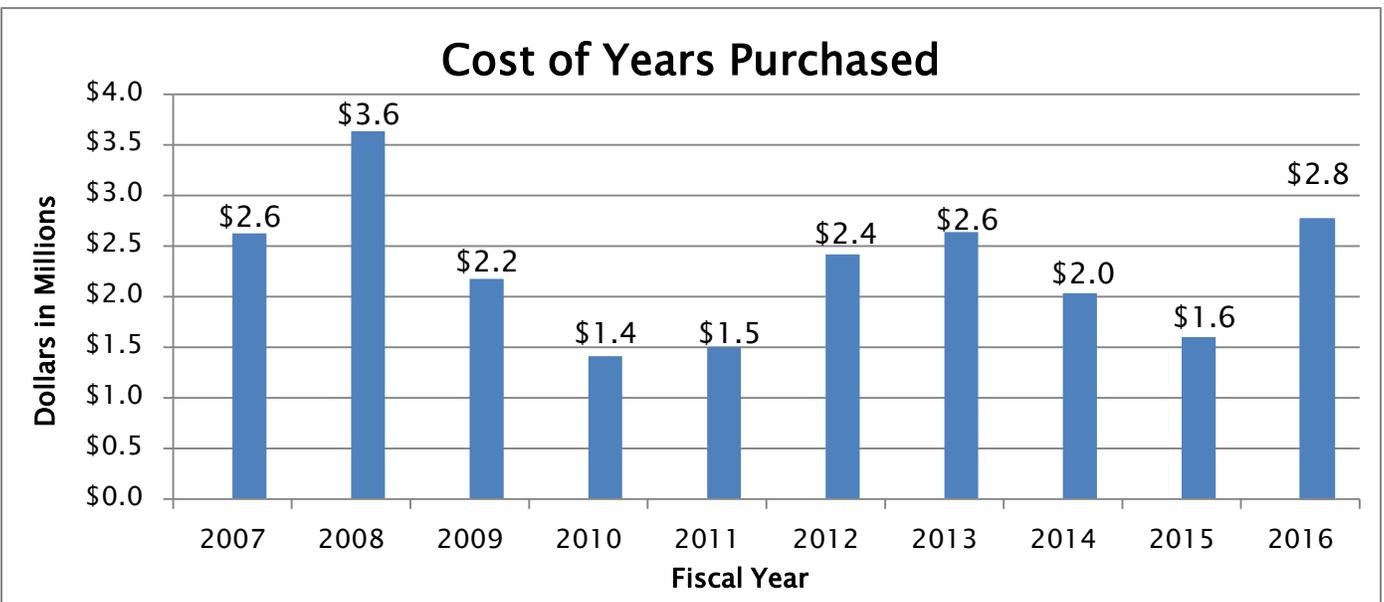
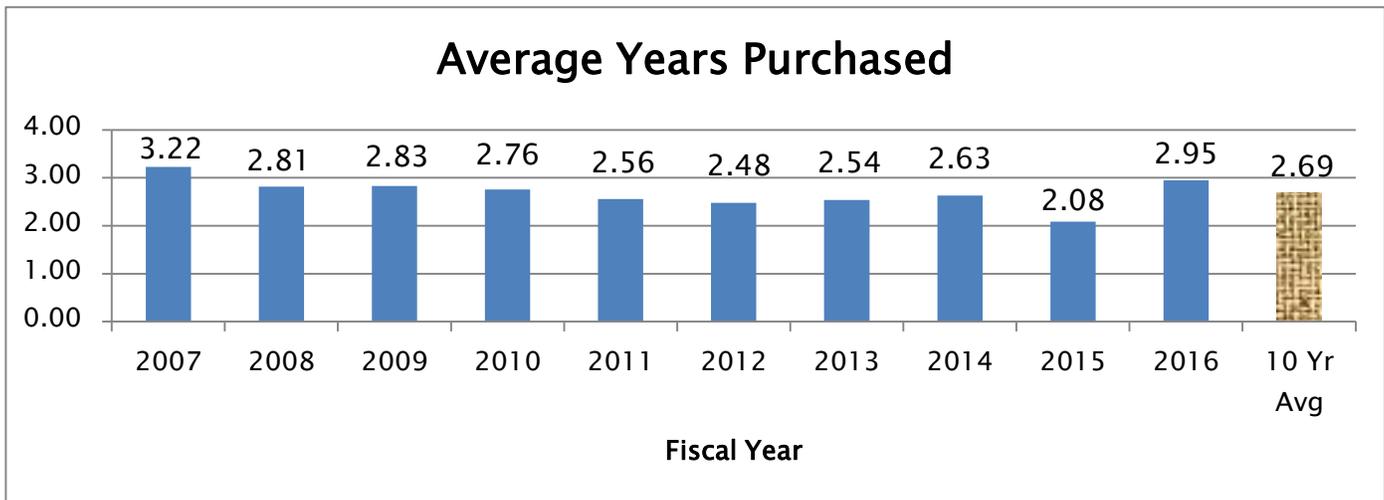
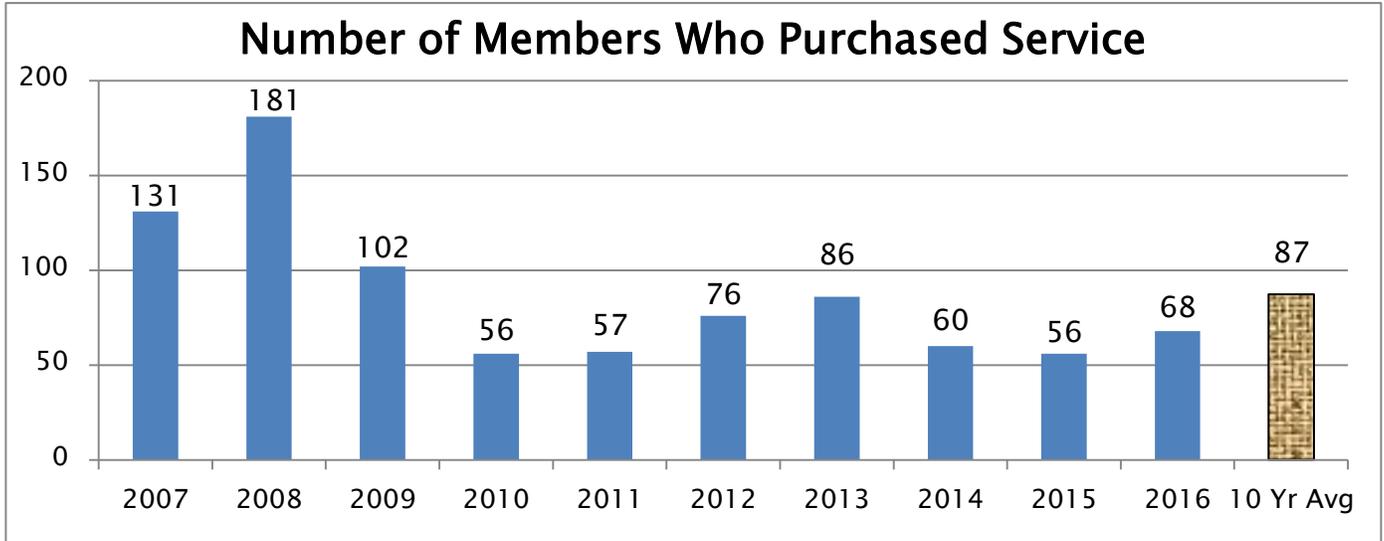
- >Participation in Outreach Programs
- >Service Purchase Statistics
- >Active Membership Tier Statistics
- >Service Retiree History & Option Usage
- >Retiree Statistics
- >Disability Retirements
- >Re-Employed Retirees
- >Employer History & Current Employer Payment Model Statistics

Participation in Outreach Programs

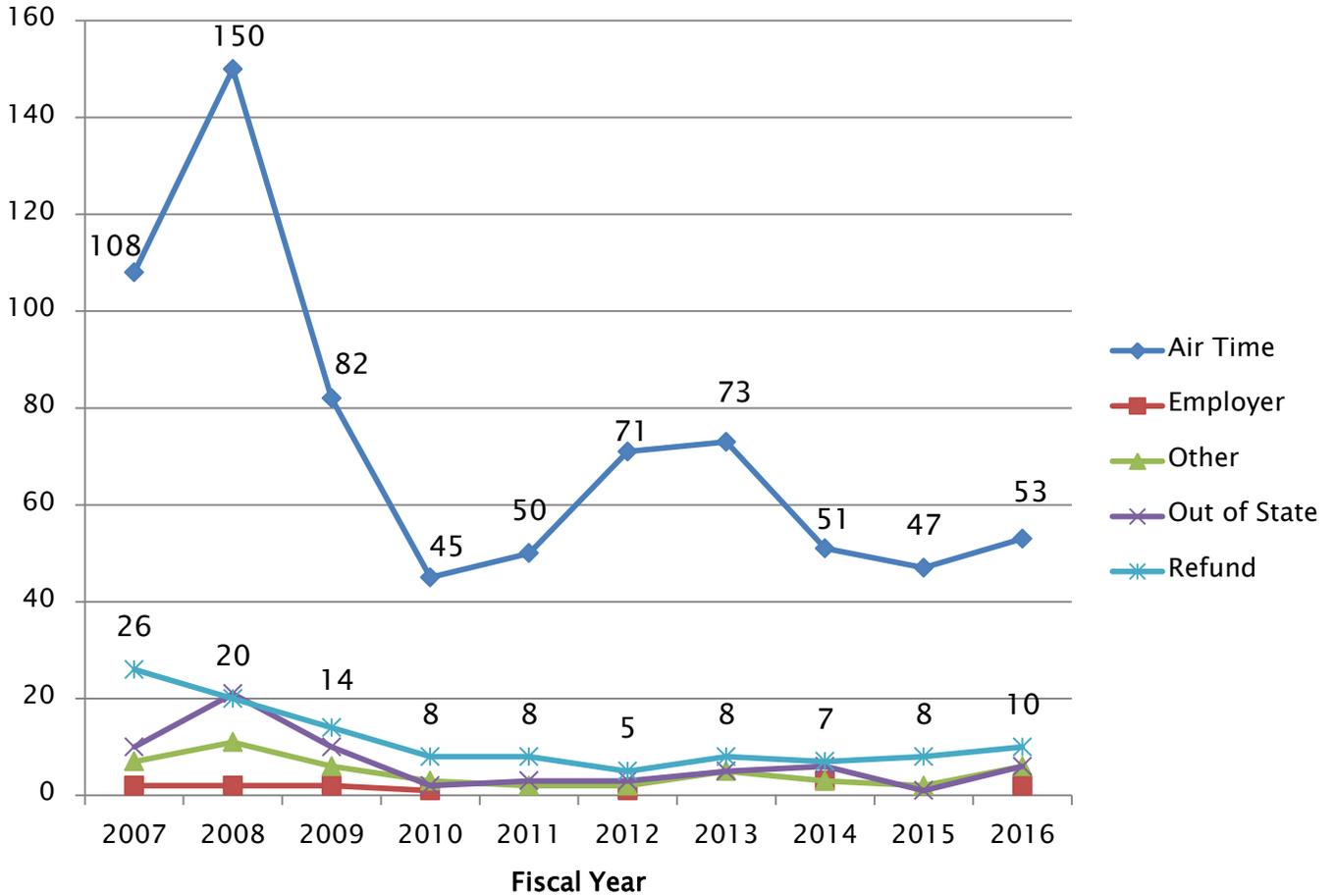


Note: 2012 – Legislation implementation year – fewer programs offered
2016 – New retirement counselor in training – fewer programs offered.

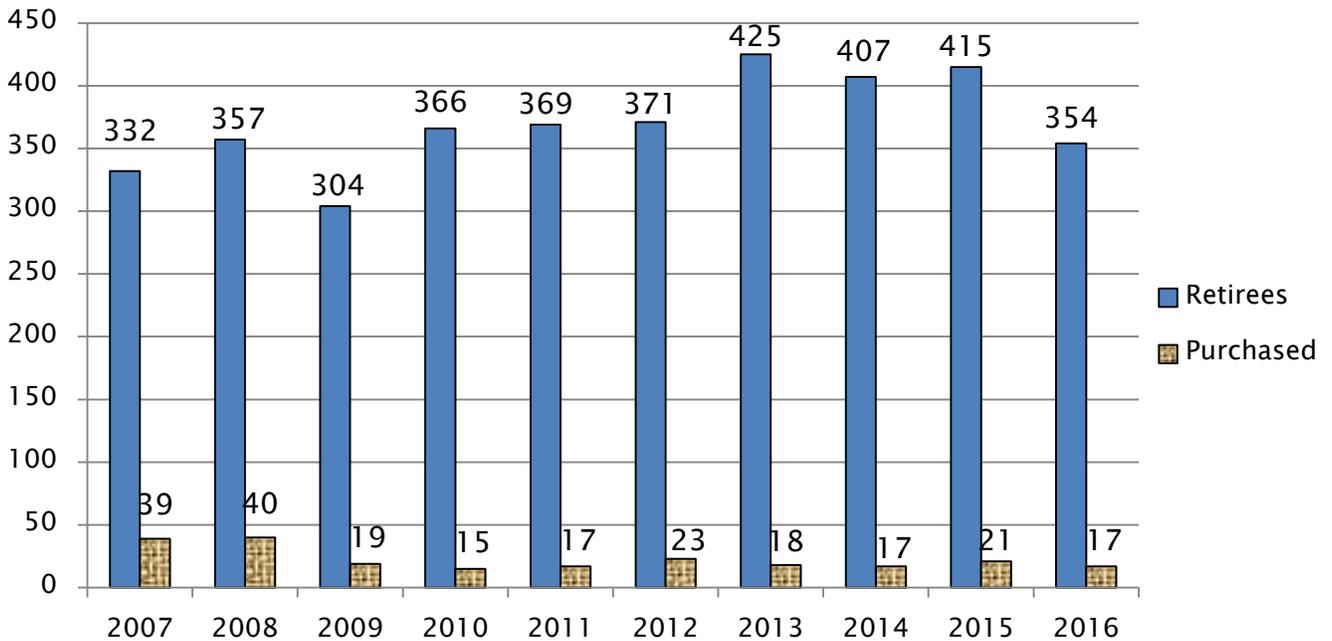
Service Purchase Statistics - 2016



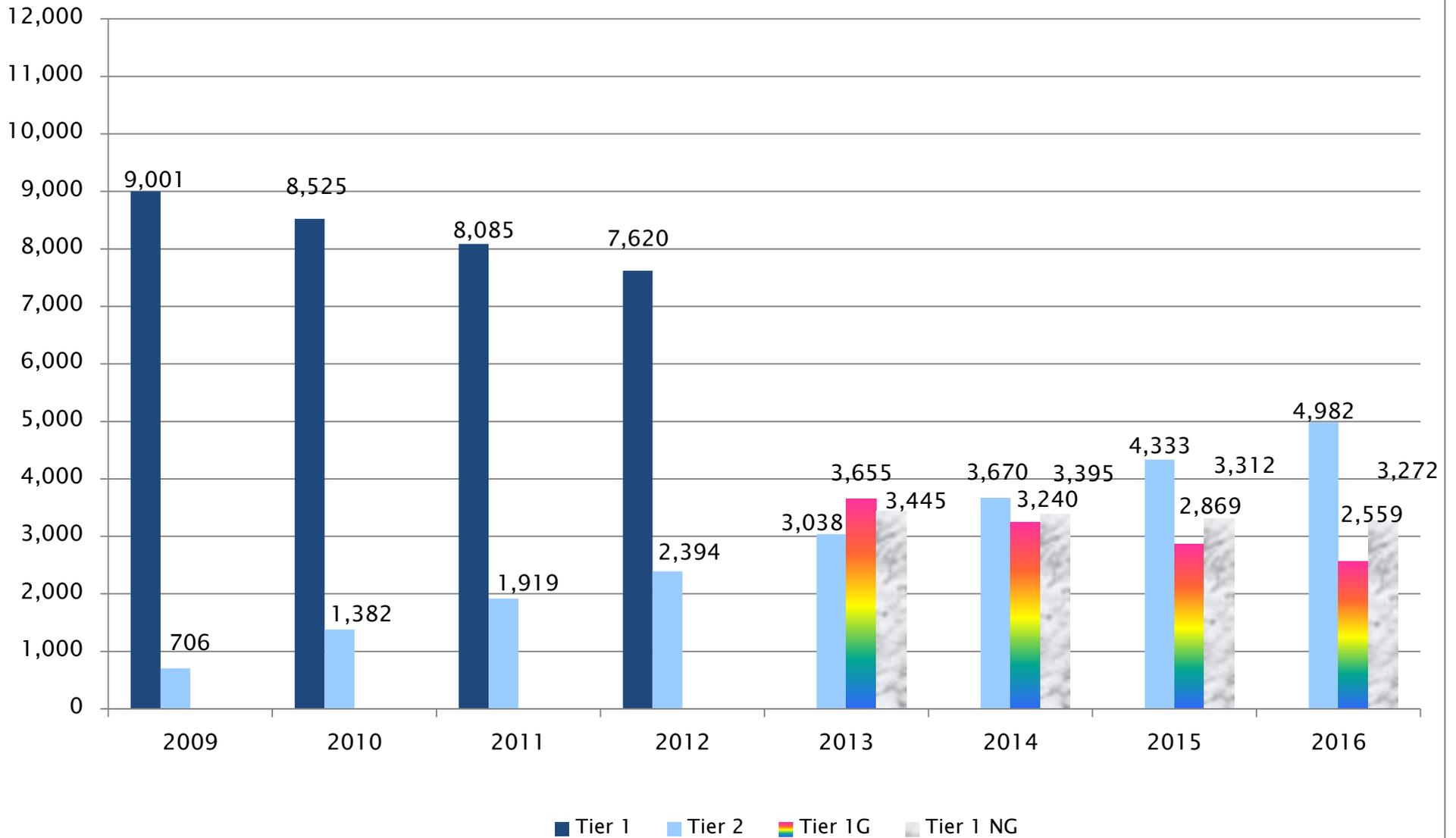
Purchase by Type



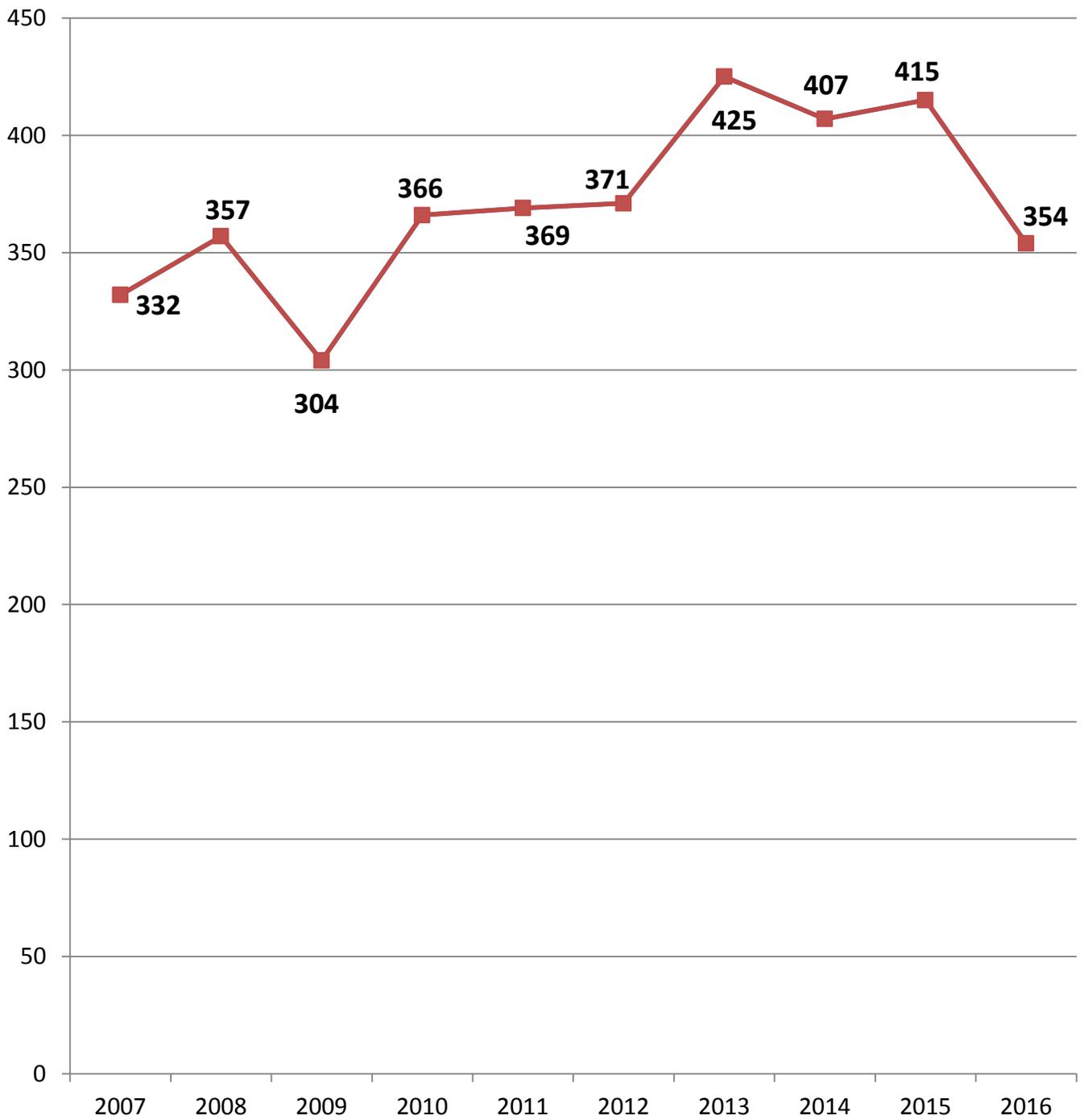
Retired/Purchased Same Fiscal Year



ACTIVE MEMBERSHIP TIER STATISTICS



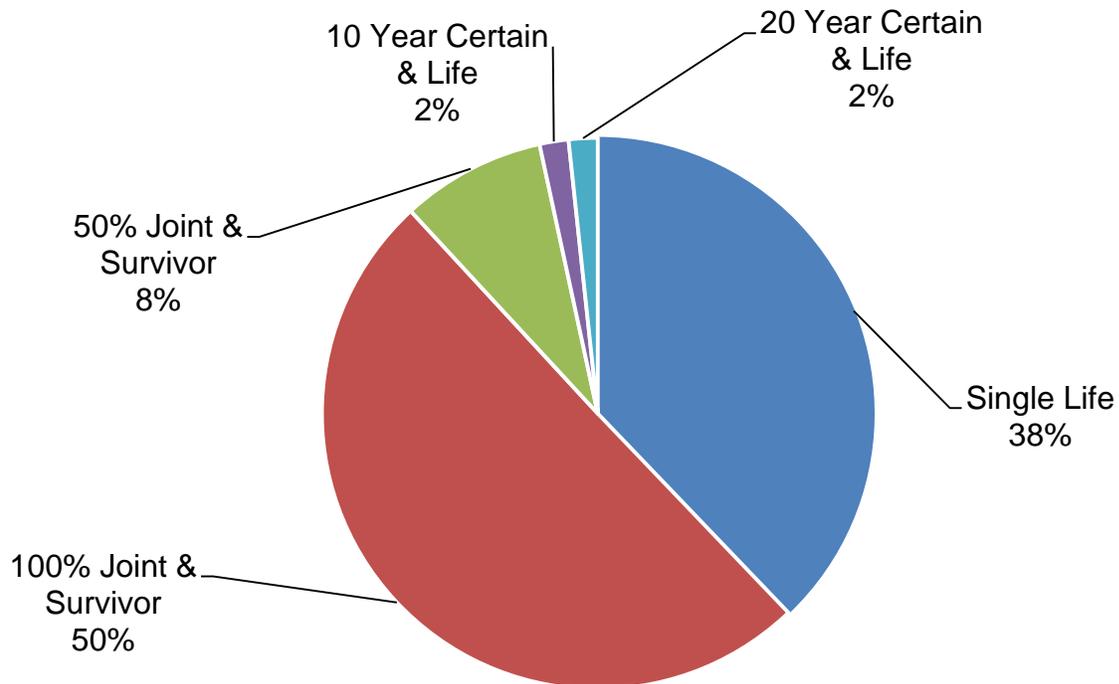
Service Retirees by Fiscal Year



Service Retirement Options

2015-16

Retirement Option	Number
Single Life	134
100% Joint & Survivor	178
50% Joint & Survivor	30
10 Year Certain & Life	6
20 Year Certain & Life	6
Total	354



Note: Of total, 2 members (<1%) selected level income option.

Of total, 24 members (7%) selected partial lump sum option.

TFFR RETIREE STATISTICS

OCTOBER 2016

Data Selection

- 8,249 retired members and beneficiaries as of July 2016 based on data from the valuation file.
- Selected various categories of retiree data and grouped data 3 ways.

TFFR Retiree Statistics by Fiscal Year

<u>Fiscal Year of Retirement Ending June 30</u>	<u>Avg Monthly Pension</u>	<u>Avg Annual Salary</u>	<u>Avg Service Credit</u>	<u>Avg Retirement Age of Member</u>	<u>Avg Current Age of Recipient</u>	<u>Number of Retirees</u>
pre-1979	\$ 493	\$ 8,146	23.9	58.6	89.3	111
1980	\$ 627	\$ 12,415	28.7	59.9	92.4	20
1981	\$ 583	\$ 13,405	25.4	59.3	93.8	22
1982	\$ 722	\$ 19,190	27.0	60.7	93.1	25
1983	\$ 429	\$ 10,772	21.1	57.8	88.8	13
1984	\$ 845	\$ 20,715	30.5	62.0	91.1	60
1985	\$ 865	\$ 22,727	29.3	60.0	88.3	19
1986	\$ 1,028	\$ 25,501	32.2	61.7	90.8	85
1987	\$ 861	\$ 24,041	26.1	59.6	88.3	21
1988	\$ 1,049	\$ 26,234	29.2	60.8	87.9	110
1989	\$ 910	\$ 26,203	25.5	58.2	84.9	28
1990	\$ 1,117	\$ 27,618	29.7	59.6	84.9	220
1991	\$ 984	\$ 27,951	26.3	60.1	84.3	84
1992	\$ 1,229	\$ 31,067	30.2	59.3	82.5	162
1993	\$ 1,147	\$ 32,581	25.6	58.7	80.6	72
1994	\$ 1,274	\$ 31,924	28.1	59.6	82.0	257
1995	\$ 1,255	\$ 32,632	27.6	59.0	79.2	190
1996	\$ 1,273	\$ 32,954	27.2	58.5	78.4	157
1997	\$ 835	\$ 27,257	20.0	58.2	77.5	77
1998	\$ 1,495	\$ 34,302	29.0	59.0	77.3	327
1999	\$ 1,088	\$ 33,187	21.0	58.6	75.5	92
2000	\$ 1,683	\$ 37,668	29.1	58.8	75.2	399
2001	\$ 1,378	\$ 38,009	23.1	57.3	72.4	80
2002	\$ 1,744	\$ 39,274	28.3	58.3	72.7	482
2003	\$ 1,734	\$ 40,554	27.2	58.2	71.4	280
2004	\$ 1,797	\$ 41,523	27.6	58.3	70.4	349
2005	\$ 1,922	\$ 43,294	27.7	58.5	69.7	351
2006	\$ 1,931	\$ 44,644	27.4	58.9	68.8	365
2007	\$ 2,064	\$ 47,581	27.5	58.9	67.5	360
2008	\$ 1,987	\$ 45,965	26.3	59.4	67.7	362
2009	\$ 2,133	\$ 49,357	27.1	59.2	66.4	341
2010	\$ 2,153	\$ 50,074	26.2	60.4	66.5	334
2011	\$ 2,211	\$ 51,202	26.1	60.5	65.7	399
2012	\$ 2,330	\$ 53,759	26.7	60.7	64.8	368
2013	\$ 2,621	\$ 58,177	27.6	60.6	63.8	460
2014	\$ 2,629	\$ 58,976	27.7	61.2	63.5	419
2015	\$ 2,614	\$ 58,681	27.3	60.9	62.2	383
2016	\$ 2,903	\$ 65,737	27.2	61.3	61.5	341
2017	\$ 3,983	\$ 90,174	29.3	59.4	59.3	24
All FY	\$ 1,891	\$ 43,907	27.4	59.6	71.3	8,249

Note: 2017 is a partial year (24 retirees) and includes July 1, 2016 retirees. These retirees averages are higher since count includes p rimary administrators, with some summer school, deferred, disability, and survivors.

TFFR Retiree Statistics by Formula

<u>Fiscal Year of Retirement Ending June 30</u>	<u>Avg Monthly Pension</u>	<u>Avg Annual Salary</u>	<u>Avg Service Credit</u>	<u>Avg Retirement Age of Member</u>	<u>Avg Current Age of Recipient</u>	<u>Number of Retirees</u>
Old formulas	\$ 493	\$ 8,146	23.9	58.6	89.3	111
1979-1983 or 1.00%	\$ 612	\$ 14,537	26.1	59.6	92.4	80
1983-1985 or 1.05%	\$ 850	\$ 21,199	30.2	61.5	90.4	79
1985-1987 or 1.15%	\$ 995	\$ 25,212	31.0	61.3	90.3	106
1987-1989 or 1.22%	\$ 1,021	\$ 26,228	28.5	60.3	87.3	138
1989-1991 or 1.275%	\$ 1,080	\$ 27,710	28.8	59.7	84.7	304
1991-1993 or 1.39%	\$ 1,204	\$ 31,533	28.8	59.1	81.9	234
1993-1997 or 1.55%	\$ 1,219	\$ 31,831	26.9	59.0	79.9	681
1997-1999 or 1.75%	\$ 1,406	\$ 34,057	27.2	58.9	76.9	419
1999-2001 or 1.88%	\$ 1,632	\$ 37,725	28.1	58.5	74.7	479
2001-present or 2.00%	\$ 2,203	\$ 50,255	27.2	59.7	66.8	5,618
All Formulas	\$ 1,891	\$ 43,907	27.4	59.6	71.3	8,249

TFFR Retiree Statistics By Retirement Type

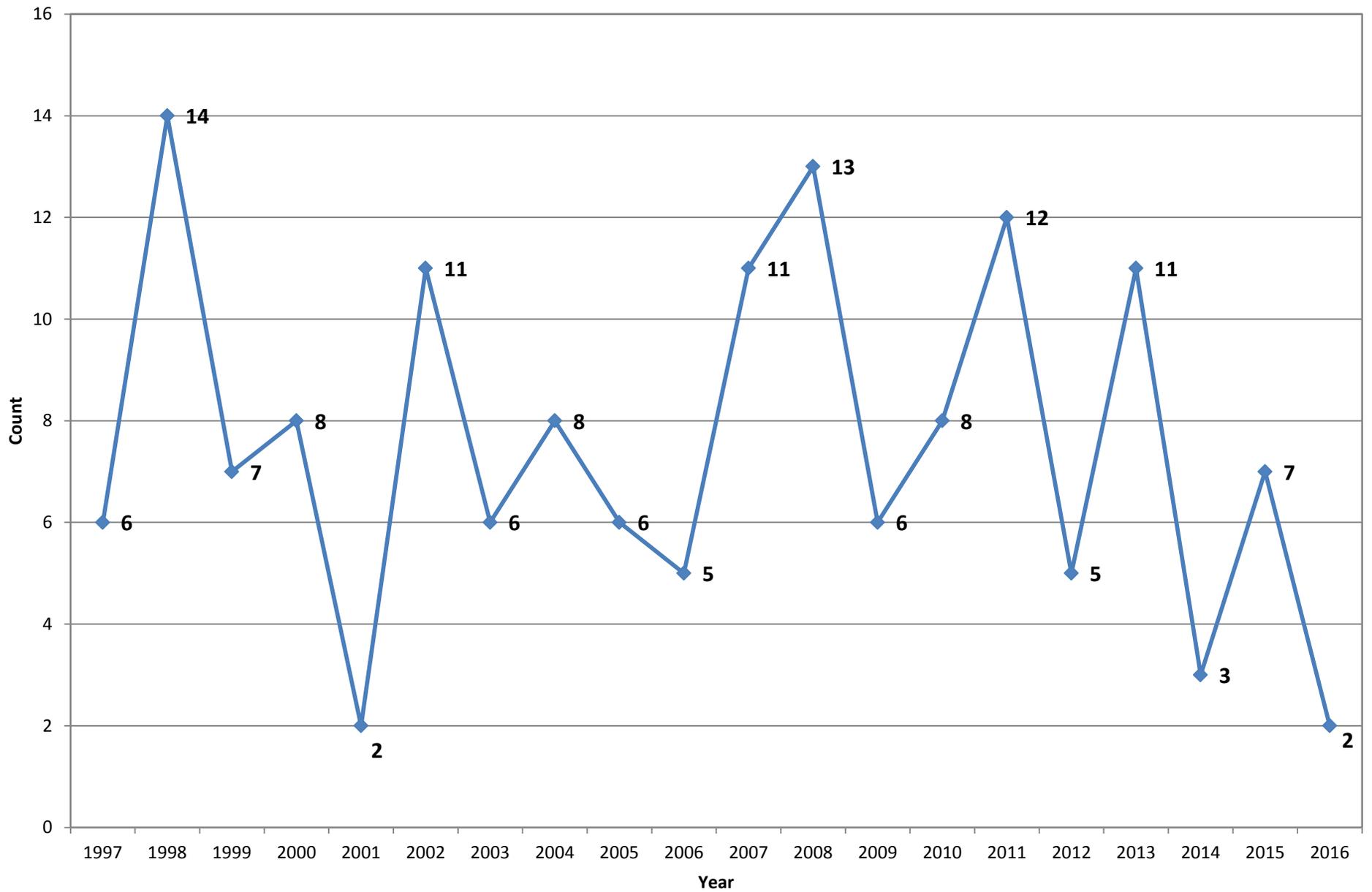
<u>Type</u>	<u>Avg Monthly Pension</u>	<u>Avg Annual Salary</u>	<u>Avg Service Credit</u>	<u>Avg Retirement Age of Member</u>	<u>Avg Current Age of Recipient</u>	<u>Number of Retirees</u>
Death	\$ 1,224	\$ 35,171	27.9	59.0	74.1	664
Disability	\$ 1,228	\$ 37,547	15.1	50.2	62.7	128
Early	\$ 674	\$ 33,040	14.8	60.2	72.3	951
Normal	\$ 2,156	\$ 46,508	29.5	59.7	71.1	6,484
QDRO	\$ 679	\$ 47,626	10.1	57.2	68.0	22
All Types	\$ 1,891	\$ 43,907	27.4	59.6	71.3	8,249

Disability Summary -- 1997 - 2016

• Total disabilities approved since 1997 - 2016	151*
Of 151, number of physical health disabilities:	131
Of 151, number of mental health disabilities:	20
• Average number of disabilities approved per year:	8
• Of 151, number that are living and drawing benefits:	101
Of 151, number that are living and returned to work:	6
Of 151, number that are deceased:	44
• Of 151, option selected was:	
Count of Single Life:	99
Count of 100% Joint & Survivor:	33
Count of 50% Joint & Survivor:	13
Count of 5 Year Certain & Life:	1
Count of 10 Year Certain & Life:	4
Count of 20 Year Certain & Life:	1
• Of 101 living and drawing benefits:	
Average service credit in years:	15.3
Average age in years:	61
Average monthly benefit:	\$1,351
Average years benefit was received:	9.9
• Of 6 living and returned to work:	
Average service credit in years:	17.2
Average age in years:	58
Average monthly benefit:	\$1,445
Average years benefit was received:	4.1

*Approved disabilities removed from total if they returned to employment then refunded or retired.

Disabilities By Year



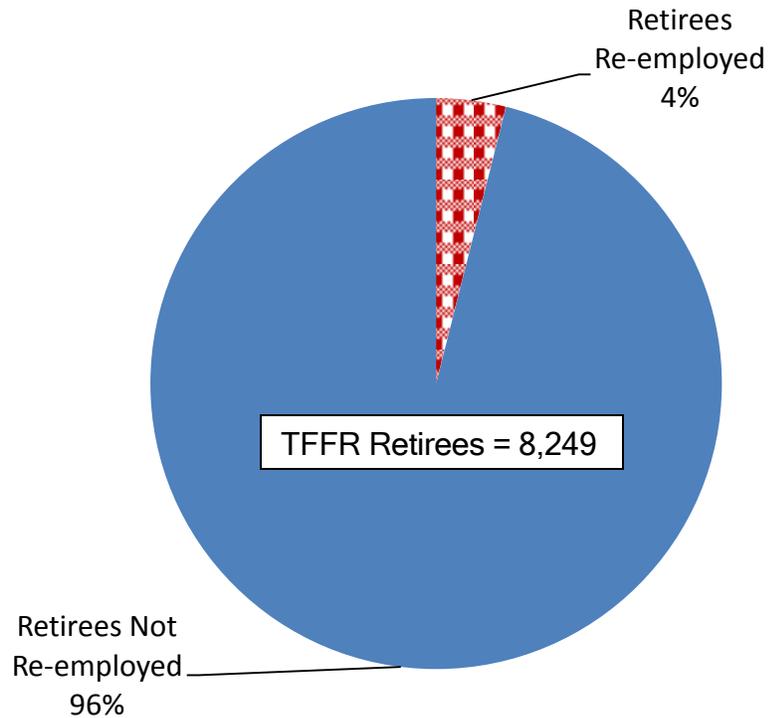
TFFR RE-EMPLOYED RETIREE REPORT 2015-16

Total number of Re-employed Retirees: 328

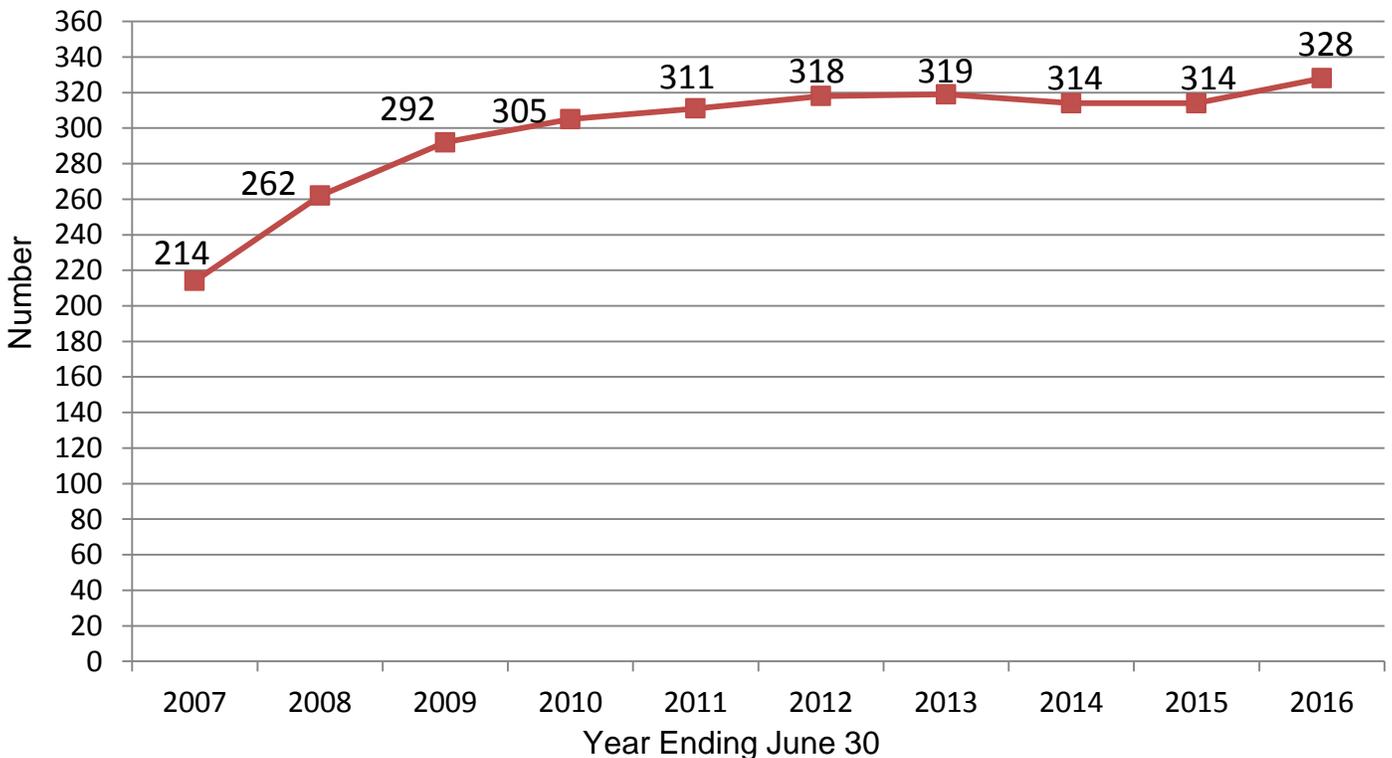
Superintendents	22
Administrators	29
Teachers	<u>277</u>

General Rule	289
Critical Shortage Area	38
Suspend and Recalculate	<u>1</u>

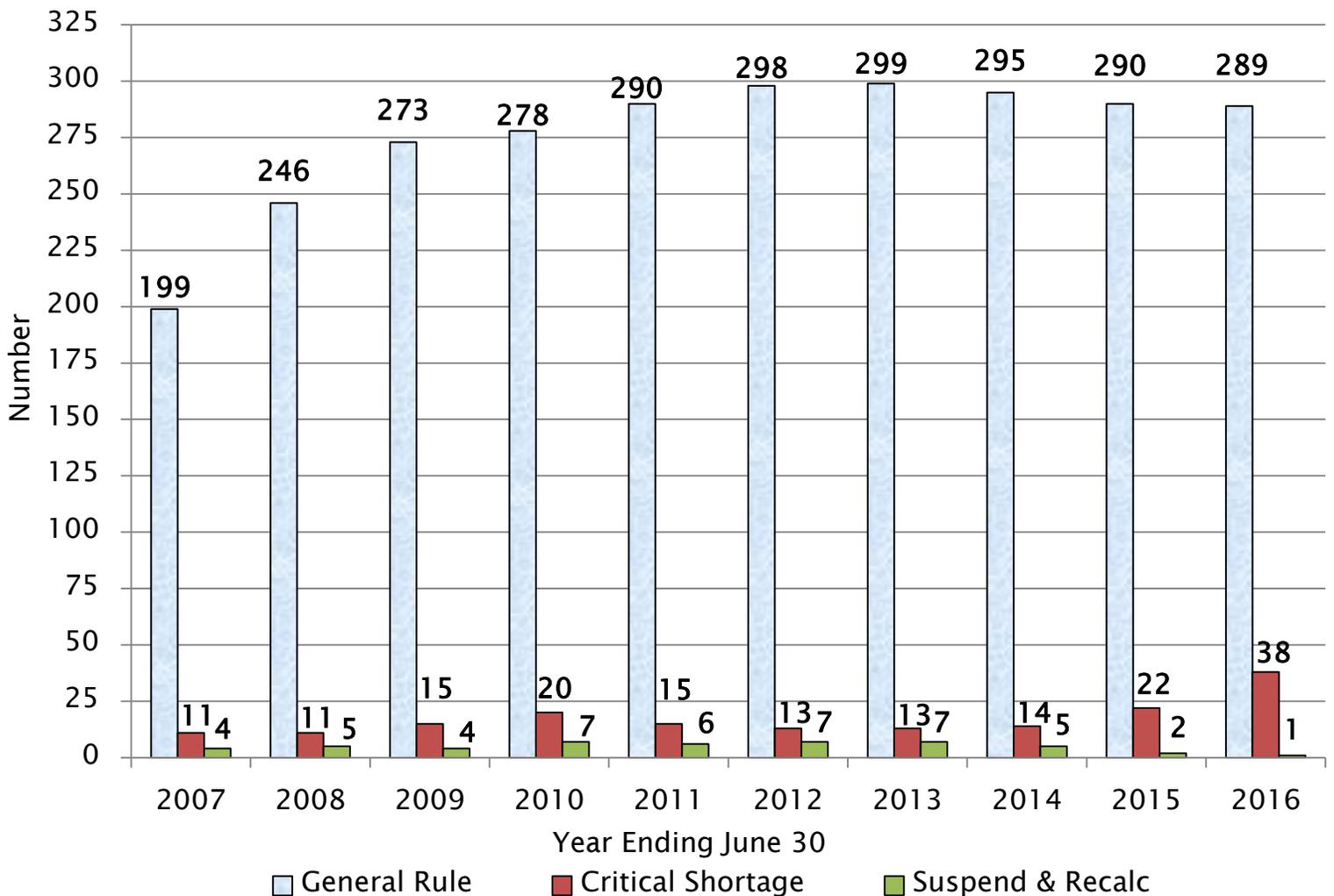
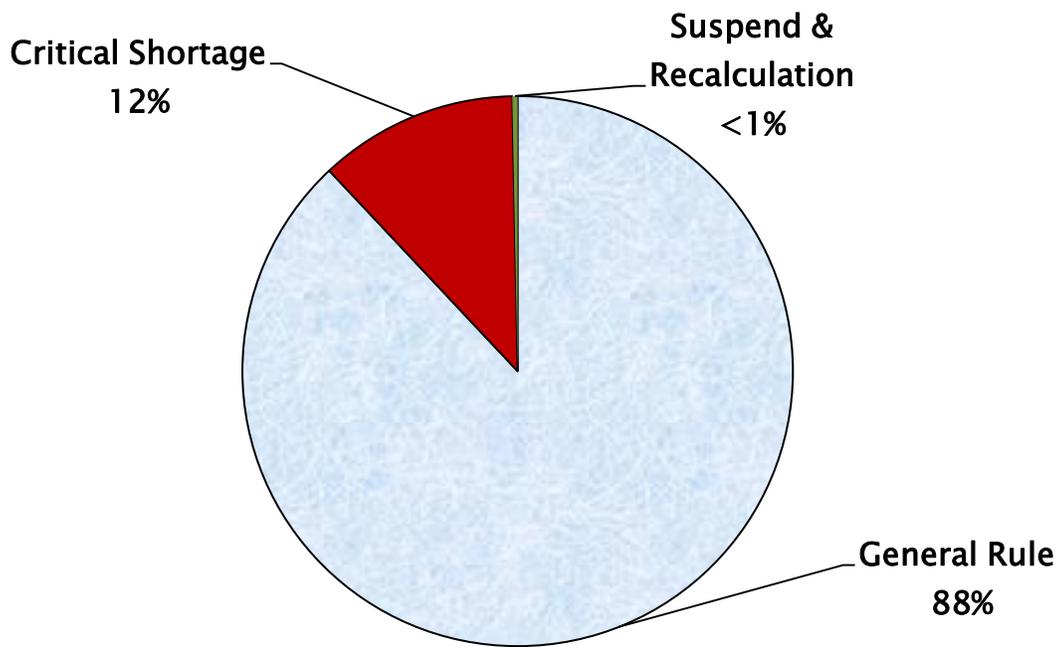
Average Age	63
Average Salary	\$27,800
Total Salaries	\$9,114,418
No. Employers w/retirees	141



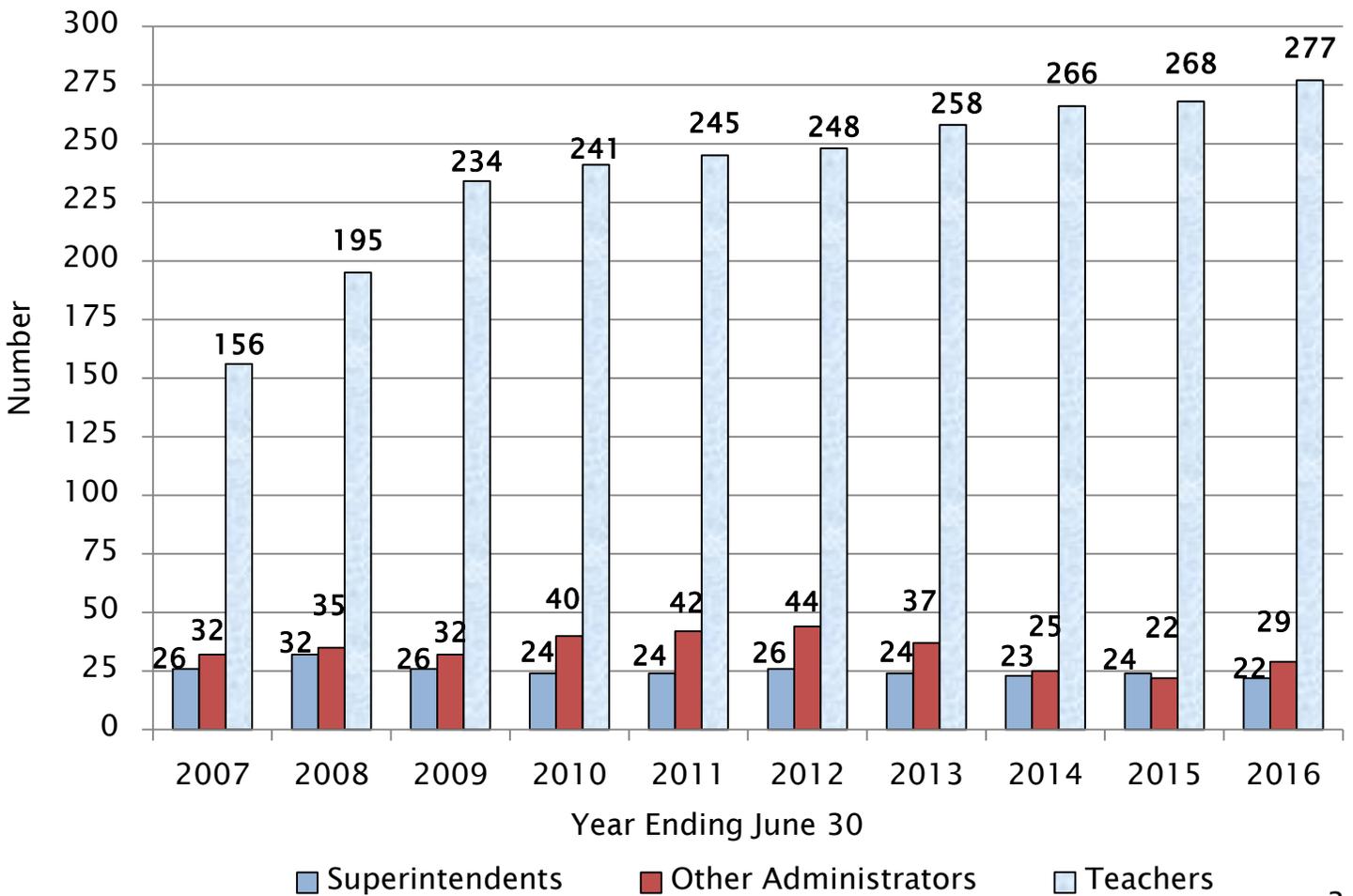
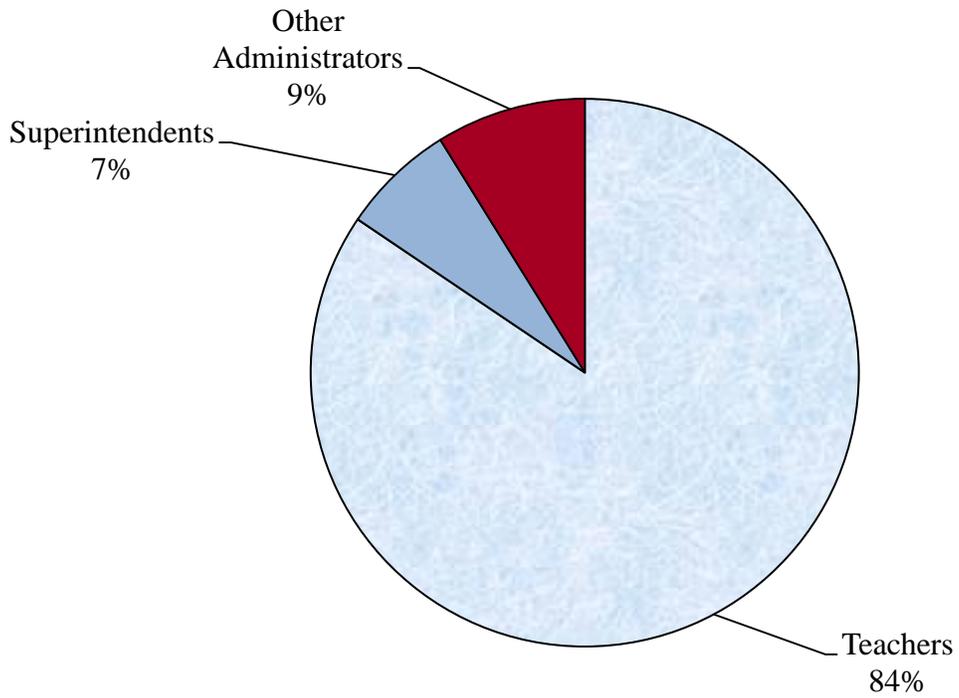
TFFR RE-EMPLOYED RETIREES 10 YRS. ENDING 6-30-16



TFFR RE-EMPLOYED RETIREES BY OPTION 2015-16



TFFR RE-EMPLOYED RETIREES BY JOB TYPE 2015-16



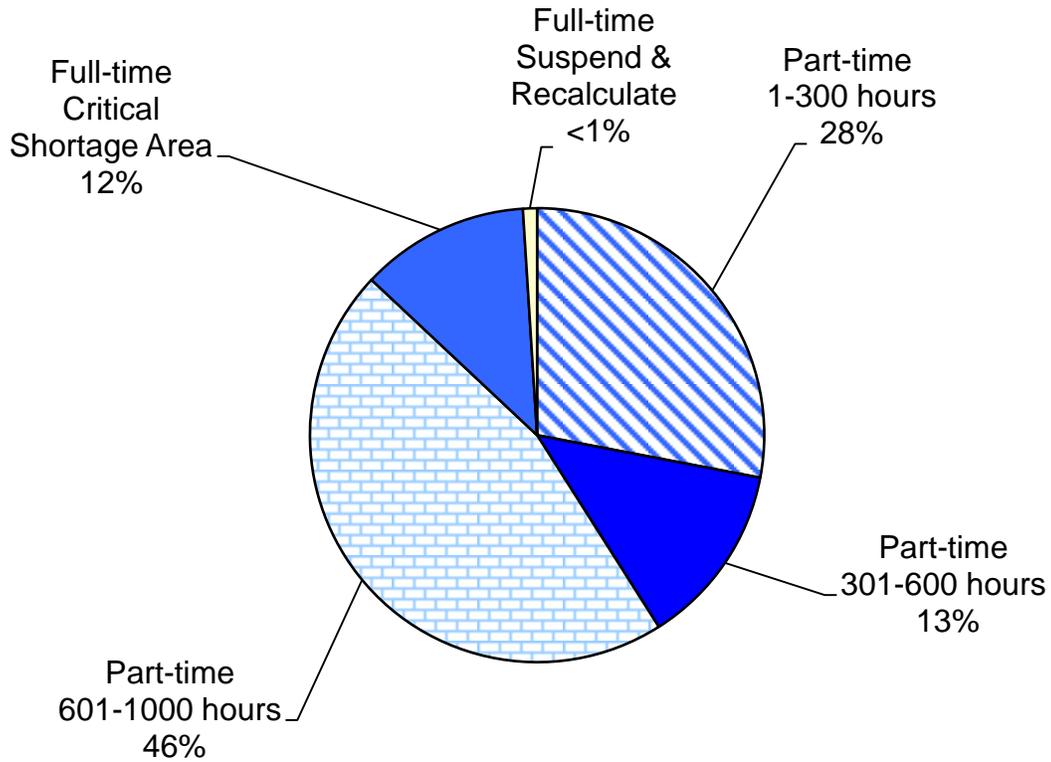
TFFR RE-EMPLOYED RETIREES BY SUBJECT/POSITION 2015-16

<u>Subject or Position</u>	<u>Re-employed Retirees</u>		
	Full Time CSA/SR	Part Time Gen Rule	Total
Art	1	5	6
Business	3	11	14
Counseling	3	9	12
Elementary Ed	7	25	32
English/Reading	3	10	13
Extra-Curricular		23	23
FACS		9	9
Foreign Language		4	4
Health/Phy Ed	1	4	5
Library/Media	1	6	7
Math	3	9	12
Mentors, Strategists, Prof. Dev.	1	18	19
Music	2	7	9
Science	3	10	13
Social Studies/History		6	6
*Special Ed/Title/LD/Speech	6	44	50
Summer School/Driver's Ed		19	19
Tech Coordination/Tech Ed	1	8	9
Voc Ed/Adult Ed		9	9
Other Teachers	<u>2</u>	<u>4</u>	<u>6</u>
Total Retired Teachers	37	240	277
Superintendent	1	21	22
Principal/Asst Supt	1	12	13
Director/Coordinator	<u> </u>	<u>16</u>	<u>16</u>
Total Retired Administrators	<u>2</u>	<u>49</u>	<u>51</u>
Total Re-Employed Retirees	39	+ 289	= 328
(7 teaching in 2 school districts)			

*Special Ed:	
LD	2
Speech Path/Ther	10
Spec Ed	20
Title	16
Vision Impair	2

CSA = Critical Shortage Area
SR = Suspend & Recalc

TFFR RE-EMPLOYED RETIREES BY HOURS CONTRACTED 2015-16



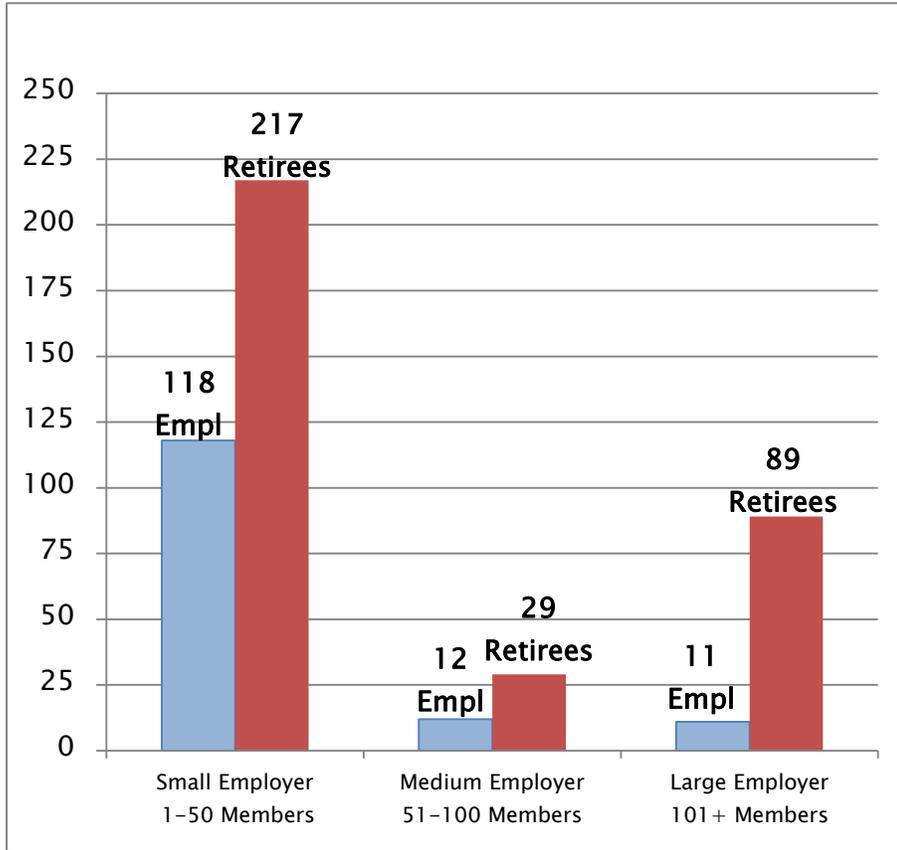
<u>Hours Contracted</u>	<u>Re-employed Retirees</u>	
Part Time – General Rule	Number	Percent
1 – 300 hours	93	28
301 – 600 hours	44	13
601 – 1000 hours	152	46
Full Time		
Critical Shortage Area	38	12
Suspend & Recalculate	<u>1</u>	<u><1</u>
Total Re-employed Retirees	328	100%
(7 teaching in 2 districts)		

TFFR RE-EMPLOYED RETIREES BY EMPLOYER 2015-2016

School Districts	#	School Districts	#	School Districts	#
Alexander		Glenburn	3	Midkota	4
Anamoose	1	Goodrich	3	Midway	2
Apple Creek Elementary		Grafton	1	Milnor	1
Ashley	1	Grand Forks	21	Minnewauken	2
Bakker Elementary		Grenora		Minot	3
Barnes County North	1	Griggs County Central	2	Minto	1
Beach	2	Halliday	1	Mohall-Lansford-Sherwood	1
Belcourt	3	Hankinson		Montpelier	
Belfield	4	Harvey	1	Mott-Regent	2
Beulah	4	Hatton Eielson	2	Mt. Pleasant	3
Billings County School	2	Hazelton-Moffit		Munich	3
Bismarck	19	Hazen	2	Napoleon	2
Bottineau	5	Hebron	2	Naughton Rural	1
Bowbells		Hettinger	1	Nedrose	1
Bowman	2	Hillsboro		Nesson	1
Burke Central	1	Hope	1	New Elementary	
Carrington	2	Horse Creek Elementary		New England	4
Cavalier	2	Jamestown	1	New Rockford-Sheyenne	1
Center-Stanton		Kenmare		New Salem-Almont	2
Central Cass		Kensal	2	New Town	1
Central Elementary	1	Kidder County School Dist.	1	Newburg United	1
Central Valley	2	Killdeer	2	North Border School	6
Dakota Prairie	2	Kindred		North Sargent	
Devils Lake	1	Kulm	2	North Star-Cando	4
Dickinson		Lakota	1	Northern Cass	
Divide County	1	LaMoure		Northwood	3
Drake	1	Langdon		Oakes	1
Drayton	4	Larimore	2	Oberon Elementary	
Dunseith	1	Leeds		Page	
Earl Elementary		Lewis and Clark	4	Park River	4
Edgeley		Lidgerwood	1	Parshall	2
Edmore	1	Linton		Pingree-Buchanan	1
Eight Mile		Lisbon	2	Powers Lake	4
Elgin/New Leipzig	1	Litchville-Marion		Richardton-Taylor	2
Ellendale		Little Heart Elementary		Richland	
Emerado Elementary	1	Lone Tree Elementary		Rolette	2
Enderlin Area School		Maddock		Roosevelt-Carson	
Fairmount	1	Mandan	5	Rugby	
Fargo	20	Mandaree		Sargent Central	
Fessenden-Bowdon	3	Manning Elementary		Sawyer	1
Finley-Sharon	1	Manvel Elementary	1	Scranton	
Flasher		Maple Valley	3	Selfridge	2
Fordville Lankin	1	Mapleton Elementary		Solen-Canonball	2
Fort Ransom Elementary	1	Marmarth Elementary	1	South Heart	1
Fort Totten	4	Max	2	South Prairie Elementary	1
Fort Yates	2	Mayville-Portland CG	1	St. John's School	6
Gackle-Streeter	1	McClusky	1	St. Thomas	3
Garrison	2	McKenzie County School Dist	1	Stanley	
Glen Ullin		Medina			
		Menoken Elementary			

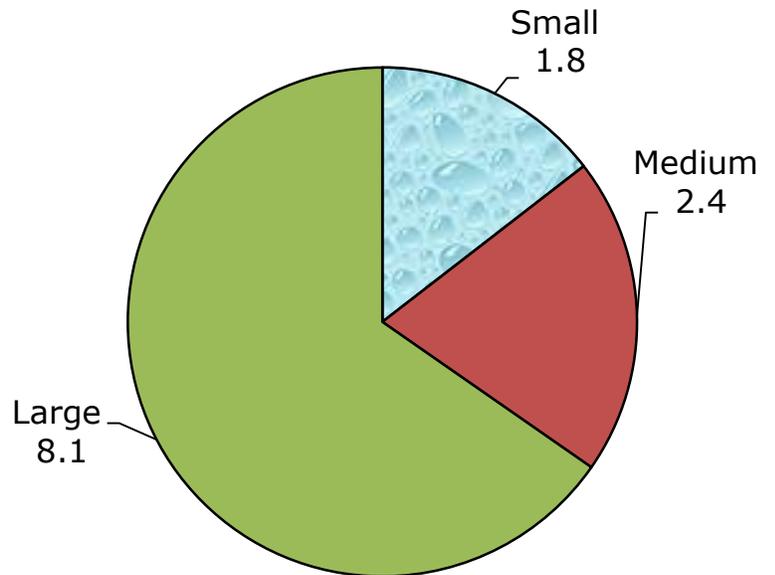
School Districts (cont)	#	Special Education Units		Other	
Starkweather	2	Burleigh County Special Ed	2	Great NW Education Co-op	1
Sterling Elementary	2	East Central Special Ed	2	ND United	
Strasburg	1	GST Educational	2	Rough Rider Ed Services	
Surrey	1	James River Special Ed			
Sweet Briar Elementary		Lake Region Special Ed			
TGU	2	Lonetree Special Ed	1		
Thompson		Northern Plains Special Ed			
Tioga	1	Oliver-Mercer Special Ed			
Turtle Lake-Mercer	4	Peace Garden Special Ed	1		
Twin Buttes Elementary	1	Pembina Special Ed		Total TFFR Participating	
Underwood	1	Rural Cass County Special Ed	1	Employers	214
United		Sheyenne Valley Special Ed			
Valley-Edinburg	3	Souris Valley Special Ed			
Valley City	1	South Central Prairie Sp Ed	1	141 Employers Employing	
Velva	2	South Valley Special Ed		TFFR Retirees (66%)	
Wahpeton	1	Southwest Special Ed			
Warwick	2	Upper Valley Special Ed	3		
Washburn	4	West River Student Services	1	328 TFFR Retirees Employed	
West Fargo	8	Wil-Mac Special Ed	3	(7 retirees working in 2	
Westhope	1			school districts)	
White Shield					
Williston	7				
Wilton		Vocational Centers			
Wing	1	N Central Area Career & Tech			
Wishek		N Valley Career & Tech Ctr			
Wolford	4	Roughrider Area Career/Tech	1		
Wyndmere	1	SE Region Career & Tech Ctr	1		
Yellowstone		Sheyenne Valley Area Voc Ctr			
Zeeland	1				
County Superintendents		State Agencies & Institutions			
Logan County		ND Center for Distance Ed	4		
McKenzie County		ND Dept of Public Instruction			
Morton County	1	ND School for the Blind	2		
Nelson County		ND School for the Deaf	1		
Slope County		ND Youth Correctional Center	1		
Ward County					

TFFR RE-EMPLOYED RETIREES BY EMPLOYER SIZE 2015-16



Empl Size	All Empl.	Empl w/ Re-empl Retirees	
Small	184	118	64%
Medium	18	12	67%
Large	12	11	92%
Total	214	141	66%

Employer Size	Re-empl Retirees	
Small	217	65%
Medium	29	8%
Large	89	27%
Total	335	100%

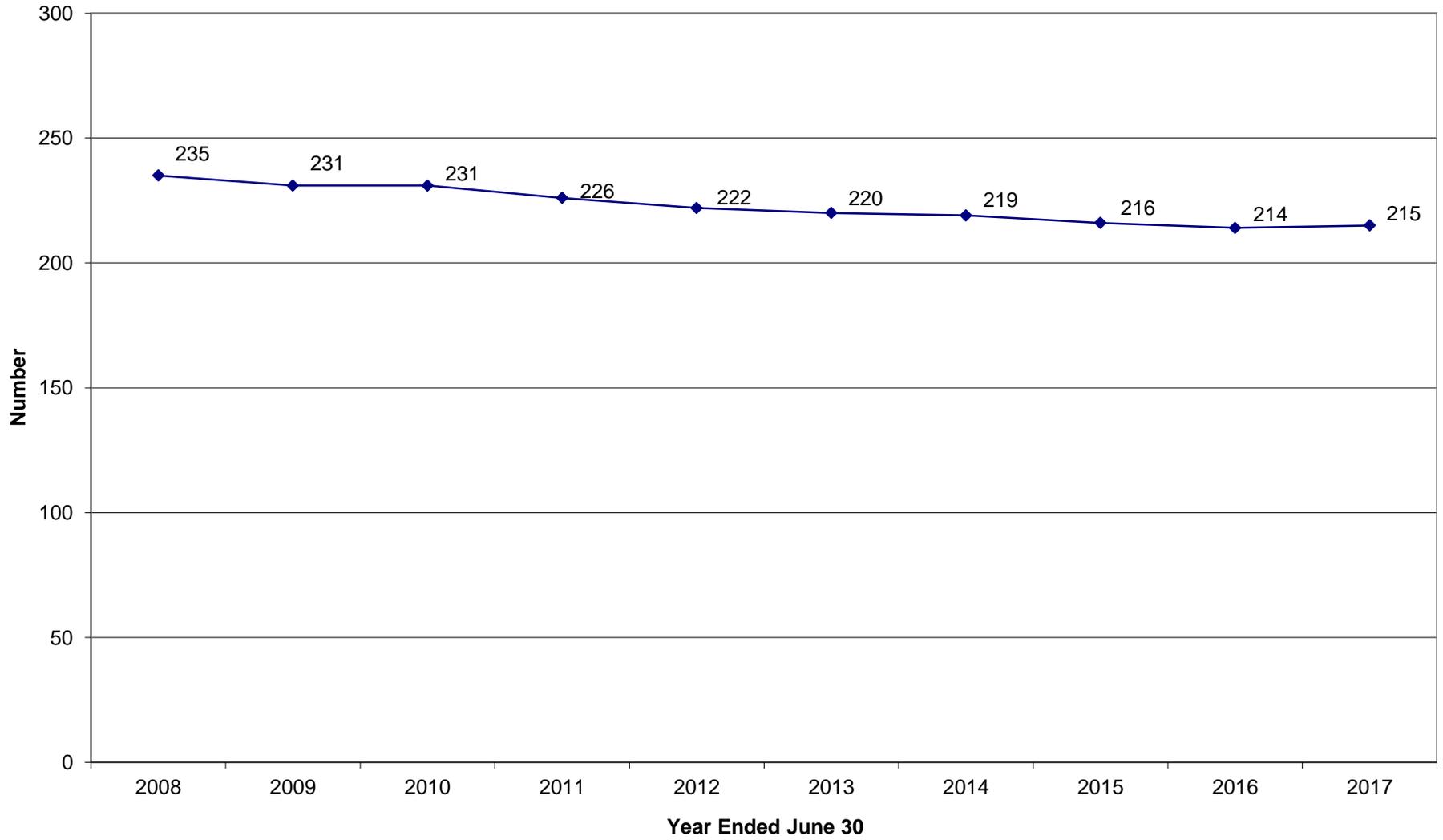


328 Retirees employed by 141 employers
(7 retirees working in 2 districts)

Average All = 2.4 retirees/employer

TFFR Participating Employers

2008 - Present

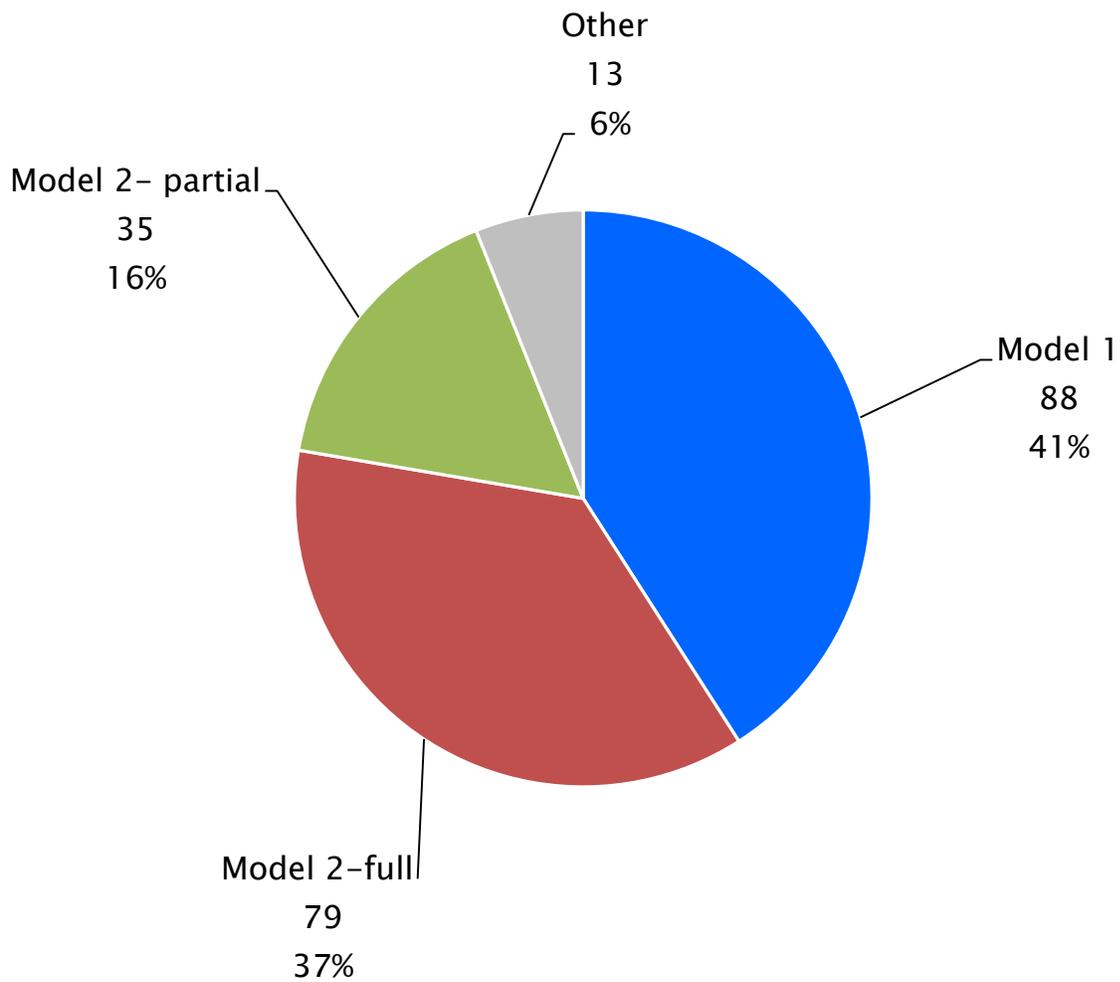


Model Usage 2016-2017

	Employers	
Model 1	88	41%
Model 2-full	79	37%
Model 2-partial	35	16%
Other	13	6%
Total	215	100%

Other includes Model 0, 3, 4

Model Usage – Employers – FY17



North Dakota Teachers' Fund for Retirement

Retirement Trends and Projections



January 2017

Retirement: Now or Later?

The decision to retire is prompted by both non-financial and financial reasons.

- ◆ **Non-financial considerations:**

- ◆ Health of teacher (and spouse)
- ◆ Family issues (spouse, children, parents)
- ◆ Personal reasons (job satisfaction vs. job stress)
- ◆ Federal regulations
- ◆ State and local issues (school closings, school consolidations)

- ◆ **Financial considerations:**

- ◆ Salary vs. Retirement benefits
- ◆ Health insurance benefits – rising cost of medical care
- ◆ Employment in retirement
- ◆ Inflation

TFFR Members



- ◆ TFFR member count includes number of people, not FTE's.
- ◆ TFFR members may be full time, part time, or temporary teachers, but must be licensed and contracted. Noncontracted substitute teachers are not TFFR members.

TFFR Member Categories

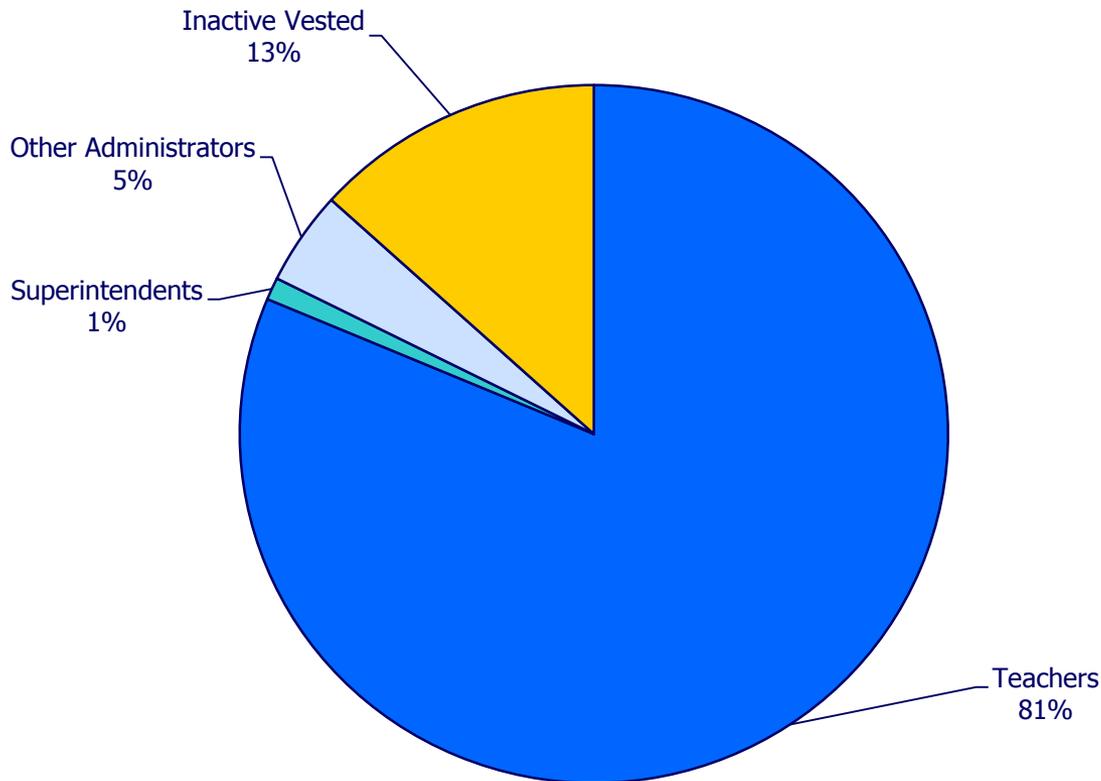
TFFR member categories are based on DPI title codes and presented according to teacher and administrator categories defined in NDCC 15.1-02-13.6.

- ◆ “Teacher” includes positions of teacher, special ed teacher, career advisor, coordinator, strategist, counselor, instructional coach, library media specialist, psychologist, and speech/language pathologist.
- ◆ “Superintendent” includes only school superintendents.
- ◆ “Other Administrators” includes positions of assistant superintendent, director, assistant director, principal, assistant principal, county superintendent, and other administrative positions.

Today

Current TFFR Membership

There are 12,664 active and inactive vested TFFR members in January 2017.



Teachers	10,298
Superintendents	131
Other Administrators	551
Inactive Vested	1,684
Total	12,664

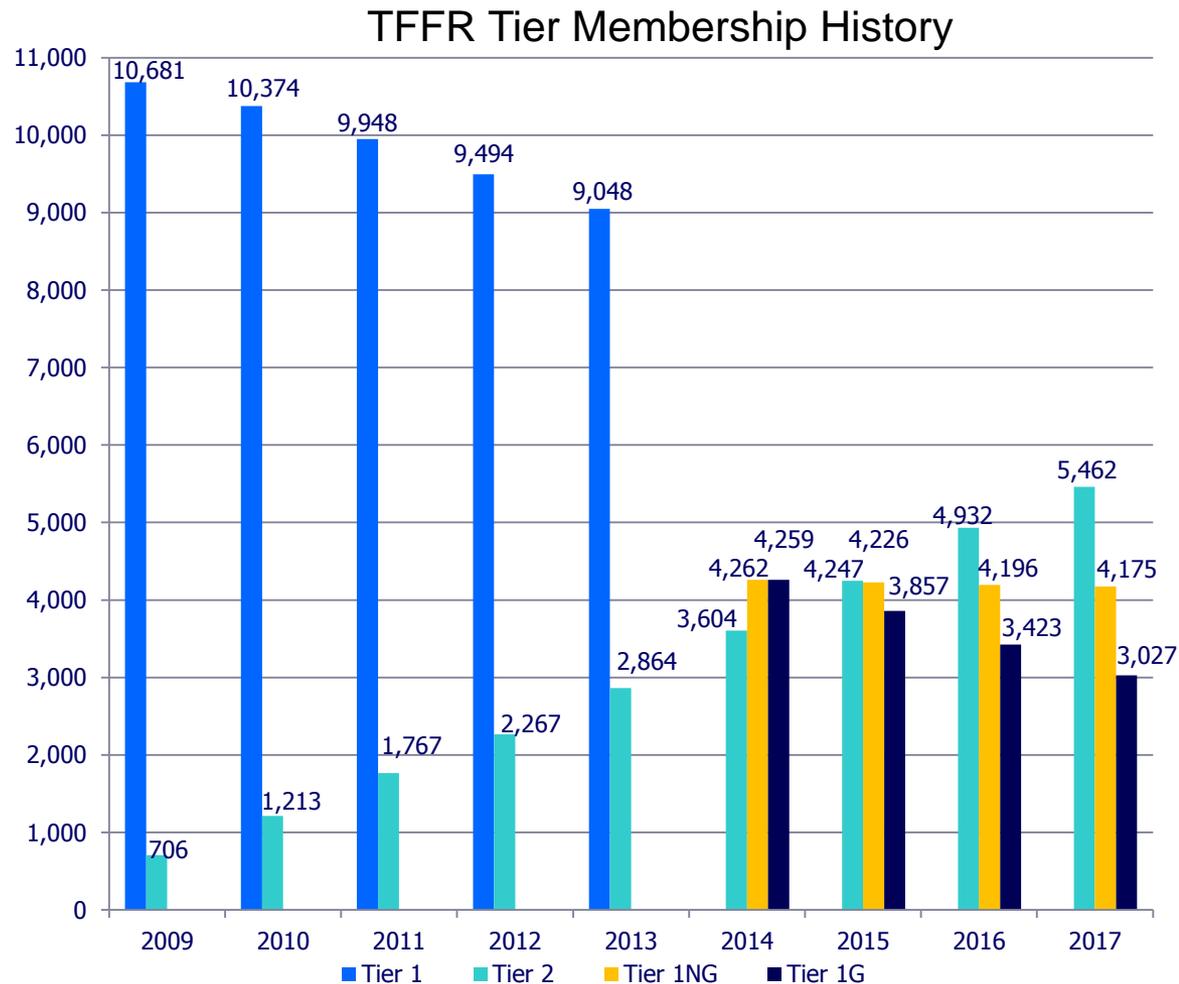
Note: There are also 968 inactive non-vested TFFR members and 8,265 retired members and beneficiaries.

Today

TFFR Tier Membership

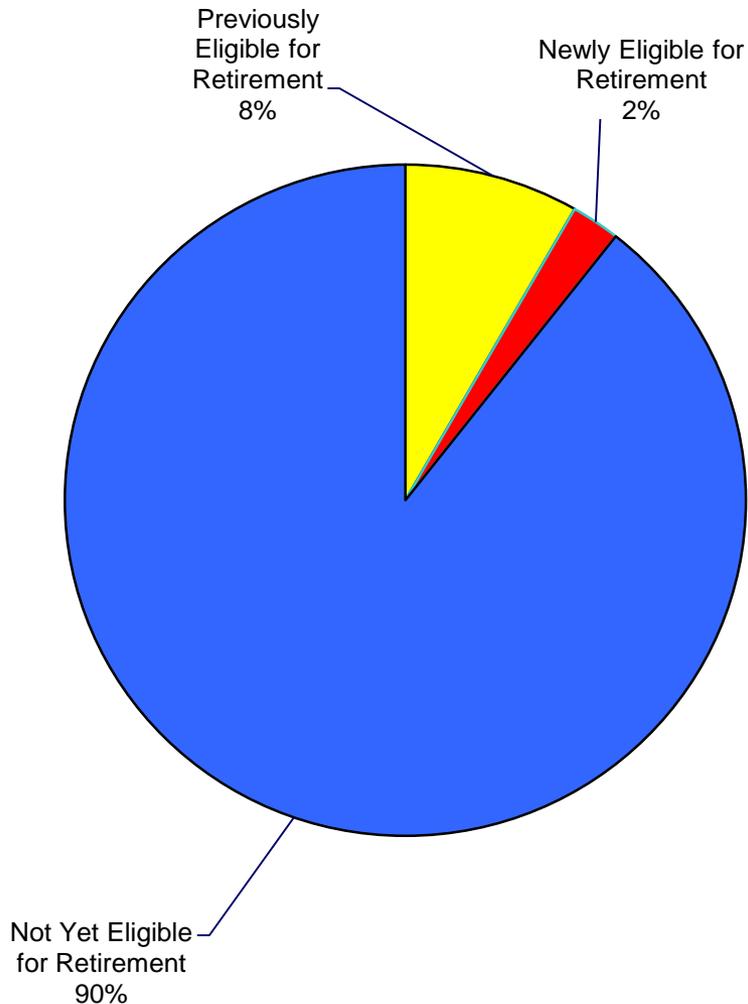
Active and inactive vested Tier membership in January 2017.

TFFR Members	Tier 1G	Tier 1NG	Tier 2	Total
Teachers	2,238	2,952	5,108	10,298
Superintendents	62	40	29	131
Other Administrators	178	239	134	551
Inactive Vested	549	944	191	1,684
Total	3,027	4,175	5,462	12,664



Today

Current Active TFFR Membership Eligible for Retirement



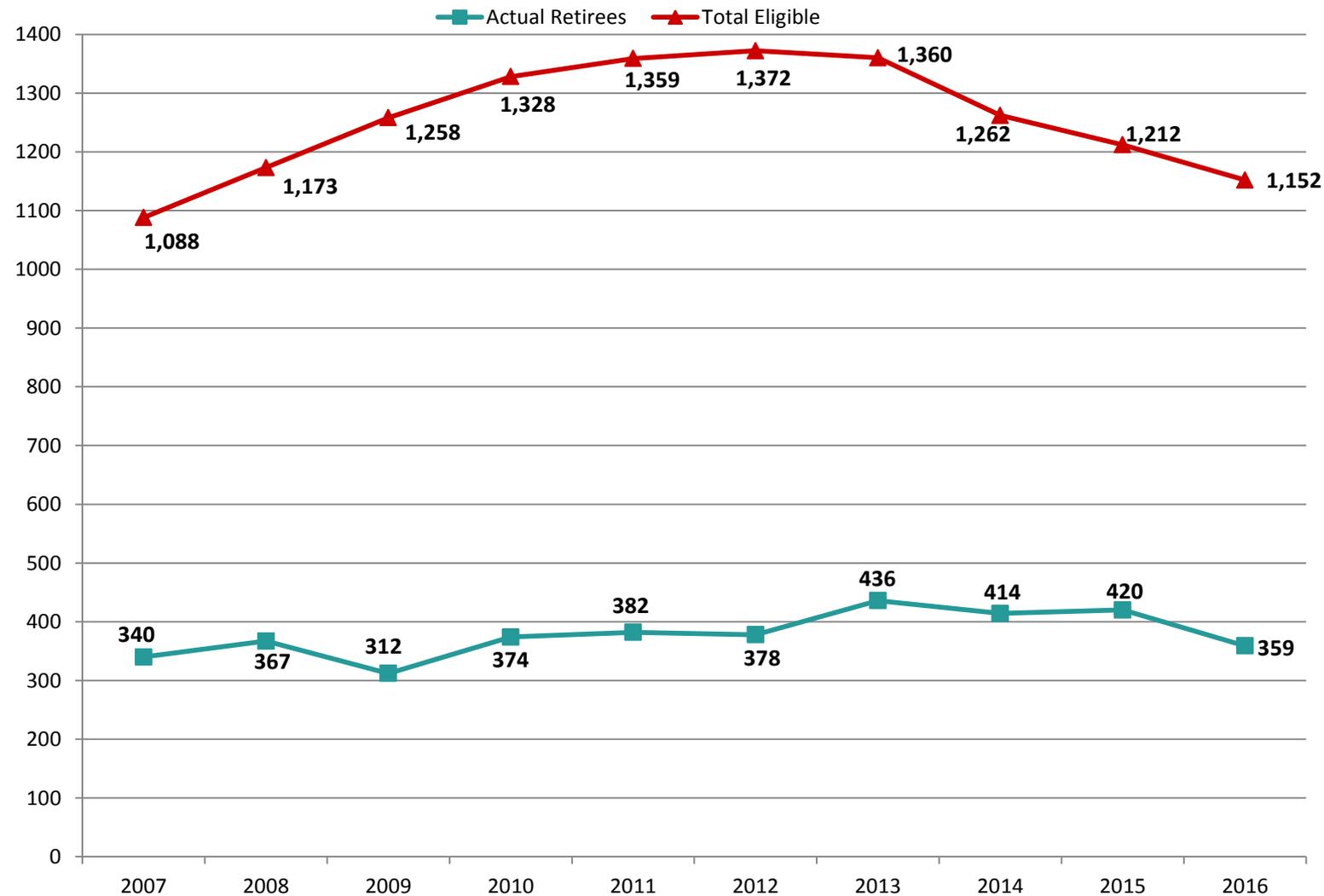
Of the 10,980 active TFFR members, 1,087 members are currently eligible to retire (10%) either under the Rule of 85, Rule of 90/Min age 60, or age 65.

Of the 1,087 active TFFR members eligible to retire, 80% are previously eligible and 20% are newly eligible in 2016-17.

Previously Eligible	874
Newly Eligible in 2016/17	213
Not Eligible	9,893
Total	10,980

Yesterday

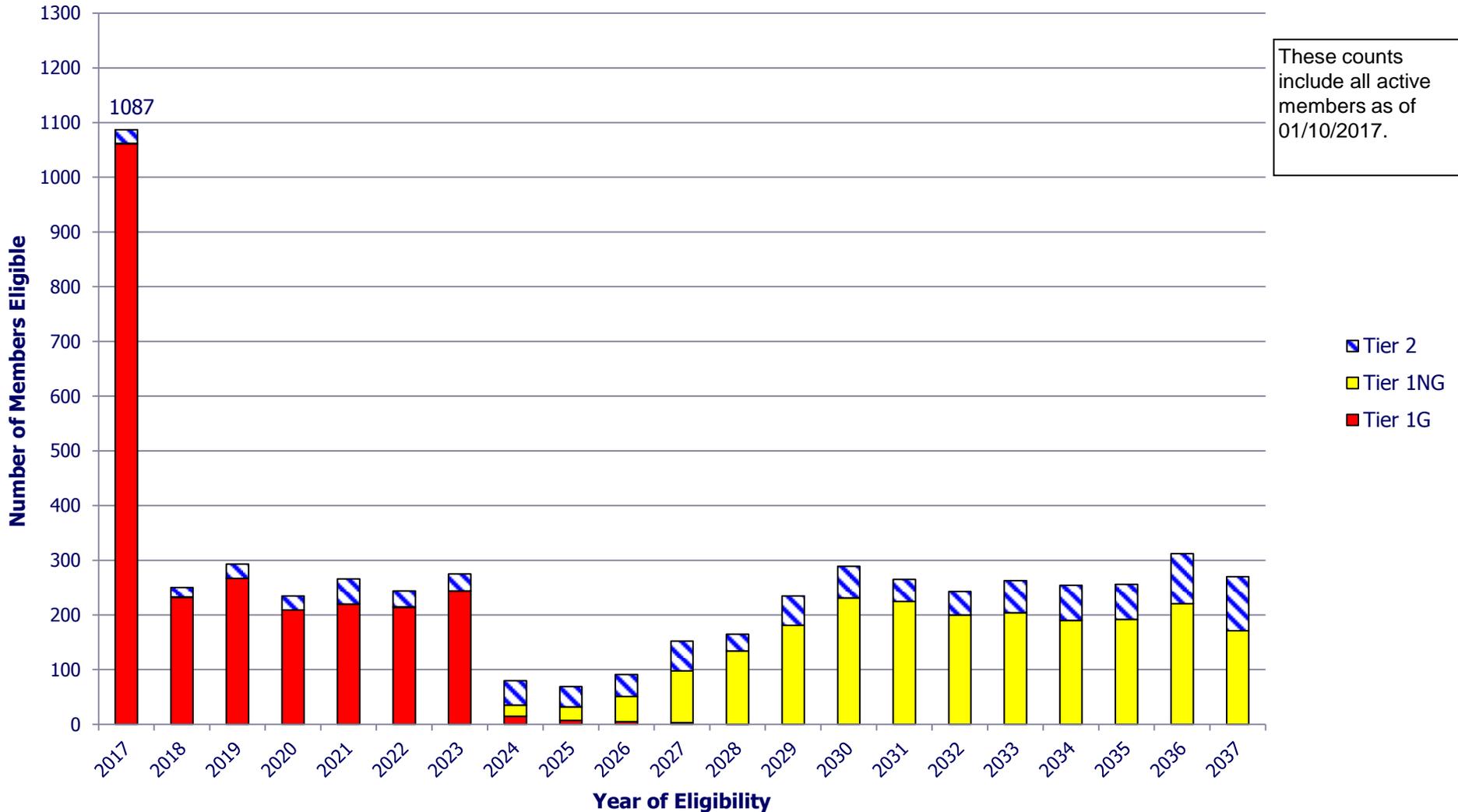
Actual Retirees and Total Eligible



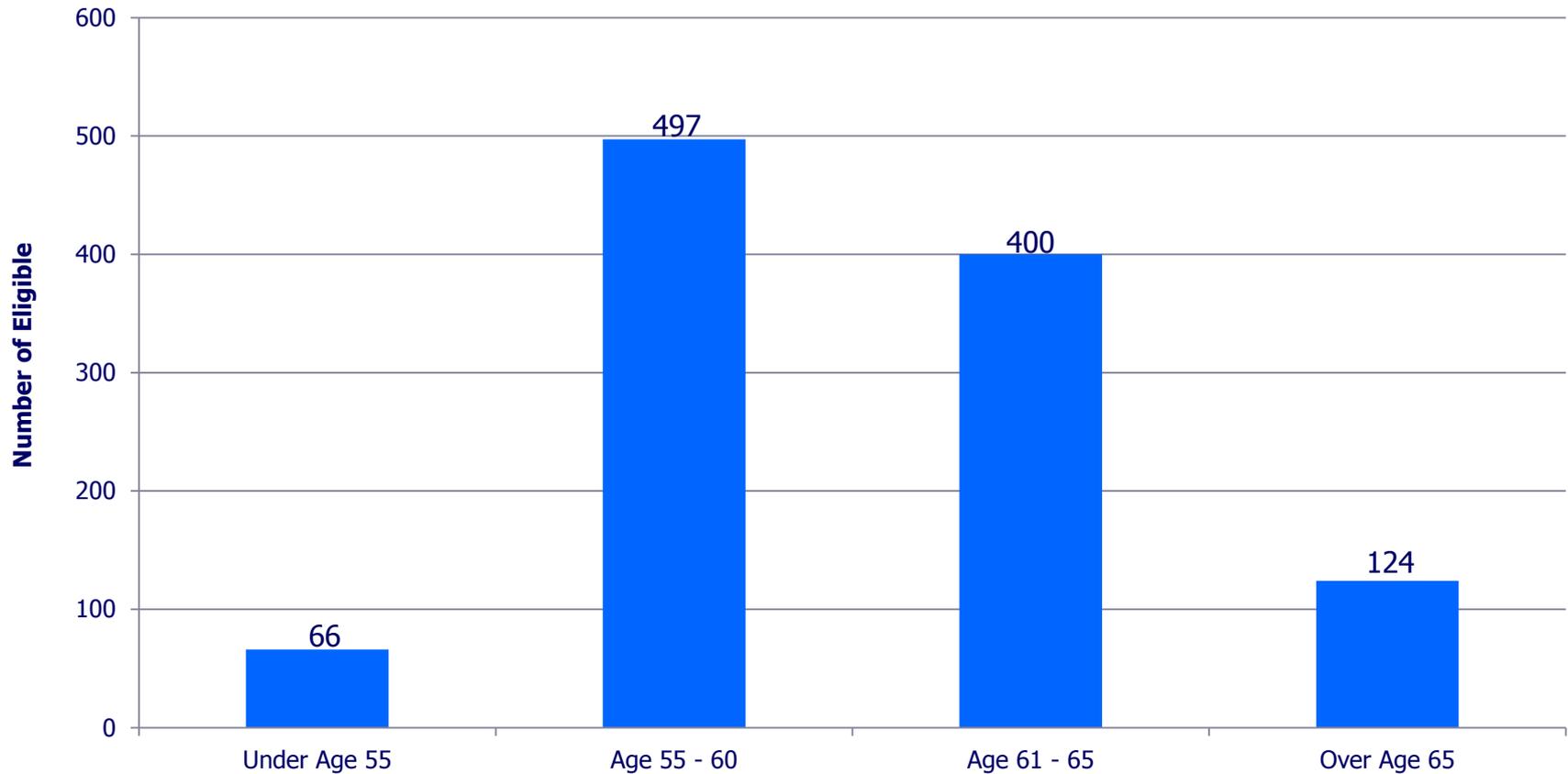
10 Year History 2007-2016

- ◆ On average, 1,256 teachers have been eligible to retire each year over the last 10 years.
- ◆ On average, 378 teachers actually retired each year, or total of almost 3,800 for 10 year period.
- ◆ Approximately 30% of eligible members actually retired over the past 10 years.

TFFR Active Member Retirement Eligibility Profile 20 Year Projection

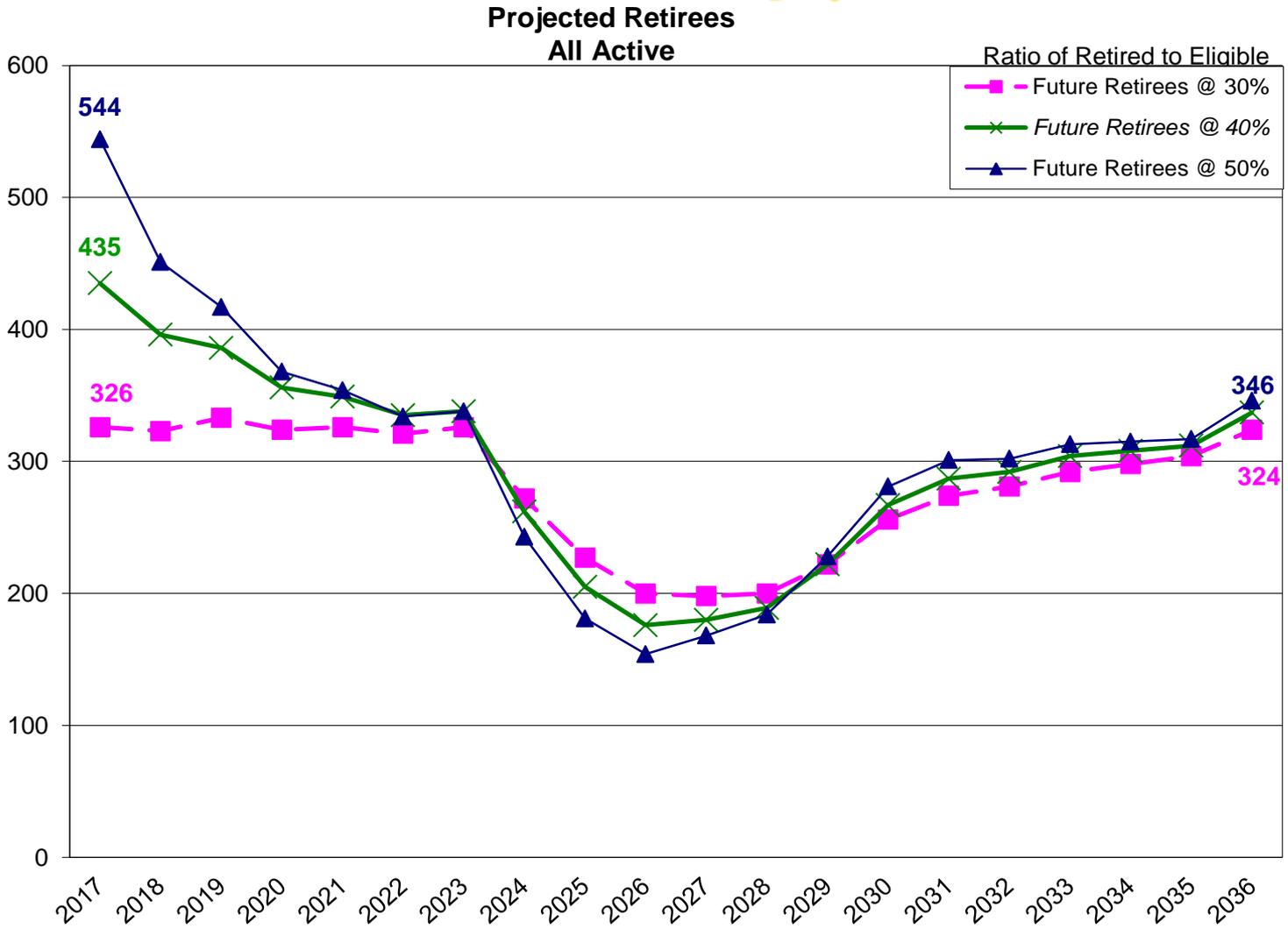


Current Eligible in 2017 by Age



Note: Of the 1,087 total eligible, the youngest is age 51 and the oldest is age 81

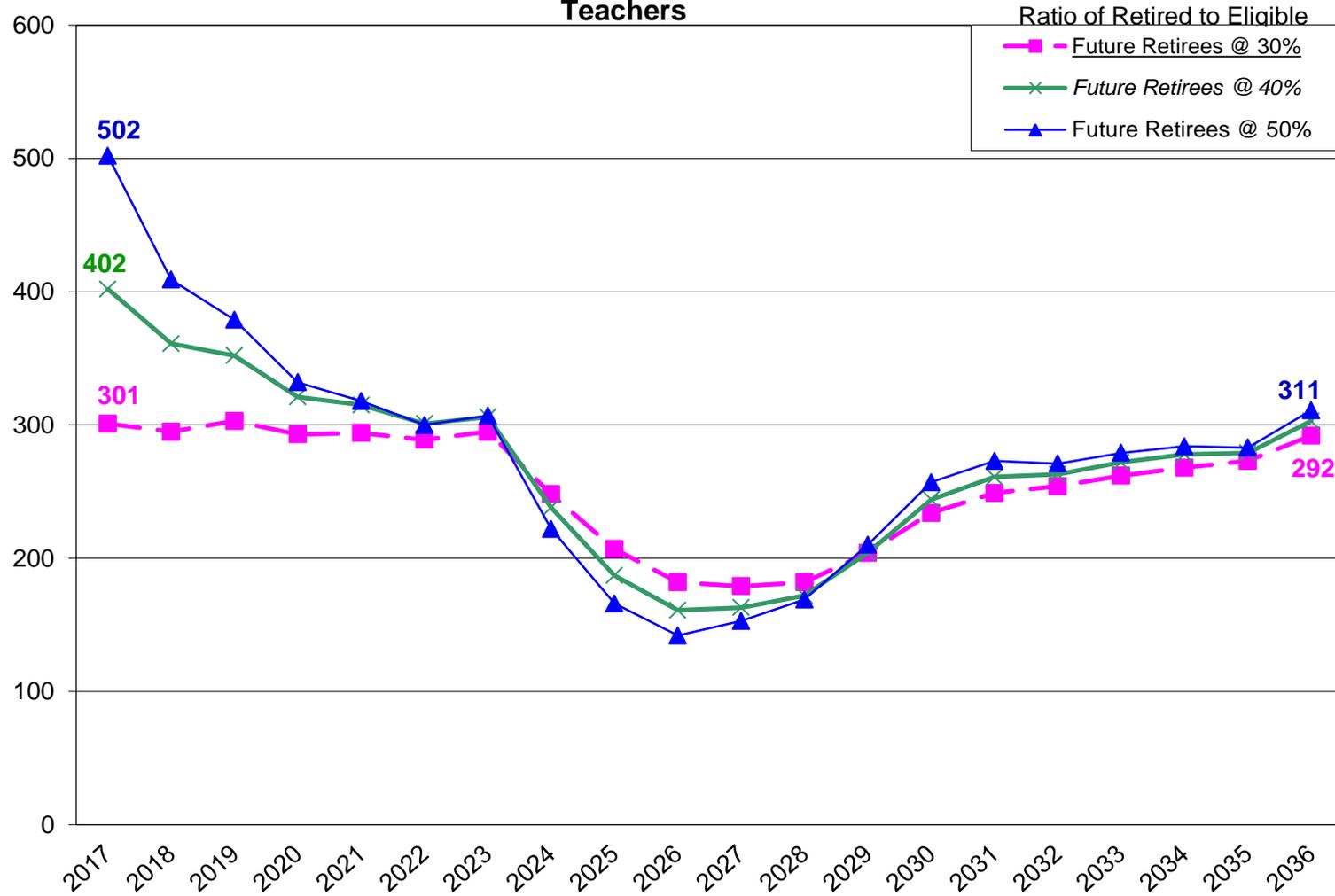
Tomorrow???



Based on ratios of 30%, 40%, and 50% of actual retirements to eligible retirements, the number of active members projected to retire in the next 20 years.

Tomorrow???

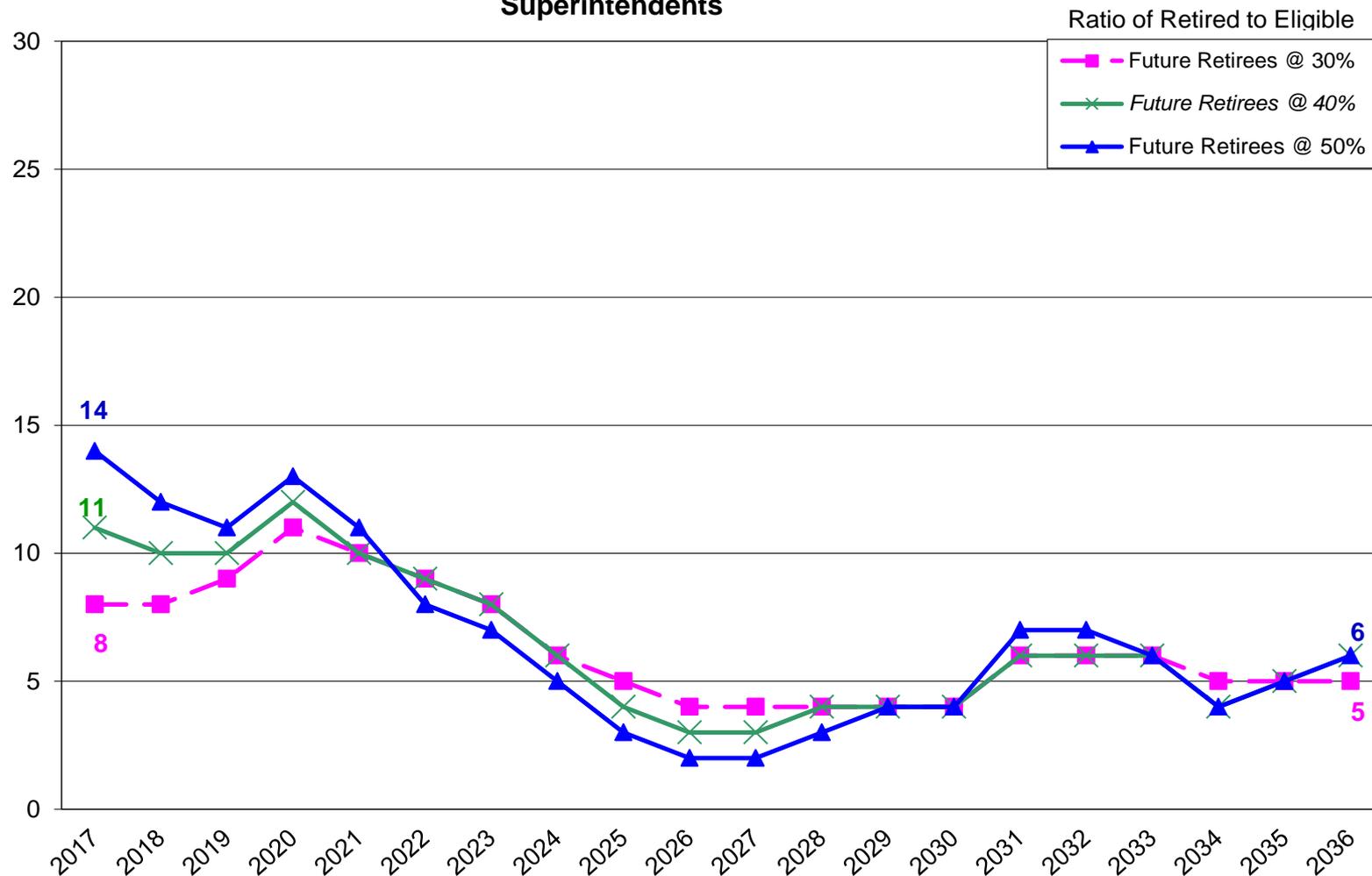
Projected Retirees
Teachers



Based on ratios of 30%, 40%, and 50% of actual retirements to eligible retirements, the number of teachers projected to retire in the next 20 years.

Tomorrow???

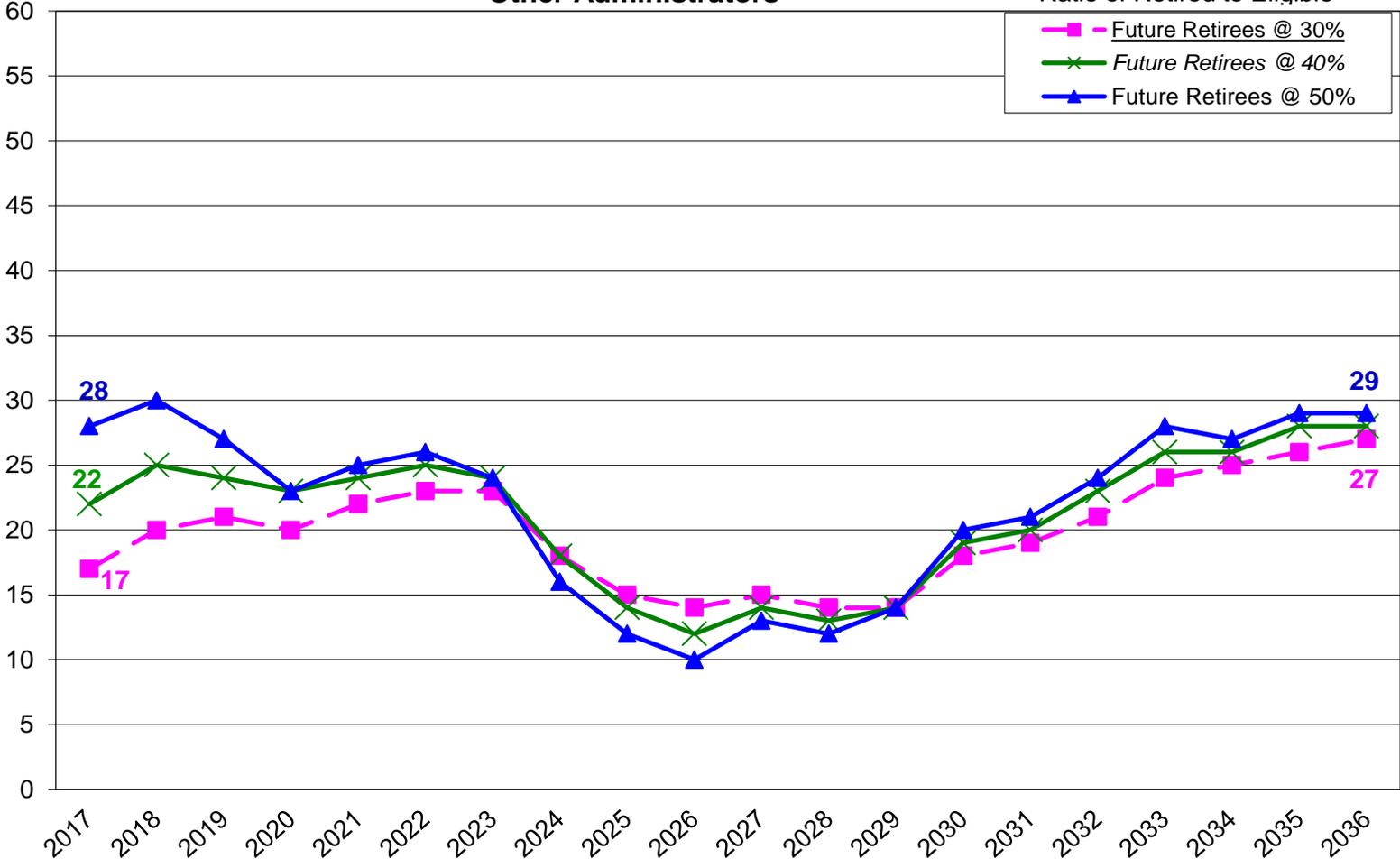
Projected Retirees
Superintendents



Based on ratios of 30%, 40%, and 50% of actual retirements to eligible retirements, the number of superintendents projected to retire in the next 20 years.

Tomorrow???

Projected Retirees
Other Administrators



Based on ratios of 30%, 40%, and 50% of actual retirements to eligible retirements, the number of other administrators projected to retire in the next 20 years.

Summary

Based on ratios of 30% and 40% of actual retirements to eligible retirements, approximately 3,000 to 3,200 active members are projected to retire in the next 10 years which averages about 310 per year.

	Members	# Retire		Avg/Yr	
		30%	40%	30%	40%
Teachers	10,298	2,707	2,944	271	294
Superintendents	131	78	83	8	8
Other Administrators	551	193	211	19	21
Total Active Members	10,980	2,978	3,238	298	323

Note: All retirement projections are estimates only.

**RETIREMENT AND INVESTMENT OFFICE
AUDIT SERVICES
2016 - 2017 1st Quarter Audit Activities Report
July 1, 2016 – September 30, 2016**

The audit objective of Audit Services is twofold: first, to provide comprehensive, practical audit coverage of the Retirement and Investment Office (RIO) programs; second, to assist RIO management and the State Investment Board (SIB) by conducting special reviews or audits.

Audit coverage is based on the July 1, 2016 through June 30, 2017 work plan approved by the SIB Audit Committee. The audit activities undertaken are consistent with the Audit Services charter and goals, and the goals of RIO. To the extent possible, our audits are being carried out in accordance with the International Standards for the Professional Practice of Internal Auditing. Audit effort is being directed to the needs of RIO and the concerns of management and the SIB Audit Committee.

Retirement Program Audit Activities

• **TFFR Compliance Audits and Not In Compliance (NIC) Reviews**

We examine employer reporting to the Teachers' Fund for Retirement (TFFR) to determine whether retirement salaries and contributions reported for members of TFFR are in compliance with the definition of salary as it appears in NDCC 15-39.1-04(9). Other reporting procedures reviewed during the audit process are calculation of service hours and eligibility for TFFR membership. A written report is issued after each audit examination is completed.

Status of TFFR Employer Audits as of September 30, 2016:

- Eleven (11) TFFR Compliance Audits had been completed.
- Five (5) TFFR Compliance Audits were in progress.
 - Two TFFR Compliance Audits in the third audit cycle were in progress.
 - Three TFFR Compliance Audits in the fourth audit cycle were in progress.
- Five (5) TFFR Compliance Audits were pending but not yet started.
 - All pending audits were in the fourth audit cycle.
- Five (5) employers were notified of an upcoming audit but information requested had yet to be received from the employers.
 - All employers notified were in the fourth audit cycle.

This is an area that requires special emphasis due to the level of risk identified through previous audit results. Our long-range plans include auditing each employer over an eight year period.

• **Benefits Payments Audit**

A review of deaths, purchases of service, refunds, long outstanding checks, and long term annuitants was completed to determine that established policies and procedures were being followed by the staff of Retirement Services. The 2015-2016 Benefit Payments Audit was completed on August 26, 2016 no findings were noted, two recommendations for future actions were provided.

• **TFFR File Maintenance Audit**

A review of changes made to TFFR member account data by Retirement and Investment Office employees is reviewed on a quarterly basis. The TFFR File Maintenance Audit for the fourth quarter of fiscal year 2016 was completed on September 19, 2016. No findings were noted.

• **TFFR Cost Effective Benefit Payments/Benefit Recalculation Audit**

The start of the TFFR Cost Effective Benefit Payments/Benefit Recalculation Audit was delayed. The audit was not completed in fiscal year 2016 as planned and has been carried over to be completed in fiscal year 2017. The audit is currently in progress.

Administrative and Investment Audit Activities

• Executive Limitation Audit

Each year the SIB conducts a customer satisfaction survey. The purpose of this annual survey is to determine how well the SIB, through the staff of the RIO, is meeting the expectations of its clients. This survey is part of the SIB's ongoing effort to be more responsive to the needs of their clients and to continually improve the services that are provided. Audit Services facilitated the survey in July 2016 and results were provided to the SIB in October 2016.

• External Audit Support

Audit Services provided support to our external audit partners, CliftonLarsonAllen (CLA), during the annual financial audit of the RIO and the GASB 68 Census Data Audits. Audit Services notified seventeen employers of upcoming GASB 68 Census Data audits in August 2016. The GASB 68 Census Data audits were completed in October 2016.

• Audit Services Procedure Manual

Work continued on the Audit Services policy and procedure manual. Procedures for the TFFR File Maintenance Audit have been placed on RIO's intranet site. Procedures for the TFFR Cost Effective Benefit Payments Audit and the Benefit Payment Audit are in progress.

Audit Services/Retirement Services Internship Program

The internship program concluded on August 19, 2016. The Supervisor of Audit Services and the Retirement Program Manager provided ongoing support and assistance to the intern throughout July and August.

Professional Development/CE/General Education

Audit Services continued its participation with the Institute of Internal Auditors (IIA) by attending monthly meetings. The Supervisor of Audit Services completed the requirements for a Certified Internal Auditor (CIA) designation in July 2016.

Summary

Audit effort is directed to activities that are of greatest concern to the SIB Audit Committee, RIO Management, and our external audit partners. Audit Services will continue to work closely with the SIB Audit Committee, RIO Management, and our external audit partners to continue to improve overall efficiency, effectiveness, and economy of total audit activity.

MEMORANDUM

TO: TFFR Board
FROM: Fay Kopp
DATE: January 19, 2017
SUBJ: 2016 CAFR and PPCC Award

In December 2016, our office sent TFFR board members a link to the [2016 NDRIO Comprehensive Annual Financial Report \(CAFR\)](#) which is posted on the NDRIO website. The report provides a detailed look at investment, financial, actuarial, and statistical information about the TFFR and SIB programs.

Please notice that the Government Finance Officers Association (GFOA) has awarded a Certificate of Achievement for Excellence in Financial Reporting to RIO for the past 18 years. In order to receive the award, RIO must publish an easily readable and efficiently organized comprehensive annual financial report. The report must also satisfy both generally accepted accounting principles and applicable legal requirements. The 2016 report has been submitted to GFOA for review, and we expect it to meet the requirements for receiving the award again this year.

Also, TFFR has received the 2016 Public Pension Standards Award for Administration from the Public Pension Coordinating Council (PPCC). To receive the award, the retirement system must certify that it meets specific standards for a comprehensive benefit program, actuarial valuations, financial reporting, investments, and communications to members. TFFR has received an award for administration and/or funding from PPCC since 1992.

If you have any questions, or would like to have a bound paper copy of the 2016 CAFR, please let us know and we will bring to the meeting.

Board Information Only. No board action is requested.

MEMORANDUM

TO: TFFR Board
FROM: Fay Kopp
DATE: January 19, 2017
SUBJ: TFFR Webcast Library

RIO staff has been working on developing and recording short, educational webcasts in an effort to provide information about the TFFR plan to members, employers, and the public using this format.

We have recently added the following webcasts to the [TFFR website](#). Please spend some time reviewing them when you have the opportunity. Each one is 9-14 minutes in length. The webcasts continue to be a work in progress, and we appreciate your feedback. We plan to continue to expand this webcast library in the future.

<u>Webcast Title</u>	<u>Staff Member</u>
About Your TFFR Benefits Plan	Fay Kopp
Funding Your TFFR Benefits Plan	Fay Kopp
Members	
How to Apply for Retirement Benefits	Paula Brown
Retirement Benefit Options	Paula Brown
Types of Service Purchases	Denise Osmond
How to Purchase Service Credit	Denise Osmond
Employers	
Employer Reporting Basics	Shelly Schumacher
Employer Payment Models	Shelly Schumacher (coming soon)

Board information only. No board action requested.

READING:

[ND TFFR Fast Facts](#)

[NASRA-Employee Contributions to Public Pension Plans](#)

[NASRA-State Hybrid Retirement Plans](#)

[Center for Retirement Research @ Boston College-New Developments in Social Investing by Public Pensions](#)

[Center for State & Local Government Excellence-State and Local Pension Reform Since the Financial Crisis](#)

[TIAA Institute-Center for State and Local Government Excellence-2016 Retirement Confidence Survey of the State and Local Government Workforce](#)